LOS ANGELES TRADE–TECH

LATTC

A Community College

Catalog

2020-2022



CONSTRUCTION
Maintenance & Utilities Pathway



BUSINESS & Civic Engagement Pathway



CULINARY ARTS Pathway



DESIGN & MEDIA ARTS Pathway



COSMETOLOGY Pathway



APPLIED SCIENCES Pathway



HEALTH & Related Sciences Pathway



Advanced TRANSPORTATION & Manufacturing Pathway



LIBERAL ARTS & Transfer Prep Pathway

COLLEGE TO CAREER, IT'S ALL HERE!

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770 Wilshire Boulevard
Los Angeles, CA 90017
(213) 891-2000

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Los Angeles Trade-Technical College

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Los Angeles CA 90015-4181
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www.lattc.edu

Driving to LATTC

- **FROM THE HARBOR FWY (110) SOUTH**
  Exit on Adams Blvd., turn left on 23rd Street, turn left to Grand Ave, and turn left to college.
- **FROM THE HARBOR FWY (110) NORTH**
  Exit on Adams Blvd., turn right to Grand Ave. and left to college.
- **FROM THE SANTA MONICA FWY (10) EAST**
  Exit on Grand Ave., turn right to college.
- **FROM THE SANTA MONICA FWY (10) WEST**
  Exit on Los Angeles Street to 17th Street, turn left on Grand Ave. to college.

Public Transportation

- **METROLINK TRAIN (arrives Union Station– Connects to Red/Blue Line and Dash Buses).**
  From Union Station, take Dash Bus D, or use Red Line to connect to Blue Line (at 7th St/Metro Ctr). More info at Metrolinktrains.com.
- **ON THE BLUE LINE**
  Station #3, Grand Ave. For information call 1-800-2LA-RIDE or visit www.metro.net
- **ON THE EXPO LINE**
  Station #3, LATTC/Ortho Institute. For information call 1-800-2LA-RIDE or visit www.metro.net
- **METRO BUSES (all adjacent to campus)**
  Bus Routes: 35, 37, 55, 355 and 603
  Dash: D
  Metro Express: 460
  LADOT Commuter Express: 438, 448

For more information about getting to the college, visit us at: http://college.lattc.edu/about-lattc/directions-transportation/

Produced by Office of Instruction



LOS ANGELES TRADE TECHNICAL COLLEGE CATALOG 2020 2022

LOS ANGELES TRADE–TECH
LATTC
A Community College

Los Angeles Trade-Technical College
400 West Washington Boulevard
Los Angeles, California 90015
(213) 763-7000

www.lattc.edu

Los Angeles Trade-Technical College is a public tax-supported educational institution which offers learning opportunities for men and women and is administered by the Los Angeles Community College District.

Accreditation

Los Angeles Trade-Technical College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 10 Commercial Boulevard, Suite 204, Novato, CA 94949 (405) 506-0234, an institutional accrediting body recognized by the Commission on Higher Education Accreditation and the U.S. Department of Education.

GREETINGS FROM THE PRESIDENT

Welcome to Los Angeles Trade-Technical College!



First off, congratulations on taking the first step toward furthering your education. LA Trade Tech College (LATTC) has been educating students for more than 95 years. This college has contributed to the growth of Los Angeles and the entire economic region, by providing an unmatched variety of courses, programs, and specialized training designed to prepare students to enter our global economy with knowledge and vision.

Our world has changed considerably over the past few months as we navigate the impact of the COVID-19 pandemic. LATTC has moved, for the most part, to a completely online platform of instruction of our courses and delivery of student services. Our faculty, staff, and administrators remain committed to providing the very best in both career training and transfer education. If you look within this catalog, you will see that our course selections continue to include extensive pathways into a number of high-demand careers.

As we move toward recovery, we will begin to offer face-to-face options again. As we have adjusted to our online environment, we actually hosted our commencement in virtual format, to celebrate our Class of 2020. It was a tribute to our students who excelled despite our current environment and the transition to online learning. The theme said it all, "Resilient Times for Brilliant Minds," and it reminded us of the determined and relentless nature of our students. You can find it at: https://youtu.be/cgJ07SoCBCQ

Our nation is also experiencing a time of social unrest as we are called to action to deal with racial equity and social justice concerns of all people of color, and in particular, the experiences of our African American/Black citizens. Our entire college is charged with ensuring an educational environment that is not only inclusive, but safe and welcoming to all persons, in line with the LACCD Chancellor's Framework added as a link here. https://www.facebook.com/LATTC/photos/a.288206326189/10157364445736190/

We are committed to providing a college experience, both rich in learning and social awareness. Our college also offers many important student support services designed to help you navigate successfully outside the classroom. You can find those services within this catalog, on our website, and throughout our social media platforms. Your dreams, whatever they are, can start right here at LATTC – we have been here for 95 years and we are here for you now!

Dr. Katrina VanderWoude

President, Los Angeles Trade-Technical College

LOS ANGELES TRADE-TECHNICAL COLLEGE

RESPONSIBILITY TO BE INFORMED

It is the student's responsibility to read the information presented in this catalog and to know and observe all policies and procedures related to his/her program. Regulations will not be waived nor exceptions granted because a student pleads ignorance of policies, procedures, or deadlines.

2020-2022 ACADEMIC CALENDAR

FALL SEMESTER 2020

Fall graduation petition dates	Please contact A&R for dates
Fall semester begins	August 31, 2020
Saturday classes begin	September 6, 2020
Labor Day (College closed)	September 7, 2020
Veterans Day (College closed)	November 11, 2020
Thanksgiving Holidays (College closed)	November 26-27, 2020
Non-Instructional day (College closed)	November 28-29, 2020
Final examination period	December 14-20, 2020
Fall semester ends	December 20, 2020

WINTER INTERSESSION 2021

Winter intersession begins	January 4, 2021
Martin Luther King's Day (College closed)	January 18, 2021
Winter intersession ends	February 7, 2021

SPRING SEMESTER 2021

Spring graduation petition dates	Please contact A&R for dates
Spring semester begins	February 8, 2021
Saturday classes begin	February 21, 2021
President's Day (College closed)	February 12-15, 2021
Cesar Chavez Day (College closed)	March 31, 2021
Spring recess	April 3 -April 9, 2021
Non-Instructional day (no classes, College Open)	April 2, 2021
Memorial Day (College closed)	May 31, 2021
Final examination period	June 1 - June 7, 2021
Spring semester ends	June 7, 2021

SUMMER SESSION 2021

Summer intersession begins	June 14, 2021
Independence Day (College closed)	July 5, 2021
Summer intersession ends	August 29, 2021

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Section I: General Information



Trade Tech: A Proud History

Los Angeles Trade-Technical College (LATTC) has been proud to serve the greater Los Angeles community for more than 90 years.

Our history began shortly after the close of World War I, when members of the Los Angeles Board of Education, the Chamber of Commerce, along with business and labor leaders held a series of conferences to talk about the need in Los Angeles for a centralized vocational training program. Out of those meetings came the initial concept of what would become Trade Tech, modeled on a class in power sewing offered to downtown garment workers. By the end of 1924, training programs in "beauty culture", printing, plumbing, and the building trades were offered at various locations around the city and briefly consolidated in a soon-to-be outgrown building located at Eighth and Grand Avenues.



Frank Wiggins, whose original vision helped create Trade Tech

In the early Spring of 1925, the Los Angeles Board of Education created the Frank Wiggins Trade School, naming it after a prominent Los Angeles Chamber of Commerce member who had been a driving force in promoting the development of vocation training. The school relocated to a new building at 1646 South Olive Street in 1926, and through the ensuing years gained a reputation for the success of its graduates in industrial careers as well as the dedication of its faculty and staff.

The advent of World War II created an exponential demand for the college's training programs in support of the war effort. The college's Aircraft and Welding Trades departments operated directly under the supervision of the federal War Production Training Program, while the majority of other programs were quickly reformatted to provide short-term training of six to ten weeks in duration, often at war production plants located throughout the city.
The end of the war and the return to a civilian economy, together with the infusion of federal funds for training veterans, led to an expanded demand for education and training at the college. In July of 1948, in response to veteran's retraining needs as well as Los Angeles' post-war population boom, the college was granted the authority to expand their curriculum and offer an Associate in Arts degree in vocational disciplines as well as academic and Liberal Arts areas.

LATTC moved to its current location in 1957 taking over the location where Polytechnic High school once stood. In 1966, an existing educational institution with a strong business program, Metropolitan College, was merged with Trade Tech, resulting in an even broader range of educational offerings. Finally, in 1969, LATTC joined the newly formed Los Angeles Community College District (LACCD), making LATTC one of the nine colleges that comprise the District.

Trade Tech occupies a unique position among institutions of higher education. Throughout nine decades, the college has remained true to its founding premise of vocational education, while expanding to provide transfer programs, adapt to rapidly changing technologies and remain responsive to the needs of the surrounding community. Students come from all over the Los Angeles basin to participate in our unique mix of programs, some of which have been in existence since the school's inception. As of Fall 2002, the campus has undergone massive renovation and added innovative programs, as we look forward to serving our community for decades to come.



During WWII, thousands of "Rosie the Riveters" enrolled at Trade Tech, lending their skills to support the war effort.



Mission and Vision Statements

OUR MISSION

Los Angeles Trade Technical College advances communities through pathways to academic, career, and transfer success that empower students to achieve career technical certificates, associate degrees, transfer, and employment.

OUR VISION

Los Angeles Trade Technical College will be a premier community college recognized regionally and nationally for transforming students' lives and their communities.

ABOUT LOS ANGELES TRADE TECHNICAL COLLEGE (LATTC)

Accreditation

Los Angeles Trade-Technical College, a California public, tax-supported community college, is officially accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges and is fully approved by the Board of Governors of the California State University and independent colleges and universities to give full credit for appropriate courses completed. Specific programs are also accredited by
the American Culinary Federation Education Foundation Accrediting Commission (ACFEFAC); Interstate Renewable Energy Council (IREC); and National Automotive Technicians Education Foundation (NATEF).

Accuracy Statement

The Los Angeles Community College District and Los Angeles Trade-Technical College have made every effort to make this catalog accurate and may, without notice, change general information, courses, or programs offered. The reasons for change may include student enrollment, level of funding, or other issues decided by the district or college. The district and college also reserve the right to add, change, or cancel any rules, regulations, policies and procedures as provided by law.

Code of Ethical Conduct

Los Angeles Trade-Technical College is committed to compliance with the law and regulations governing the college, as well as the policies and procedures established by the college. In order to encourage ethical conduct and strengthen and promote ethical practices among college employees, members of the college community, and those who conduct business with the college, LATTC has adopted this Code of Ethical Conduct:

LATTC employees shall:

- Uphold the highest standards of intellectual honesty, and academic, professional, and personal integrity in the conduct of instruction, research, college services, and all other functions of the college when dealing with students, coworkers, industry partners, and the public in general.
- Act in a way that promotes healthy working relationships based on mutual trust and support among one's fellow employees.
- Act so as to value human beings over other assets of the college.
- Act as good stewards of the resources and information entrusted to our care.
- Perform assigned duties and professional responsibilities in such a manner so as to further the LATTC mission.
- Treat fellow employees, students, and the public with dignity and respect.
- Utilize decision-making ability in a capacity that promotes beneficial outcomes and results for our students, our local community, and our industry partners.
- Refrain from discriminating against, harassing, or threatening others.
- Comply with all applicable laws, rules, regulations, and professional standards.
- Respect the intellectual property rights of others.
- Respect differences of opinion and approaches to issues and problems.
- Avoid improper political activities as defined in law.
- Protect human health and safety and the environment in all LATTC operations and activities.
- Refrain from using our employment to improperly advance the interests of a friend or relative.
- Foster a climate of life-long learning and prepare our students to participate effectively in our democratic society.
- Be dedicated and committed to the concepts and ideals of student success.
- Comply with conflict of interest codes by keeping community interest a priority and maintaining transparency (as defined in Board Rule 14000).

College Advisory Committees

The demands of industry determine the various phases of business, technical and trade training carried on by the college. Placement and successful progress of students are the measures of effectiveness of the pre-employment training. Increased productivity, job satisfaction, and advancement of the employed trainee attest to the effectiveness of the program. For these reasons all training is developed and carried on with the advice and assistance of the college advisory committees.
Membership in each of the groups is composed of community-wide representatives from labor and management, and from federal, state and local agencies who are concerned with the business, trade and technical programs offered. These advisory committees meet on the invitation of the college administration at least once a year and on additional occasions when considered necessary. They give counsel and advice in regard to evaluating training programs, approve plans to meet current training needs, review past accomplishments, and forecast trends affecting training and employment.
Members of the various advisory committees are an important part of the educational program of the college. The people who serve on the committees are selected because of their leadership in the economic life of Los Angeles. The advisors bring to the college expert advice and sound thinking on business, trade and technical problems. Thus the work of the classroom reflects the rapid changes in community and industry.

ABOUT THE LOS ANGELES COMMUNITY COLLEGE DISTRICT (LACCD)

Educational Philosophy of the LACCD

The Los Angeles Community Colleges affirm the principle that individuals should have opportunities to develop to their full potential. To that end, our main responsibility is to students and to the provision of education, which benefits students and enables them to contribute to society.
Our colleges, therefore, should be accessible to all individuals who have the capacity and motivation to benefit from higher education. Curricula and services of our colleges should provide means for fulfilling the promise of open access.
We recognize the necessity to adapt to the changing educational needs of the Los Angeles Community Colleges' communities and to the growing diversity among students. The quality of the educational experience is to be judged by its value to students and communities, not merely by quantitative appeal. We further recognize that academic freedom is essential to excellence in education.

Functions of the LACCD

Consistent with the educational philosophy and mission of the Los Angeles Community Colleges (Board Rule 1300), Los Angeles Trade-Technical College offers the following types of educational programs and services:

- **Transfer -** A college transfer program which enables the students who complete two years of study to continue upper-division (third year) work at accredited four-year colleges and universities through careful and continuous articulation with accredited collegiate institutions and high schools.
- **Occupational -** Career-technical education offers students, a business, technical, and professional curricula to develop skills which can lead to employment, job advancement, certification, or the associate degree.
- **General Education -** A program of general education comprised of associate degree programs and other planned experiences which develop knowledge, skills, and attitudes necessary for the student to be effective as a person, a family member, a worker and a citizen, thereby enhancing the quality of life for the individual and for the society at large.
- **Transitional Education -** A program of remedial and basic skills education for students needing preparation for community college level courses and programs; and English as a Second Language instruction for immigrants, foreign students and other students with limited English proficiency.
- **Counseling and Guidance -** A counseling and guidance program incorporating academic, career, and personal counseling and assistance in matters of admissions, financial aid, job placement and student activities; to assist the student in the establishment of educational goals and in the selection and pursuit of a life work compatible with his/her interests, aptitudes, and abilities.
- **Continuing Education -** A program of continuing education comprised of graded and ungraded classes to provide opportunities for personal and occupational competence that supplement formal full-time college attendance.
- **Joint Programs -** Joint programs with business, industry, labor, education, government and other institutions which are of mutual benefit to sponsoring institutions, enhance the educational opportunities of program participants, and advance the mission and functions of the District.

Mission Statement of the LACCD

"Changing Lives in a Changing Los Angeles"

The mission of the Los Angeles Community College District is to provide our students an excellent education that prepares them to transfer to four-year institutions, successfully complete workforce development programs designed to meet local and statewide needs, and pursue opportunities for lifelong learning and civic engagement. (Board Rule 1200).

LACCD Core Values

This District mission is informed by the following core values that will guide us in reaching our goals (Board Rule 1201)

- **Access & Opportunity**--We are committed to maximizing educational opportunity and access to everyone who has the desire to learn, and we actively engage all students, including those from communities that have traditionally been underserved by higher education or who require special accommodation or support.
- **Excellence & Innovation**--In all of our services and institutional activities, we strive to create a culture of excellence and continuous improvement through the use of innovative pedagogy and technologies that challenge our students, faculty, staff and administrators to meet the highest educational and professional standards.
- **Student Learning & Success**--All of our institutional efforts and resources are dedicated to one central purpose–the support of all students as they work toward the achievement of their academic and career goals.
- **Free Inquiry**--We value the vigorous, critical and free exchange of ideas and opinions, and we work actively to create communities of mutual respect and shared concern that support and sustain open debate and constructive, democratic discourse.
- **The Power of Diversity**--As a group of nine urban and suburban colleges situated in the midst of different communities, we draw upon and embrace diversity as an integral aspect of our civic and institutional identity and as a powerful element in the education and development of every individual.
- **Equity**--We are committed to eliminating achievement gaps by identifying and removing barriers to student success.
- **Community Connection**--Our colleges must be rooted in the communities they serve, and we are determined to build and maintain strong, durable, and responsive collaborations with our educational partners across Los Angeles, and with business, labor, and other organizations that contribute to the fabric of our larger community.
- **Public Accountability and Transparency**—We are accountable to the public for all aspects of our mission, and we owe the students we serve, the people of Los Angeles, and the State of California regular and timely assessments of all of our efforts through shared governance processes that are open and transparent.

Section II: Campus Life and Services – Student Support Services

ACADEMIC CONNECTIONS

Phone: (213) 763-3754
Location: D3, Room 109
Website: http://college.lattc.edu/academicconnections/

Academic Connections is a collaborative interdisciplinary hub that interconnects the campus to provide students with academic instruction and support services required to achieve their academic, vocational and personal goals. We provide an environment that facilitates the learning process to help students gain a deeper understanding of course content. We focus on individual needs of all LATTC students through our noncredit course offerings, workshops, tutoring, and instructional support resources.

Noncredit Courses

College Readiness, Career Exploration, Career Readiness, English as a Second Language (ESL Noncredit), and GED Exam Preparation.

Academic Connections offers noncredit Basic Skills courses to all students who wish to reinforce their skills as independent learners and critical thinkers, analytical readers, proficient writers, users of technology, and effective mathematic problem solvers through the use of practical study strategies. Our noncredit courses empower students to successfully complete their GED, improve their English language skills, use technology to support their learning development, and enter the workforce.

Tutoring Services

Free tutoring is available to all LATTC students. We encourage students to seek out tutoring services to increase their knowledge of course content and to enhance learning development. Tutors are available in a wide variety of subjects to assist students through one-on-one or small group tutoring sessions at our Center. Pathway tutoring is also available for students pursuing certificate and degree programs.

ASSESSMENT CENTER

Phone: (213) 763-5339
Email: assessment@lattc.edu
Location: D3, Room 001
Website: http://college.lattc.edu/sssp/assessment/

The Assessment Center offers placement assistance/Guided Self-placement to new/returning and continuing students in accordance to new state policy "AB 705". Students that attended a US high school within the last ten years through eleventh grade and provided high school cumulative grade point average, qualify for AB 705 placements for English/math. If you don't meet AB 705 placement policy, please see a Counselor or the Assessment Center for Guided Self-placement assistance. Other services provided in the Assessment Center include: Course prerequisite clearance, course prerequisite challenge exams, Test for Adult Basic Education (TABE-Basic Skill courses), Pearson Vue Authorized Testing Center (Official GED Exam).

ASSOCIATED STUDENT ORGANIZATION (ASO)

Phone: (213) 763-7200
Email: aso@lattc.edu
Location: C2, Room 105

The governing body of the Associated Students, the Student Council, is composed of elected Executive Board members consisting of the President, Vice President, Parliamentarian, Treasurer, Historian and the Recording Secretary. The Student Council also includes appointed Senators and Commissioners who serve as representative liaisons for departments on campus.

ASO programs are supported by a membership fee payable at the Business Office for day and evening students. These fees help support the services ASO provides. Any student, upon enrolling, is eligible to become a paid member of the Associated Student Organization. Members are entitled to all rights and privileges, including educational, social and community services programs and all associated activities.

Inter-Club Council (ICC)

The Inter-Club Council is composed of representation of all officially chartered clubs. ICC serves as the coordinating and planning body for club activities.

Students are encouraged to organize new special interest clubs on campus. Before a group is recognized officially, a constitution must be submitted and approved by the ASO Advisor and Executive Board. Sample constitutions can be obtained in the ASO Office. Every club is required to have at least one full time Faculty Advisor.

BRIDGES TO SUCCESS CENTER

Telephone: (213) 763-5560
E-mail: bridges@lattc.edu
Location: D3, Room 105
Website: http://college.lattc.edu/bridges/

The Bridges to Success Center at Los Angeles Trade-Technical College is the first stop for questions on the college application, class enrollment, K-12 concurrent enrollment, and other support services available on campus.

The Center's staff will assess your questions and provide on the spot assistance or refer you to the appropriate resource for additional information.

BUSINESS OFFICE

Phone: (213) 763-7225
Email: businessoffice@lattc.edu
Location: E5, 1st Floor Lobby
Website: http://college.lattc.edu/business

Student accounts are managed through the College Business Office. Student fees including enrollment fees, non-resident tuition, health fees, parking, Associated Student Organization, child care, transcripts and Community Service fees are payable at the Business Office. Upon payment of fees, the Business Office then issues students a receipt of fees paid. In addition, the Business Office accepts, disburses, and accounts for some student financial aid, loans, scholarship checks, and student refunds.

CAREER/EMPLOYMENT CENTER

Phone: (213) 763-7104/ 7124
Location: E5, Room 413
Webpage: http://college.lattc.edu/careercenter

The Career/Employment Center's mission and goal is to provide students and alumni with effective career planning tools, state-of-the-art technology, resources and services equipping them with the ability to identify and make informed career choices, and to achieve their life long career goals through successful employment and/or higher education in career technical/ vocational or other educational programs. Experienced staff will assist with career guidance and options, provide the testing and interpretation of career assessments and develop the student's awareness of educational and employment opportunities available.

Services:

- Career Assessments & Interpretations (Individual/ Group/ Classroom)- Career Assessments offered include Myers/Briggs Personality Assessment and COPS-COPES-CAPS career inventory
- EUREKA Career Exploration System
- Career/Life Skills Workshops
- Employment Information- Job listings/ referrals (full/part time and temporary/seasonal), internships, online job search assistance, resume and cover letter assistance, and on-site employer recruitments
- Labor Market and Consumer Information

The Center, in collaboration with GAIN/CalWORKs, various on-campus departments, and a robust Job Expo Advisory Board including local, county and state government and non-profit agencies, hosts its annual Job/Career and Resource Expo every spring.

CHILD DEVELOPMENT CENTER

Phone: (213) 763-3690
Email: CDCenter@lattc.edu
Location: D6 (Corner of Olive and 21st Street)
Website: http://college.lattc.edu/cdc

The Campus Child Development Center is designed to provide a supportive educational environment for children while parents attend classes, job training, or work. Our focus is to provide developmentally appropriate activities for children and to provide opportunities for parents to enhance their parental skills. Activities are planned to meet the child's emotional, social, physical and intellectual needs. Age groups served by the Center: Infants through Preschool Children, 16 months to 5 years of age (before entrance to kindergarten). Children are served breakfast, lunch and a snack each day. Priority application period is June through July. Applications are accepted year-round (applicants may be placed on a waiting list). Priority is given to enrolled LATTC students. To receive an application, contact the Center. Each application is to be completed and returned to the Child Development Center with current income verification in order to establish enrollment priority for your child's admission. Child care is free for income eligible parents.

COLLEGE CAFE & GARDEN ROOM RESTAURANT

Phone: (213) 763-7331
Location: B4

The LATTC College Cafe offers a wide variety of exceptional menu choices for your dining pleasure. Culinary Arts and Professional Baking students in The Culinary Arts Pathway prepare fresh food daily that is served in the on-campus bakery, café, and Garden Room Restaurant. Selections include hot entrees, hot freshly made breakfast, grab and go sandwiches and salads, as well as a variety of artisanal baked goods. Dine with us in the Garden Room, our full-service restaurant, for lunch or come to our weekly international cuisine buffet - an all you can eat themed menu based on food from all over the world! The College Café can also provide on-site catering for your special events.

COLLEGE STORE

Phone: (213) 763-7210
Location: C4, Room 102
Email: collegestore@lattc.edu
Website: http://www.lattcbookstore.com

LATTC is the official place to purchase textbooks, LATTC merchandise, and supplies. We also offer the following services: Buy, sell and rent used and new textbooks, purchase the universal college student transit pass (U-Pass), purchase graduation materials.

COUNSELING SERVICES

Phone: (213) 763-7354
Email: counseling@lattc.edu
Location: E5, Room 214 and various locations on campus
Website: http://college.lattc.edu/counseling/

The mission of the Counseling Department is to provide the opportunity for our students and the community to receive professional counseling services to assist them in the exploration, planning and successful completion of coursework leading toward obtaining their academic, career and personal goals. The Counseling Department supports student success and promotes achievement through persistence, retention and the use of technology in order to foster life-long learning and effective participation in our democratic society. Advisement in Spanish is available upon request. Students may consult with a Counselor to discuss any of the following:

- Counseling Courses
- Early Alert Workshops
- Financial Aid Advisement

- General Education Certification (UC/CSU)
- Graduation Requirements
- Interpreting Assessment Results
- Intervention Planning
- Pathway Information
- Personal Concerns
- Student Educational Plan
- Substance Abuse Counseling Referrals
- Transcript Evaluation

DISABLED STUDENTS PROGRAMS AND SERVICES

Phone: **(213) 763- 3773**
Video Phone: **(213) 814-1551**
Email: **dspslattc@lattc.edu**
Location: **D3, Room 100**
Website: **www.lattc.edu/services/support/dsps**

Services provided by the Disabled Student Programs and Services (DSPS) department are designed to facilitate equal access to instructional and other related academic programs for students with disabilities. This is achieved by providing appropriate academic adjustments, accommodations and services to students with a verified disability. DSPS determines reasonable academic adjustments and accommodations for students on a case-by-case basis, depending on the specific nature of the student's disability. Examples of accommodations which may be approved include special counseling, assistance with disability management and liaison with college facultyand staff, priority registration assistance, assistive technology and devices, sign language interpreters, note-taking assistance, test proctoring, liaison with the Department of Rehabilitation and other similar agencies. Students who need classroom accommodations are strongly encouraged to contact the DSPS office as soon as possible. For further information, contact the DSPS Office.

DREAM RESOURCE CENTER

Phone: **(213) 763-5552**
Email: **drc@lattc.edu**
Location: **D3, Room 109C**
Website **http://www.lattc.edu/services/support/drc**

The Dream Resource Center provides on and off-campus resources for undocumented students to maximize student success. The center provides assistance with residency and enrollment, financial literacy, counseling, legal literacy and advocacy, peer mentoring and community engagement.

EXTENDED OPPORTUNITY PROGRAMAND SERVICES (EOPS)/COOPERATIVEAGENCIES RESOURCES FOR EDUCATION(CARE)/ NEXTUP

Phone: **(213) 763-7097/7098**
Email: **EOPSTrade@lattc.edu**
Location: **E5, Room 416**
Website **www.lattc.edu/services/support/eops**

Extended Opportunity Programs and Services (EOPS) is a state funded comprehensive counseling support program which recruits and assists qualified low- income students who have educational disadvantages. Participants must be full-time students receive the College Promise Grant, not have more than 70 units nor a college degree. EOPS students receive assistance and support with their education. Special Attention is given to identify, plan, develop and achieve the academic, career, and personal goals of students.

Services:

- Book Grants
- CARE (not all will qualify)
- Counseling (academic, career, personal)
- Dedicated Counseling Courses
- Field Trips to Universities and Cultural Locations
- Success Banquet
- Priority Registration
- Specialized Workshops
- Student Support Program (for students with low GPAs)

The CARE (Cooperative Agencies Resources for Education) Program is a supplemental component of EOPS and is targeted at providing educational opportunities and enhancing personal growth to students receiving CalWORKS. CARE students must be single head of household, have a dependent(s), be a CalWORKS recipient and meet EOPS eligibility. It is our commitment to extend support services to CARE students in order to help them achieve their educational goals at LATTC. The concept of "over & above" in assisting CARE students is embraced and exercised among our dedicated staff.

Services:

- Access to Community Resources
- Childcare Assistance
- Counseling
- Educational and Developmental Workshops
- Educational Supplies
- Meal Tickets
- Resource Referrals
- Transportation Assistance

The NextUp (formerly CAFYES) program is a supplemental component of EOPS. The mission of NextUp is to provide additional services and support to eligible current or former foster youth. NextUp students must be a current or former foster youth in California whose dependency was established or continued by the court on or after youth's 16th birthday, be no older than 25 years of age and meet EOPS eligibility (NextUp students may have 9 units to meet EOPS full time eligibility). It is our commitment to provide "over and above" support services to NextUp students in order to help achieve their educational goals.

Services:

- Cash Grants
- Dedicated NextUp Lounge
- Counseling
- Meal Tickets
- Specialized Workshops
- Transportation Assistance
- Book Grant

FINANCIAL AID

Phone: **(213) 763-7082**
Email: **finaid@lattc.edu**
Location: **E5, 1st Floor Lobby**
Website: **http://www.lattc.edu/services/financial-aid**

The purpose of the student financial aid program is to provide financial assistance to students who, without such aid, would be unable to attend college. Although it is expected that students and parents will make a maximum effort to meet the cost of education, financial aid is available to fill the gap between family resources and the annual educational expenses. Financial aid is meant to supplement the family's existing income/financial resources and should not be depended upon as the sole means of income to support other non-educational expenses.

Financial aid is available from various sources such as Federal, State, institutional, community organizations and individual donors.

Financial aid can be awarded in the form of grants, loans, work-study, scholarships, or a combination of these. For more information about Financial Aid policies, go to Section III of this catalog.

FOSTER & KINSHIP CARE EDUCATION PROGRAM

Phone: **(213) 763-3665**
Location: **C2, Room 100**

The Los Angeles Trade-Technical College Foster and Kinship Care Education program provides quality education and support services to foster parents, adoptive parents, relative care providers, non-relative extended-family care providers, legal guardians and foster and kinship care youth.

Available workshops and services include: Foster & Kinship Care Education (FKCE); Working with Special Needs Children (D-Rate Certification & Renewal); Working with Medically Fragile Children (F-Rate Certification & Renewal); Whole Family Foster Home ~WFFH~ & Shared Responsibility Plan ~SRP~ also known as SB500 (W-Rate Certification & Renewal); Partnering for Permanence and Safety, Model Approaches to Partnerships in Parenting (PS–MAPP/Foster Parent Certification); and Emancipated Foster Youth Support (Guardian Scholars Program).

GAIN/CALWORKS PROGRAM

Phone: **(213) 763-7109**
Location: **E5, Room 403**
Email: **Calworks@lattc.edu**
Website **www.lattc.edu/services/support/gain**

GAIN/CalWORKs is a job training program that provides extensive services for student parents receiving Temporary Aid for Needy Families (TANF). Educational services include instructional programs in Adult Basic Education, GED Preparation, English as a Second Language and Tutoring; Certificate and AA/AS Degree Programs in Academic/Career Technical Education and Personal Development/Counseling classes.

Our highly trained staff provides academic, career and crisis/personal counseling and case management. Job development services include career/life skills workshops, work study, work experience, and post- employment services. Childcare is provided through our campus Child Development Center. We also provide an active Men of CalWORKs support group which provides special workshops to assists fathers through completion.



The collaborative services with the County Department of Public Social Services/ GAIN (DPSS) include: contracts, childcare, transportation, textbooks, supplies, progress reports, training and employment, and outside agency verifications. Collaborative partnerships with the campus Career/ Employment Center, Employment Development Division (EDD) and County of DPSS/GAIN involve: Job/Career Expos, Job Assistance, and Career/Job Development Workshops. We work closely with One Stops, Work Source Centers, and Workforce Investment Boards and other community based agencies including our CalWORKs Advisory Board.

The ultimate program goal is to provide quality training and services to all eligible students in their transition from welfare to work to self-sufficiency.

GUARDIAN SCHOLARS PROGRAM

Phone: **(213) 763-3664**
Location: **C2, Room 100**

The Guardian Scholars Program (GSP) exists to provide support for youth who are or have been part of the California foster care system and who are enrolled for studies at Los Angeles Trade Technical College (LATTC). The college environment is a new and different experience for virtually every student. We recognize that this is particularly true for current or former foster youth, who can sometimes experience feelings of insecurity and/or being overwhelmed by the experience. GSP provides a useful array of supportive and reassuring services to assist students in navigating the process.

Students are eligible for GSP if:

- They have applied for admission to LATTC, or are already enrolled in the current semester
- They are currently or were formerly a part of the state's foster care system
- They are between the ages of 16 and 35

INSTRUCTIONAL TELEVISION (ITV)

Phone: **(818) 833-3595**
Email: **weekendcollege@lamission.edu**
Website: **http://www.lamission.edu/ITV/Home.aspx**

Students enrolled in any of the Los Angeles Community College District (LACCD) colleges may enroll in these classes. ITV is a series of eight week intensive courses designed specifically for working adults and busy students. In 8 weeks, through a combination of weekend class meetings, an interactive course website, and additional video or text content, you can earn the same transferable community college course credits that would take twice as long in a traditional semester. Classes are convenient and provide greater flexibility. Students may also complete a large majority of the IGETC/CSU transfer requirement classes in an accelerated schedule with our program. For more information and to learn how to register in ITV classes please visit the website.

INTERNATIONAL STUDENT CENTER

Phone: **(213) 763-5345**
Email: **intstud@lattc.edu**
Location: **E5, Room 316**
Website: **http://college.lattc.edu/isc/**

International Student Center provides information and support services to meet international students' educational goals at LATTC while adhering to the policies and procedures of United State Citizenship and Immigration Services (USCIS) and Immigration & Custom Enforcement (ICE). The International Student Center enhances Student Services division in areas pertaining to diversity of college experience, academic/career planning, and university transfer options. In short, the center compliments the overall college's mission by meeting international students' educational and professional needs in an era of rapid career/technical advancement, and globalization.

International Student Center staff offer the following:

- Provide comprehensive immigration advising based on Federal regulations related to F-1 visa, I-20 related matters, and ongoing assessment of students' status.
- Process admission applications and matriculate applicants for timely enrollment.
- Process OPT (Optional Practical Training) and CPT (Curricular Practical Training) requests for qualified international students.
- Offer thorough academic, career & transfer counseling.
- Develop marketing, recruitment, & outreach strategies to grow International enrollment.

LIBRARY

Circulation Desk: **(213) 763-3950**
Reference Desk: **213) 763-3958**
Location: **D3, 2nd Floor**
Email: **library@lattc.edu**
Website: **http://lattc.libguides.com/homepage**

The Library offers a diverse collection of curriculum-centered, academic and vocational education materials. Research resources include library subscription databases, books, a selection of Faculty Reserve course textbooks, print periodicals, and internet access. The book collection, research databases and online periodicals are accessible 24/7 via the online public access catalog and the Library research databases remote access available at website: http://library.lattc.edu. The Library offers free, time-limited internet access to currently enrolled LATTC students and individual study areas and small group rooms are available. Students need a valid, current student identification card to qualify for Library borrowing privileges. Loan periods are four weeks for circulating books and two hours or one week for selected Library Reserve materials.

Faculty Librarians offer individualized research assistance at the Reference Desk and educate students in developing research skills to enable them to succeed in their course work and research interests. Library Faculty also offers Library resources instruction in Library workshops, Faculty-scheduled Library orientations, and one-unit Library Science 101 Library Research Methods classes.

OFFICE OF STUDENT LIFE

Phone: (213) 763-7200

Location: C2, Room 105

Email: studentlife@lattc.edu

The Office of Student Life (OSL) provides opportunities for students to become engaged in educational, social and community service activities in and outside the classroom. Services such as the club activities, discounts to social events, publicity through the student bulletin and bulletin boards are offered. Other activities handled by this office include: ASO Student Council Board meetings, Inter Club Council Board meetings, Dean's Honors Awards Ceremony, ASO Chartered Club meetings, Commencement, ethnic and multicultural programming, club fairs, blood drives, and scholarships.

The OSL Student Lounge is open to all LATTC students. The lounge doubles as a study lounge during midterms and finals. On special occasions the lounge is used as a community gathering location.

OMBUDSPERSON

Phone: **(213) 763-5351**

Location: **E5, Room 532**

Website: **http://www.lattc.edu/services/rights-complaints-compliance/office-of-the-ombudsperson**

Form: **http://www.lattc.edu/services/rights-complaints-compliance/student-conflict-resolution-process/online-form**

The College Ombudsperson is available to assist students to seek resolution to concerns and problems they encounter. The Ombudsperson assists with the facilitation of the grievance process (E-55). Additional information is listed in the District & College Policies section of the catalog.

ONLINE EDUCATION

Website: **https://ilearn.laccd.edu**

Online courses at LA Trade-Tech College provide the opportunity for students to take classes in a setting other than the traditional face-to-face classroom. LATTC offers courses to meet your individual needs and preferences. All course materials and class activities can be accessed online 24/7 to meet your needs while you are at home, your office or on a trip. With the use of innovative course delivery software, our professors deliver quality instruction at a distance.

PUENTE PROJECT

Phone: **(213) 763-7365**

Location: **E5, Room 214**

Email: **puente@lattc.edu**

Website: **http://www.lattc.edu/services/support/puente**

The Puente Project is an academic preparation program whose mission is prepare students to successfully transfer to four-year colleges and universities and return as role models in the community. Puente uses a combination of teaching, counseling and mentoring to achieve its educational objectives. These three components combine to provide a focused and engaging learning community that allows students to achieve greater gain than would be possible using any single component alone-the whole is greater than the sum of its parts. To be eligible for the program prospective

Puente students must:

- Attend a Puente orientation in the spring or summer prior to entering the program in the Fall semester.
- Be interested in transferring to a four-year university
- Be eligible to register for English 101 in the Fall semester. Be willing to make a one year commitment to the program.
- Be willing to take Puente English and Personal Development/Counseling classes during Fall and Spring semesters.
- Be available to participate in extracurricular activities



SHERIFF'S DEPARTMENT

Phone: (213) 763-3600
Location: D4, Room 150
Website: http://college.lattc.edu/sheriff/

Los Angeles Trade Technical College contracts with the Los Angeles County Sheriff's Department for all law enforcement services. The staff includes a Sergeant, a Team Leader, a Campus Deputy, and (11) armed Los Angeles County Sheriff Security Officers. Los Angeles County Security Officers undergo training with the Los Angeles County Sheriff's Academy. They are classified under 832 PC as security officers. They provide 24 hour, seven-day-a-week security coverage for the campus. The Sheriff's team major objective is to provide a safe and secure campus community for students, faculty and staff. An additional resource for the Department is the Student Cadet Program. The campus utilizes student workers under the supervision of the Sheriff's Department to assist the campus station. Security officers and cadets continuously patrol using bicycle, foot and vehicle patrols 24 hours a day, 365 days a year. The Department's jurisdiction covers all property owned and/or operated by the College.

STUDENT HEALTH CENTER

Phone: (213) 763-3764/3765
Location: D3, Room 107A

The LATTC Student Health Center, under operation by St. John's Well Child and Family Center, provides many services for currently enrolled students. The Student Health Fee allows the majority of the services to be administered free of charge. Licensed physicians, nurse practitioners and behavioral health providers deliver a range of services which include:

- Non-emergency care, including health screenings, general physical exams and limited treatment of illnesses.
- Health and nutrition Information; health education literature.
- Free immunizations.
- Laboratory tests.
- TB skin tests.
- Mental health and substance abuse counseling.
- Women's health services.
- Health education workshops.

STUDENT INTERCOLLEGIATE ATHLETICS

Phone: (213) 763-3726
Location: F2, Room 202

LATTC is a member of the South Coast Conference of which there are 10 colleges. The other colleges are: East Los Angeles College, Cerritos College, Long Beach City College, Mt. SAC College, Pasadena City College, Los Angeles Southwest College, and Compton College. In the Fall, sports offered are Men's and Women's Water Polo, Men's and Women's Basketball and Women's Volleyball. In the Spring, sports offered are Men's and Women's Swimming.

To be eligible for intercollegiate athletic program participation, students must be enrolled and attending 12 or more units. They must also have a physical examination and be cleared by our medical staff.

College Colors and Mascot

The college colors are violet and gold. The college mascot is the Beaver, and LATTC students are known as Beavers.

THE OPEN COMPUTER LAB

Phone: (213) 763-3950
Location: D3, Room 104 M-F
D3, Room 109 Saturday only

The Open Computer Lab ("Open Lab") is available to all LATTC students and faculty free of charge. Students must be actively enrolled in classes at LATTC to log into the computers in the Open Lab and print. Students may use the Open Lab for general computer use, the Internet, and online class access. Students from other colleges in the district can log into the campus WiFi using their PeopleSoft authentication. Online printing is available in the Open Lab through www.printeron.com/lattc/main which also connects to the printers in the Open Lab. The Student Help Desk can provide assistance. For Lab hours or more information, please call (213) 763-3950.

TITLE IX

Phone: (213) 763-7076 or (213) 763-7207
Location: E5, Room 532
Website: http://college.lattc.edu/studentrights/title-ix/resources/

Title IX (of the 1972 Education Amendments) protects students and staff alike from discrimination based on sex, including Sexual Harassment and Sexual Assault, which are forms of Sexual Misconduct. Under Title IX, all people in the educational environment must be treated equitably, regardless of sex, sexual orientation or expression, and/or transgender identity.

If you have experienced or learned of a possible violation of Title IX and/or would like to know about options, resources (including confidential services), the law, or District policy, please do not hesitate to contact a Title IX Coordinator.

UNIVERSITY TRANSFER CENTER

Phone: (213) 763-7154
Location: E5, Room 203
Email: UTC@lattc.edu
Website: http://college.lattc.edu/utc

The University Transfer Center (UTC) offers a variety of activities, services and strategies to explore, discover and create your personal transfer pathway. The UTC is committed to helping you actualize your transfer goal as a partner in planning no matter where you want to transfer. Representatives from the University of California, California State University as well as private institutions such as USC, visit the Center to provide up-to-date information to students via workshops or individual appointments.

Visit our website: http:// college.lattc.edu/utc to find out more about our activities, transfer information and resources.

UMOJA

Phone: (213) 763-7354
Location: E5, Room 214
Website: http://college.lattc.edu/counseling/umojacommunity/

UMOJA actively serves and promotes student success for all students through a curriculum and pedagogy responsive to the legacy of the African and African American Diasporas. African and African American intellectual, cultural, and spiritual gifts inform UMOJA Community values and practices.

The LATTC UMOJA Community seeks to nurture knowledge of and pride in these gifts. The learning experience within the LATTC UMOJA Community offers each individual the opportunity to add their voice and story to the collective voices and stories of the African Diaspora. The LATTC UMOJA Community strives to educate the whole student – body, mind and spirit. Informed by an ethic of love and its vital power, the LATTC UMOJA Community will engage students as full participants in their construction of knowledge and critical thought.

The Umoja Project is an academic preparation program funded by Student Equity funds whose mission is to increase the success rates for African Americans and other students in meeting their educational goals at LATTC with a focus on English and Math.

Students benefit from the Umoja program in the following ways:

- Students belong to a community of students, faculty and staff that support them in meeting their educational goals.
- Students are exposed to courses and teaching strategies designed to support and empower students of color.
- Workshops and activities are related to the skills necessary to be a successful student.
- Opportunity to attend Umoja-sponsored conferences and regional workshops with students from other colleges.
- Access to Umoja Community scholarships.
- Opportunity to learn about unique transfer options including on-the-spot admission to several Historically Black College and Universities (HBCUs) at the annual Fall conference. See http://extranet.cccco.edu/HBCUTransfer.aspx for the list of participating Colleges and Universities.
- Attend HBCU tours at a discount rate.
- Opportunity to develop leadership skills in a supportive environment.
- Participate in individualized and/or group tutoring available in Math and English.
- Assistance with textbooks, supplies and public transportation assistance (U-PASS or LATTC parking permit).

VETERANS STUDENT CENTER

Phone: (213) 763-5305 or (213) 763-5572
Location: D3, Room 101
Email: VeteransStudentCenter@lattc.edu
Website: http://www.lattc.edu/services/support/veterans

Los Angeles Trade-Technical College courses are approved for the training of eligible Veterans, Reservist, National Guard, and eligible dependents, under Federal and State Assistance programs. In order to start training under any of these programs, eligible students should visit the Veterans Student Center.

All Veterans Administration rules and regulations apply to all eligible students attending a Los Angeles Community College and receiving benefits under Chapter 30, 31, 33, 35 & 1606 and National Guard of the United States. All benefits have to be approved through the Department of Defense (DOD).

WORKSOURCE CENTER

Phone: (213) 763-5951
Location: C2, Room 106

The WorkSource Center is part of a District-wide initiative that is designed to support the learning experience of all LACCD college students. The collocated center is part of a national workforce development program that seeks to assist individuals seeking to:

- Develop new job skills
- Receive an array of support services in order to increase the potential for successful completion
- Increase the ability to compete in today's job market

The WorkSource Center is funded by the City of Los Angeles Workforce Development Board and strives to prepare eligible students to attend short-term training as well as enter college courses that can help ensure their successful return into the workforce. The center is funded by the Workforce Innovation and Opportunity Act of 2014 (WIOA) and offers a range of services that includes short-term skills training, case management, career exploration, on-the-job training, support services, and job-placement assistance. As a federally-funded program, the WorkSource Center can assist individuals seeking gainful employment by accessing an array of training activities as well as added-value resources such as, but not limited, the following:

- Unemployment insurance benefits through the Employment Development Department
- Access to support services such as transportation, uniforms, childcare, etc.
- Labor market information that can be used to identify good-paying jobs and careers



L.A. TRADE TECH COLLEGE FOUNDATION

FOUNDATION.LATTC.EDU

The Los Angeles Trade Technical College Foundation supports the school through scholarships, grants, and programs. The Foundation keeps in touch with alumni and community partners to promote employment opportunities and raise funds for LATTC.

Watch for announcements about our student and alumni benefits!

- Scholarship applications
- Tools for the Trades competition
- Other ways to get involved

LATTC
LOS ANGELES
TRADE-TECH
COLLEGE
FOUNDATION





Section III: District and College Policies

ADMISSIONS

Application for Admission

New Students

Prior to the Start of the Semester/Session: New students must submit an application online at http://www.laccd.edu/Students/opencccapply/applylattc/Pages/default.aspx.

APPLICATION DATES (WITHIN THE U.S.)

SEMESTER	MONTH	DATE RANGE
Spring	February	Sept 1 to Jan 2
Fall	August	March 1 to July 15

After the application is submitted...

1. Allow at least 72 hours (3 business days) for the application to be processed.
2. The Los Angeles Community College District maintains a student record system that uses student identification numbers (student ID) assigned by the college. You will receive a Student ID number via email once your application has been processed.
3. You must complete the onboarding process (Orientation, AB 705 new placement process, Counseling) for more information go to the following link: http://college.lattc.edu/oac/
4. After the onboarding process is completed, then you must check your Student Portal - Student Information System (SIS) at http://college.lattc.edu/student/new-students/register-now/ to view your Registration Appointment.
5. You must register on or after the date of your assigned Registration Appointment, you will not be able to register for classes beforehand.

Continuing Students

Students currently enrolled or those that have missed one semester do not need to submit a new application.

Transcripts

Transcripts are required if students wish to claim credit for college courses or to clear a prerequisites for courses completed at other colleges. High school transcripts are required if students wish to use high school foreign language courses for IGETC language certification.

Official transcripts must be submitted directly from the institution to the Admissions and Records Office. All transcripts become the property of the college and cannot be returned to the applicant.

Bridge to College (K-12)

(Board Rules 8100.01, 8100.03)

The Bridge to College Program at Los Angeles Trade Tech College (LATTC) provides students the opportunity to concurrently enroll in college courses while still in high school. The purpose of the program is to provide advanced scholastic and educational enrichment opportunities for eligible students.

Advanced scholastic academic work: courses applicable towards a two or four year degree or courses beyond the scope of a high school's program.

1. Vocational Training: any course in any vocational field (e.g. Architecture, Automotive, Cosmetology, Electrical, etc).
2. Non-Credit Courses: open entry/exit courses that do not carry any college unit credit intended for personal enrichment.
3. Early college experience: students will become familiar with college work and procedures while still in high school.

Students who desire to participate in concurrent enrollment must be recommended by their principal or counselor and have parental permission.

Admission Basis

Although the K-12 school makes recommendations, LATTC can deny admissions based on:

1. Age restrictions for specific courses (e.g. Cosmetology).
2. Completion of a specified grade level.
3. Demonstrated eligibility for instruction using assessment methods (e.g. Math and English).
4. Limitation on enrollment of credit Physical Education (limited on average to four students per section).
5. K-12 concurrent students will be treated as regular college students and are expected to comply with all college rules and regulations.

Fees

The enrollment fees are waived for concurrent students as long as they are enrolled in 11 units or less during a regular term in the Los Angeles Community College District. Students must arrange for their own transportation to and from the college and provide their own books and equipment.

For more information visit the Bridge to College Website at: https://college.lattc.edu/bridges/bridge-to-college-program-k-12-concurrent-enrollment/

International Student Admission

All F-1 visa students seeking admission to Los Angeles Trade Technical College must apply through the International Student Office. All applicants for F-1 status must provide the following documents:

1. Completed International Student application.
2. Evidence of English Competency in any of the following:
   - TOEFL score of 450 (CBT score 133) (IBT score 45) or higher.
   - IELTS 5 OR iTEP 3.5
   - (For Japanese applicant only) An Official STEP EIKEN 2A
   - Grade level or higher.

3. Most recent three years of high school and/or college transcripts
4. Two recent passport-sized photos
5. Affidavit of support
6. Bank letter
7. Processing fee of $50
8. Students applying from within the U.S.A. must provide a current passport, current visa and I-94.
9. All current and previous status documents (I-20, DS-2019, et.)
10. Transfer Status Verification Form
11. All previous US Colleges, universities, and high school official transcripts if applicable.

All documents submitted must be either originals or certified copies, and all documents must be translated into English. Upon receipt of the above mentioned, a decision is made regarding acceptance. If the application is approved, an immigration form I-20 will be issued to the candidate. Immigration regulations require that all F-1 (student) visa holders must be enrolled in a minimum of 12 units and maintain 2.0 grade-point average each semester. Failure to comply with the above will jeopardize your F-1 student visa status.

APPLICATION DATES (OUTSIDE THE U.S.)

SEMESTER	MONTH	DATE RANGE
Spring	February	Sept 1 to Nov 15
Fall	August	March 1 to July 15

Additional information regarding International Student admission or immigration regulations may be obtained by contacting the International Student Office (213) 763-5345 or online at http://college.lattc.edu/isc/

Residency Requirements

California Residence Requirement

A California resident is defined as one who has established both physical presence and intent to make California their permanent home, for more than a year and a day immediately preceding the opening day of instruction. Physical presence is defined as continuous physical presence within the State of California, excluding temporary absences. Intent to make California the permanent home is determined based upon acceptable evidence showing California is the student's permanent home and evidence showing the student is not precluded from establishing permanent residency in the United States.

- If the applicant is under the age of 18, his or her parents must have had legal residence in California for a minimum of 12 consecutive months preceding the day before the first day of the semester or session.
- If the applicant is 18 but not yet 19 years of age, the applicant and the applicant's parents or legal guardian must have combined residence in California for a minimum of 12 consecutive months preceding the day before the first day of the semester or session.
- If the applicant is 19 years of age or older, the applicant must have had legal residence in California for a minimum of 12 consecutive months preceding the day before the first day of the semester or session.
- Applicant must submit proof of residency.

Non-Resident Status

A non-resident student is one who has not resided in the State of California for more than one year and one day immediately preceding the start of the semester or who has shown conduct inconstant with a claim for California residence or who is precluded from establishing domicile in the United States within the last 12 months. Non-residents still may attend the college subject to non-resident tuition fees as established by the District's Board of Trustees.

Residence Reclassification

Students who have been classified non-residents may petition to be reclassified as California residents if their status has changed. The Residence Reclassification form is available in the Admissions and Records Office and must be submitted with the appropriate documentation showing both physical presence and intent to make California their permanent home, for more than one year and one day before the start of an upcoming semester. Reclassification requests must be submitted prior to the start of the semester in which reclassification is requested to be effective.

Residence Classification Appeal

A student may appeal the residence classification determined by the college. The appeal must be made within 30 calendar days of receipt of notification of the residence classification from the Admissions and Records. The written appeal along with supporting documents must be submitted to the college Registrar. Any further appeals will be forwarded to the District Residency Appeal Officer.

AB 540 Non Resident Tuition Exemption

AB 540 is a bill authored by Marco Firebaugh (D-Los Angeles), which was signed into law by the Governor on October 12, 2001. In some cases, this new legislation waives non-resident tuition for students, regardless of immigration status, who have attended and graduated from California high schools.

Students are eligible for exemptions for semesters or terms beginning on or after January 1, 2002 as long as they meet the following conditions:

- Attended a California K-12 for three or more years. Attended a combination of California high school, adult school, or community college for the equivalent of three (3) years or more. Have three or more years of California high school course work and attended a California K-12 for three or more years. Attended a combination of California high school, adult school, or community college for the equivalent of three (3) years or more.
- Graduated from a California high school or earned an equivalent of a high school diploma (for example a GED or a passing score on the high school proficiency exam). Completed or will complete an associate degree from a california community college, or have completed or will complete the minimum requirements at a california community college for transfer to the California State University or the University of California.
- Signed an affidavit stating that the student meets these conditions and stating that the student has filed, or will file, an application with the United States Citizenship and Immigration Service (USCIS) to legalize his/her immigration status as soon as possible.
- Do not currently have "nonimmigrant alien" immigration status (for example F-series student visas and B-series visitor visas).

Additional proof of residency (for example, high school transcripts or diploma) is not required unless the college has conflicting information. Otherwise, the student's signed application for admission and the affidavit requesting the

exemption will be all that is required for the exemption from non-resident tuition. Also, the college is not required to explore the student's eligibility for legalization of residency status nor is the college required to monitor future changes in eligibility. AB 540 does not grant residency in California for Financial Aid or any other purpose; it only exempts eligible students from non-resident tuition fees.

REGISTRATION

Online Registration

After the onboarding process is completed, students must check their Student Portal - Student Information System (SIS) to view their Registration Appointment date. Students must register on or after the date of their assigned Registration Appointment, they will not be able to register for classes beforehand.

Prior to the semester/session start date register through the Student Information System portal at: http://college.lattc.edu/student/new-students/register-now/

It is highly recommended that students register for classes using the Student Portal - Student Information System (SIS) by 11:59pm the Saturday before the semester/session starts. After this day, students will need to request a permission number from the instructor to add a class.

Adding a class (after the semester/session has started)

In order to add a course after the semester has started, students need a class permission number from the instructor. Permission numbers are unique and can be used by the student only once for the specified class, and must be used by the expiration date.

Steps:

1. Attend the first day of class.
2. Request a permission number from the instructor (Note: instructor(s) may or may not issue permission numbers for their course; therefore it is recommended to register for classes before the semester begins).
3. After receiving the permission number, log onto the Student Information System portal and use the permission number to add the class.

It is the student's responsibility to ensure that they meet all requirements for a course (example: pre-requisites, unit limitations, etc.) in order for a permission number to be successfully used.

Note: There are specific deadlines to add and drop classes, please view the Class Schedule on the college website or in your Student Information System portalf or specific dates, for each class.

Program Planning-Unit Limit

In cooperation with a counselor, students should carefully plan their academic programs. Careful planning will facilitate progress through a curriculum with maximum learning and minimum difficulty. In general, students may receive no more than 30 semester or 45 quarter units of credit for remedial coursework. Exceptions to this limitation exist for students enrolled in remedial coursework and students who have learning disabilities. "Remedial coursework" is defined as "pre-collegiate basic skills courses" which are described as "those courses in reading, writing, computation, and English as a Second Language which are designated by the community college district as non-degree credit courses." Degree and non-degree applicable units are noted on student records. A student who intends to transfer to another college or university should consult the catalog of that institution. The Graduation Requirements section of this catalog gives general education requirements for the California State University, and breadth requirements for the University of California, as accurately as could be determined at the time of publication of this catalog. Maximum and minimum unit requirements may apply, as follows:

Unit Maximum

- The maximum study load is 19 units during a regular semester, 9 units in two summer sessions, and winter sessions. The normal class load for students in the Fall or Spring semester is from 12 to 18 units a semester for full-time students. Students who desire to take 19 1/2 or more units must obtain approval through a petition found in the Admissions and Records Office.
- Those students who will be employed while attending college should consider reducing their classes accordingly. It is suggested that those students who are employed full-time should enroll in no more than one or two classes or 9 units maximum.

Minimum study loads for specific programs:

- Veterans and veterans' dependents: 12 units
- Social Security benefits: 12 units
- Foreign Students (F-1 visa): 12 units
- Athletes: 12 academic units

Full-Time Definition

- A program of study 12 units or more (4 units or more in Summer and Winter intersession) is considered a full-time study program.

The Veterans Administration uses the following definition for eligibility:

- full-time benefits: 12 or more units
- 3/4-time benefits: 9 — 11 units
- 1/2-time benefits: 6 — 8 units
- less than 1/2 time: 3 — 5 units (Reservist and National Guard)

Student Right and Responsibilities

(Title 5 Section 55530, Board Rule 8601)

Students are encouraged to establish a "home college" for purposes of receiving matriculation services. Matriculation services provided at one college shall be honored at other colleges within the LACCD. All students shall be required to:

1. Identify an educational and career goal.

2. Diligently engage in course activities and complete assigned coursework.

3. Complete courses and maintain progress toward an education goal and completing a course of study.

Effective Fall 2014, first time non-exempt students seeking priority registration shall be required to:

- Identify a course of study.
- Participate in the AB 705 new placement process.
- Complete an orientation activity provided by the college.
- Participate in counseling to develop at minimum an abbreviated student education plan.

Failure to complete the steps above may result in a hold on a student's registration or loss of registration priority until the services have been completed.

A Comprehensive educational plan must be completed by the 3rd semester or after completion of 15 semester units of degree applicable coursework (effective Fall 2015).

Registration Priority

Students may register for no more than 19 units per semester (primary terms of Fall and Spring), and no more than 9 units during the Summer and Winter sessions. Students in good academic standing shall be granted registration priority on the basis of cumulative units completed within the LACCD in the order listed below, from highest to lowest:

1. New and fully matriculated students as follows:

- Members of the armed forces or veterans pursuant to Education Code 66025.8,
- CalWORKs recipients in good standing with fewer than 100 degree-applicable units,
- Disabled Student Programs and Services (DSPS) students in good standing with fewer than 100 degree-applicable units,
- Extended Opportunity Programs and Services (EOPS) students in good standing with fewer than 100 degree-applicable units,
- Foster youth or former foster youth, pursuant to Education Code section 66025.9 regardless of academic standing and units taken, and
- Homeless youth, pursuant to Education Code Section 66025.9.

2. New and continuing students fully matriculated students participating in special programs as follows:

- Student participating in LACCD intercollegiate sports and identified as a member of a team through the submission of the Form 1 by the college Athletic Director or designee.
- Students participating in the LA College Promise (or equivalent college promise program with other school districts) who have met all required elements of the program.
- In order to accelerate program completion, students who are able to complete their first degree, state approved certificate, or transfer program designated on the Student Education Plan within one semester and who are in good standing with fewer than 100 degree-applicable units earned. Students may receive priority registration under this provision for one semester only.

3. Continuing students in good standing with fewer than 100 degree-applicable units, middle college students in good standing with fewer than 100 degree-applicable units, new, fully matriculated students, returning exempt students and new students who are exempt from matriculation.

4. Students who have lost their enrollment priority, as set forth below.

5. Special K-12 admits pursuant to Education Code section 76001.

To be eligible for registration priority as listed above, students must have completed orientation, placement results using AB 705/Guided Self-placement, and developed student education plans.

Loss of Registration Priority

Students, with the exception of foster youth or former foster youth, will lose registration priority at the first available registration after:

- They are placed on academic or progress probation, or any combination thereof, for two consecutive terms.
- Have earned one hundred (100) or more degree-applicable units in the District; however, non-degree applicable basic skills units do not count towards the 100 units.

Appealing loss of Registration Priority

Each college shall establish a Registration Priority Appeals Committee to review requests from students appealing the loss of enrollment priority. Colleges shall inform students of the appeals process and the time period by which appeals must be submitted. A student may appeal on one or more of the following grounds:

- The student has extenuating circumstances. Extenuating circumstances are verified cases of accidents, illnesses or other circumstances beyond the student's control.
- The student applied for reasonable accommodation for a disability, but did not receive it in a timely manner.
- The student has demonstrated significant academic improvement. Significant academic improvement is defined as achieving no less than a 2.0 grade point average in the prior term.

The College's Registration Priority Appeals Committee shall notify the student within ten (10) business days of its decision. The decision of the college Registration Priority Appeals Committee shall be final. Title 5, CAC, Section 55530 (d)

Exemptions

(Board Rule 8602)

Colleges shall exempt any student from participation in orientation, assessment, counseling or advisement who:

a. Has completed an associate degree or higher, or

b. Has enrolled at the college solely to take a course that is legally mandated for employment or necessary in response to a significant change in industry or licensure standards, or

c. Has enrolled at the college as a Special Admit student. Any student exempted in accordance with this section shall be notified that he or she is exempted from participating in all or part of the matriculation process, and shall be given an opportunity to choose whether or not to participate (Title 5, CAC, Section 55532)

Limitations on Enrollment

(Board Rule 8603)

All courses shall be open to enrollment, however, enrollment in specific courses or programs may be limited as follows

a. Students meeting prerequisites and co-requisites established pursuant to Title 5, and Board Rule 8600.

b. Health and safety considerations, facility limitations, faculty workload, the availability of qualified instructors, funding limitations, the constraints of regional planning or legal requirements imposed by statutes, regulations, or contracts. Fair and equitable procedures will be used for determining who may enroll in affected courses or programs. Such procedures shall be consistent with one or more of the following approaches:

- Limiting enrollment to a "first-come, first-served" basis or
- Limiting enrollment using a registration procedure authorized by Title 5, section 58108; or
- In the case of intercollegiate competition, honors courses, or public performance courses, allocating available seats to those students judged most qualified; or

- Limiting enrollment in one or more sections of a course to a cohort of students enrolled in one or more other courses, provided however, that a reasonable percentage of all sections of the course do not have such restrictions. Students on probation or subject to dismissal, consistent with the provisions of Title 5, and Board Rule 8200 et seq., may be limited to enrollment in a total number of units or to selected courses, or required to follow a prescribed educational plan.

Challenges to Limitation on Enrollment

(Board Rule 8604)

A student may challenge an enrollment limitation on any of the following grounds:

1. The enrollment limitation is either unlawfully discriminatory or is being applied in an unlawfully discriminatory manner;

2. The District is not following its policy on enrollment limitations; or

3. The basis upon which the District has established an enrollment limitation does not in fact exist.

The student shall bear the burden of showing that grounds exist for the challenge. Challenges shall be addressed within 5 working days and, if the challenge is upheld, the enrollment limitation shall be waived.

The college shall, upon completion of the challenge, advise the student that he or she may file a formal complaint of unlawful discrimination pursuant to Title 5, California Code of Regulations, section 59300 et seq. Completion of this challenge procedure shall be deemed to satisfy the requirement of Title 5, California Code of Regulations, section 59328(b) that the District and the student attempted to informally resolve the complaint.

Section Transfer

Students who have a change of work schedule or other extenuating circumstances may request a section transfer from one class to another class in the same Subject.

Consent must be granted by the new instructor for the new class and may involve instructor-to-instructor transfer of grade records. The section transfer request requires incoming instructor and student consent and must be submitted to the Admissions and Records Office by the section transfer deadline (see class schedule).

Cancellation of Classes

The college reserves the right to discontinue any class with insufficient enrollment prior to the end of the second week of the class.

Student Success and Support Program - Matriculation Process

Los Angeles Trade-Technical College supports the transition of new/returning students into the college by providing services that promote academic achievement and successful completion of degrees, transfer preparation, career technical education certificates, or career advancement. Based on student responses to the College application for admission, students will be identified as matriculating or non-matriculating. Students identified as matriculating are referred to core matriculation services: placement/Guided Self-placement, orientation, and counseling. Students must complete the assessment placement, orientation, and counseling (abbreviated student educational plan) prior to their priority registration date and time. The abbreviated student educational plan is provided during the in-person orientations. After registration and sometime during the semester, a comprehensive student educational plan must be completed within a reasonable time period by making an appointment to meet with a counselor. Non-matriculating students are exempt from participating in the core matriculation services, but are advised to access these services if they plan to pursue a degree or certificate.

Orientation, Assessment, Counseling (OAC)

Assessment Placement Process

The Assessment Center offers placement assistance/Guided Self-placement to new/returning and continuing students in accordance to new state policy “AB 705”. Students that attended a US high school within the last ten years through eleventh grade and provided high school cumulative grade point average, qualify for AB 705 placements for English/math. If you don’t meet AB 705 placement policy, please see a Counselor or the Assessment Center for Guided Self-placement assistance. The first step is to submit the LATTC admission application online. All new students are required to participate in the Placement Process. Student ID number is needed prior to participating in the Placement Process. For more information, please call or visit Assessment Center. Any student with a verified disability may arrange if preferred an appointment with the Disabled Student Program and Services at (213) 763-3773 to receive placement assistance.

Note: See entire OAC Segment for additional Assessment references.

Orientation and Counseling

After participation in the Assessment placement process, students must participate in the orientation. In-person orientations are led by faculty counselors and an abbreviated student educational plan will be provided. The orientation schedule is provided to all students participating in the assessment placement process and additional information is available on the LATTC website at http://college.lattc.edu/.

All students should meet with a counselor during the semester to develop a comprehensive student educational plan. All students who have not declared an educational goal and students who are enrolled in pre-collegiate basic skills courses are highly encouraged to meet with a counselor to develop a student educational plan. Students who are on academic or progress probation are referred to participate in a probation workshop.

Exemptions

(Title 5, Section 55532)

Exemption from core matriculation services (orientation, assessment, and counseling) if the student:

Has completed an associate degree or higher;

Has enrolled at the college for a reason other than career development or advancement, transfer, attainment or a degree or certificate, or completion of a basic skills or English as a Second- Language course sequence;

Has completed these services at another community college within a time period as identified by the district;

Has enrolled at the college solely to take a course that is legally mandated for employment as defined in section 55000;

Has enrolled at the college as a special admit student pursuant to Education Code section 76001.

ASSEMBLY BILL 705 (AB 705) & PLACEMENT

ENGLISH, ESL, and MATH Placement

California Assembly Bill (AB) 705, a law which took effect January 1, 2018, requires that California Community Colleges use multiple methods of placing students into transfer-level English, English as a second language (ESL) and math courses. These methods must include the use of high school cumulative grade point average (**HSGPA**), high school course grades, and high school courses taken. The law also requires that the method that yields the **highest** placement overrides all other methods.

In response to the AB 705 law, the California Community Colleges Chancellor's Office established "default" (standardized) HSGPA ranges for colleges to use as the basis for placing students in English and math courses. Colleges may depart from these standardized HSGPA ranges, but they must provide statistical evidence that such departures **meet** or **exceed** the standardized targets set by the California Chancellor's Office, and that students placed into any pre- or corequisite for a transfer-level course are highly unlikely to pass the course **without** it.

Additional resources on AB 705:

- Assembly Bill 705: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB705
- Assembly Bill 1805: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1805
- CCC Chancellor's Office Memo AA 18-40: https://assessmentplacement.squarespace.com/s/0718-AB-705-Implementation-Memorandumpdf.pdf
- CCC Chancellor's Office Memo AA 18-41: https://assessmentplacement.squarespace.com/s/AA-18-41-AB-705-Initial-Guidance-Language-for-Credit-ESL_.pdf

Students who apply to the Los Angeles Community College District (LACCD) using CCCApply or updated their placement information using the LACCD MMAP Web Form on their To-Do Checklist will be placed into tiers (groups) of courses in English; math for business, science, technology, engineering, and mathematics (BSTEM) programs; and statistics or liberal arts math (SLAM). Those who choose to complete ESL placement will be placed into an ESL tier, as well. Each tier includes the transfer-level courses cleared for enrollment, as well as optional or required support courses intended to help students succeed in transfer-level coursework in that tier. These tiers will be combined to produce an "E" placement level (English plus ESL, if completed) and "M" placement level (SLAM plus BSTEM), which will be shown on the online Student Portal Assessment Page.

ENGLISH and ESL Placement Criteria:

English

The following criteria is used for placement into transfer-level English composition courses. Assignment to a tier is based on the student's HSGPA (US high school cumulative grade point average). **All students who provide placement data** may enroll in **transfer-level English composition** (English 101) with or without the optional support courses or services listed in the placement message.

TIER	PLACEMENT CRITERIA
ENG 1	HSGPA ≥ 2.6
ENG 2	1.9 ≤ HSGPA < 2.6
ENG 3	HSGPA < 1.9
ENG N	Insufficient data to apply the above

Note: LATTC students placing in Tier ENG 2 are recommended to enroll in English 72, a support course. Students placing in Tier ENG 3 are highly recommended to enroll in English 72, a support course or English 100.

English as a Second Language (ESL)

Each LACCD college uses its own criteria for ESL placement. In most cases, these involve a combination of a placement exam score and the Multiple-Measures Assessment Project (MMAP) placement criteria, which place students based on their anticipated success rates using high school performance data (like grade point average). Note: ESL placement does not override English placement.

MATH Placement Criteria:

Note: A chart of Math course options is available in the Course Description (Section IV) of this Catalog, under Mathematics.

Business, Science, Technology, Engineering, and Mathematics (BSTEM) Placement Criteria

The following criteria is used for placement into mathematics courses typically Eight of the nine LACCD colleges use the default placement criteria below for placement into courses typically required for business, science, technology, engineering, and mathematics programs (BSTEM). HSGPA=US high school cumulative grade point average; HS=US high school course.

BSTEM TIERS

TIER	PLACEMENT CRITERIA
1	HSGPA ≥ 3.4 or HSGPA ≥ 2.6 & HS Calculus
2	HSGPA ≥ 2.6 or HS Precalculus (or equivalent/higher)
3	HSGPA < 2.6
N	Insufficient data to apply the above

Statistics and Liberal Arts Math (SLAM)

The following criteria is used for placement into courses that may be required for programs that require statistics or liberal arts math (SLAM). HSGPA=US high school cumulative grade point average; HS=US high school course.

SLAM TIERS

TIER	PLACEMENT CRITERIA
1	HSGPA ≥ 3.0
2	3.0 > HSGPA ≥ 2.3
3	2.3 > HSGPA
N	Insufficient data to apply the above

All students who provide placement data except those placed into a level including BSTEM or SLAM tier 3 may enroll in **some form of transfer-level math**. In some cases these include courses with required additional hours per week and/or corequisites. For levels including tier 3, students are required to take a below-transfer-level math courses prior to their transfer-level course. Students are encouraged to see a counselor and the catalog to determine which (if any) of the courses they are cleared to take are required for their education plan.

Guided Self-Placement

Students who are not able to provide enough information for automated placement, who have been away from high school for more than 10 years, or did not attend or graduate from a US high school or earn a GED or CA

High School Proficiency certificate, may use their the Guided Self-placement process. This will likely involve meeting with a counselor or other college officer to discuss topics such as the following in order for **the student** to place him/herself:

- Courses taken and grades received
- The transfer-level English and math courses offered at the student's home college, and which of them (if any) are required for the student's chosen major, general education plan, or transfer plan
- The support courses and services offered to students enrolled in transfer-level courses
- Students' rights under the AB 705 law

The Guided Self-placement process **cannot** require the student to take any exam or test, solve any problems, provide any writing samples, or review any sample questions, problems, or prompts.

Attendance

Only students who have been admitted to the College and are in approved active status may attend classes. Students are expected to be in class on time and to remain for the entire class period. Medical appointments, work, job interviews, child care responsibilities, etc. should be arranged so as not to occur during class time. Please do not make requests for exceptions.

LATTC College Attendance Policy - An instructor may exclude a student who is absent for more hours than the class meets per week or 20% of the total class hours, for short term classes. In addition, an instructor may equate three or more late arrivals or early departures from class as an absence for purposes of class attendance. Student attendance expectations including this policy must be clearly indicated on the course syllabus. Instructors must apply their attendance policy in a consistent manner.

Students who are registered in a class and miss the first meeting may lose their right to a place in the class, but the instructor may consider special circumstances. Instructors will generally only exclude students through the census date for non-attendance. It is the student's responsibility to drop classes in time to avoid fees and/or grades of "W".

Students are responsible for dropping a class that they stop attending. If the class is not dropped, the student may receive an "F" in that class and be responsible for enrollment fee. Any drops or exclusions that occur between the 4th week and the 12th week will result in a "W" on the student's record. Drops are not permitted beyond the 12th week. A grade ("A", "B", "C", "D", "F", "INC", "P", or "NP") will be assigned to students who are enrolled past the 12th week even if they stop attending class. For further details, refer to "W" section of "Grading Symbols and Definitions."

Students who, because of mitigating circumstances, are unable to attend the first-class meeting should leave a voice mail message or email for the faculty member. This, however, does not guarantee students a seat in the class if they do not attend the first-class meeting.

Dropping Classes and Withdrawing from College

The student is asked to consult with a counselor when considering withdrawing from the College. Clearance of the record in courses where equipment has been issued is required when the student separates from such classes. Individual classes may be dropped by logging on to the student portal. Students who cease attending class or classes officially or unofficially are Subject to the following regulations:

1. Dropping officially from a class or withdrawing from the College by the end of 20% of the term will prevent classes from appearing on the student's permanent record.

2. Dropping a class after 20% of the term is completed will result in a "W" being recorded by the Admissions Office. IT IS THE STUDENT'S RESPONSIBILITY TO DROP BEFORE THE DEADLINE DATES. Excessive "W" grades may lead to progress dismissal.

3. Students are not permitted to drop a class or withdraw from the College after 75% of the term. Grades shall be recorded by the instructor based on the grade-point aver- age of the student during the period of attendance. Stu- dents may receive a failing grade in any course when they stop attending class and do not officially drop the class.

4. Students seeking withdrawal from a class after the "W' deadline for extenuating circumstances must submit a petition to Admissions clearly stating the circumstances and providing documentation of such circumstances. Petitions are to be available in the Admissions Office after the "W" deadline. Petitions will not be accepted without documentation.

The Registrar will review petitions. The following criteria will be applied:

Verified cases of accidents, illness, or other circumstances beyond the control of the student, such as death of an immediate family member, natural disaster, and/or other reason- able obstacles that prevented a student from complying with college procedures for dropping a class.

Students wishing to appeal the final decision should be referred to the Student Grievance Procedures, Administrative Regulation E-55.

IT IS THE STUDENT'S RESPONSIBILITY TO DROP CLASSES HE/SHE NO LONGER WISHES TO ATTEND . FAILURE TO DROP A CLASS, MAY RESULT IN FEE CHARGES, AND/ OR HAVING GRADES OF "W" OR "F" LISTED ON OFFICIAL TRANSCRIPTS.

"W" records count as attempted enrollment . Students are currently limited to three attempts in the same course.

Final Examinations

Final examinations are to be given in all subjects according to the schedule printed in the Schedule of Classes. No student will be excused from taking a final examination. All faculty shall retain the final exams of every student for a minimum of one year after the end of the semester for which the final exam was given in order to permit students to examine their graded final exams.

Student Fees

(Note: Fees Subject to change by the California legislature.)

Enrollment Fee for Residents

California residents are required to pay $46 per unit. For example, if you take 10 units, the cost is $460.

Fee for Out Of State Non-Residents

United States Citizens and Permanent Resident Card holders who have lived in California for less than a year are required to pay a non-resident tuition fee of $265 per unit plus an enrollment fee of $46, and a Non-Resident Capital Outlay fee of $0 per unit for a total of $311 per unit.

Fee for Residents of a Foreign Country

Students with Visas which require residency in a country outside the United States are required to pay a non-resident fee of $242 per unit plus an enrollment of $46 per unit, and a Non-Resident Capital Outlay fee of $9 per unit for a total of $297 per unit.

Health Fee

(Board Rule 8502)

The Board of Trustees shall give diligent care to the health, safety, and physical development of students enrolled in the public colleges under its jurisdiction. The Chancellor or designee shall establish such regulations as shall be necessary for the administration of college health program. The Board of Trustees shall require that each campus collect a mandatory fee for these services to all full-time and part-time students pursuant to Education Code Section 76355 and Title 5 of the California Code of Regulations, Section 54702, which define the services, fee procedures, and specific allowable fee expenditures. Except in cases where it is allowable under the law, health services will not be provided to minors under the age of eighteen (18), unless the student has a consent form signed by his or her parent or guardian.

Exempted from the payment of these fees are: (a) students who depend exclusively on prayer for healing in accordance with the teaching of a bona fide religious sect, (b) students who are attending classes under an approved apprenticeship training program, (c) noncredit education students, (d) students enrolled in District colleges exclusively at sites where student health services are not provided, (e) students who are enrolled in District colleges exclusively through Instructional Television or distance education classes, (f) students who are enrolled in District colleges exclusively through contract education, (g) students admitted as Special Part-time Students (K-12) or Special Summer School Students under the provisions of Board Rule 81001.01 or 81001.02. Student exempted under the provisions of (b), (c), or (g) above are eligible to receive the services of the college health program; all other exempted students are not eligible to receive the services of the college health program, unless they opt to pay the fee.

Associated Student Organization Fee

The ASO fee is $7.00 per semester and $3.00 for summer or winter session. This fee entitles you to participation in student organization activities. The ASO sticker cannot be refunded.

SEVIS Fee

A $25.00 non-refundable fee is added to the enrollment fee each semester of attendance for international students (F-1 visa). Fees are levied for the monitoring and maintenance of the SEVIS system as required by the Department of Home- land Security.

Instructional Materials Fee

Students may be required to pay for instructional and other materials required for some courses. Such materials shall be of continuing value to a student outside of the classroom setting and shall not be solely or exclusively available from the District.

California College Promise Grant **(previously known as BOG Fee waiver)**

The California College Promise Grant will waive all per unit enrollment fees for an eligible student. It will not waive any material fees, student representation fees, or health fees.

To qualify you need to meet one of the following criteria:

- Be classified as a resident of California or AB 540 student, according to Admissions and Records.
- Meet income criteria by: Providing proof that you are receiving monthly cash assistance from TANF/CalWORKs, SSI/SSP or General Assistance (or, if a dependent student, your parent(s) receive this assistance).
- Establishing that your income (or your parent's income, if you are a dependent student) was within set income standards.
- Completing a FAFSA (Free Application for Federal Student Aid) or California Dream Application and have remaining "financial need" of at least $1,104.
- Being a Congressional Medal of Honor recipient (or dependent); being a dependent of a victim of the September 11, 2001 terrorist attack; having certification from the California Department of Veteran Affairs or the National Guard Adjutant General; or being a dependent of a deceased law enforcement/fire suppression personnel killed in the line of duty that you are eligible for this waiver.

FEE REFUND POLICIES

Full- Term Course Fees

A student will receive a full refund of the enrollment fee if they drop by the refund deadline. Thereafter, no refund is authorized, except when college action to cancel or reschedule a class necessitates the drop. After the refund deadline, a student may drop a course and apply the fee previously paid towards meeting the cost of the fee of a course to be added during the same semester. Please note that after the refund deadline there will be absolutely no refunds even when an added course has fewer units than a course that was dropped. For example, a student who enrolls in 3 units, then after the refund deadline drops those 3 units and adds another 3 units, will not be charged an additional fee. A student who enrolls in 3 units, then after the refund deadline drops the 3 units and adds 2 units, will not be charged for the 2 units and will not receive a refund for the difference between 3 and 2 units. SEE SCHEDULE OF CLASSES FOR DATES ON REFUNDS .

Short-Term Course Fee

A student will receive a full refund up to the end of a period of time equal to approximately 10% of the total class time. There will be no refunds after that time unless a student must drop a class because it was canceled or rescheduled by the college administration.

Non-Resident Tuition Fee

Refunds of non-resident tuition for full-term or short-term courses are governed by the same policies as indicated above. Once the class is dropped prior to the deadline date, the non-resident student must request a refund in writing (a form is provided in the Fiscal Office). All refunds for non-resident tuition will be by check and mailed to the student.

Audited Course Fee

Audited classes are not taken for college credit and cannot be dropped. No refund is given for audit courses no longer attended.

Parking Fee

Parking permits may be returned and refunded within the first two weeks of school at the Fiscal Office.

Health Center

Refunds for the health center are made only to students who withdraw entirely from the college by dropping all their activities units by the refund deadline of the semester.

Associated Student Union Fees

Associated Student Union fees are not refundable.

ACADEMIC POLICIES

Grading Symbols and Definitions

(Board Rule 6700)

Only the symbols in the grading scale given in this section shall be used to grade all courses.

Grades shall be averaged on the basis of the point equivalencies to determine a student's grade point average, using the following evaluative symbols:

SYMBOL	DEFINITION	GRADE
A	Excellent	4
B	Good	3
C	Satisfactory	2
D	Less than satisfactory	1
F	Failing	0
P	Pass (At least satisfactory – units awarded not counted in GPA. Has the same meaning as "CR" as that symbol was defined prior to June 30, 2007.) Applies to credit and noncredit courses.	
NP	No Pass (Less than satisfactory – units awarded but not counted in GPA. NP has the same meaning as "NC" as that symbol was defined prior to June 30, 2007.) Applies to credit and noncredit courses.	
SP	Satisfactory Progress towards completion of the course (used for noncredit courses only and is not supplanted by any other symbol)	

Explanation of Symbols Without Impact on Grade Point Average:

SYMBOL	DEFINITION
EW	Excused Withdrawal

The EW symbol may be used to to denote Excused Withdrawal. The purpose of the EW non-evaluative symbol is to permit a student to withdraw from a course for reasons beyond their control. A student may request to use an EW for only one course or all courses in a term depending on the reason for the request. It is possible a student, based on an illness for example, is not able to participate in an in-person course but is able to continue with online courses. Colleges should use individual case facts to determine the continuity of some courses and not others. An EW symbol may be requested by the student at any time during the semester and no later than the date when the district/college policy allows a grade change. Excused Withdraw shall not be counted in progress probation or dismissal calculations nor shall it be counted towards the permitted number of withdrawals or counted as an enrollment attempt. The financial aid of a student may be affected depending on individual circumstance. A student should consult with the financial aid staff regarding any impact.

Title 5, Section 55024.

SYMBOL	DEFINITION
I	Incomplete

Incomplete academic work for unforeseeable, emergency, and justifiable reasons at the end of the term may result in an "I" symbol being entered in the student's record. The condition for removal of the "I" and the grade which is assigned in lieu of shall be stated by the instructor in an Incomplete Grade Record.

This record shall be given to the student, with a copy on file in the college Admissions Office until the "I" is made up and a final grade assigned, or when one year has passed. The "I" symbol shall not be used in calculating units attempted nor for grade points. The "I" may be made up no later than one year following the end of the term in which it was assigned. The student may petition for a time extension due to unusual circumstances.

Note: Courses in which the student has received an Incomplete ("I") may not be repeated unless the "I" is removed and has been replaced by a grade of "D" or "F". This does not apply to courses which are repeatable for additional credit.

SYMBOL	DEFINITION
IP	In Progress

The "IP" symbol shall be used only in those courses which extend beyond the normal end of an academic term. It indicates that work is "in progress," but that assignment of a grade must await the course completion. The "IP" symbol shall remain on the student's permanent record in order to satisfy enrollment documentation. The appropriate evaluative grade and unit credit shall be assigned and appear on the student's record for the term in which the required work of the course is completed. The "IP" shall not be used in calculating grade point averages.

SYMBOL	DEFINITION
RD	Report Delayed

The "RD" symbol may be assigned when there is a delay in reporting the grade beyond the control of the student. The "RD" may be assigned by the Dean of Student Services only. It is a temporary notation to be replaced by a permanent symbol as soon as possible.

SYMBOL	DEFINITION
W	Withdrawal

Withdrawal from a class or classes shall be authorized through the last day of the fourteenth week of instruction or 75% of the time the class is scheduled to meet whichever is less.

No notation ("W" or other) shall be made on the record of a student who withdraws before the census date of the course.

Withdrawal between the end of the fourth week (or 30% of the time the class is scheduled to meet, whichever is less) and the last day of the fourteenth week of instruction (or 75% of the time the class is scheduled to meet, whichever is less) shall be authorized after informing the appropriate faculty. A student who remains in class beyond the fourteenth week or 75% of the time the class is scheduled shall be given a grade other than a "W", except in cases of extenuating circumstances.

After the last day of the fourteenth week (or 75% of the time the class is scheduled, whichever is less) the student may withdraw from class upon petition demonstrating extenuating circumstances and after consultation with the appropriate faculty.

Extenuating circumstances are verified cases of accidents, illness, or other circumstances beyond the control of the student. Withdrawal after the

end of the fourteenth week (or 75% of the time the class is scheduled, whichever is less) which has been authorized in extenuating circumstances shall be recorded as a "W".

For purposes of withdrawal policies, the term "appropriate faculty" means the Instructor of Record for each course in question or, in the event the instructor cannot be contacted, the department chair or equivalent faculty officer.

The "W" shall not be used in calculating units attempted nor for the student's grade point average.

"W's" will be used as factors in progress probation and dismissal.

A "W" shall not be assigned, or if assigned shall be removed, from a student's academic record, if a determination is made that the student withdrew from the course due to discriminatory treatment or due to retaliation for alleging discriminatory treatment or that the student withdrew because he or she reasonably believed that remaining in the course would subject him or her to discriminatory treatment or retaliation for alleging discriminatory treatment.

A student may not withdraw and receive a "W" symbol on his or her record more than three times for enrollment in the same course. A student may enroll again in the same course after having previously received the authorized number of "W" symbols in the same course, if a designated college official approves such enrollment after review of a petition filed by a student.

SYMBOL	DEFINITION
MW	Military Withdrawal

The MW symbol may be used to denote military withdrawal.

"Military Withdrawal" occurs when a student who is a member of an active or reserve United States military service receives orders compelling a withdrawal from courses. Upon verification of such orders, a withdrawal symbol may be assigned at any time after the period established by the governing board during which no notation is made for withdrawals. The withdrawal symbol so assigned shall be a "MW."

Military withdrawals shall not be counted in progress probation and dismissal calculations. "MW" shall not be counted for the permitted number of withdrawals. The District shall refund the entire enrollment fee unless academic credit has been awarded.

Title 5, C.C.R., Section 55022, 55024

Pass/No Pass

(Board Rule 6701)

SYMBOL	DEFINITION
P/NP	Pass/No Pass

(Formally Credit/No Credit)

Colleges may designate courses in the college catalog wherein all students are evaluated on a "pass-no pass" basis or wherein each student may elect on registration or no later than the end of the first 30% of the term, whether the basis of evaluation is to be "pass-no pass" or a letter grade. These courses will be noted in the college catalog as being eligible for the "pass-no pass" option.

The pass-no pass grading system shall be used in any course in which there is a single satisfactory standard of performance for which unit credit is assigned. A grade of Pass shall be assigned for meeting that standard (earning 70% or higher), and a grade of No Pass shall be assigned (earning a grade below 70%) for failure to do so.

The student who is enrolled in a course on a "pass-no pass" basis will be held responsible for all assignments and examinations required in the course and must meet the same standards of evaluation as required for all students.

Title 5, C.C.R., 55022

- ACCEPTANCE OF PASS CREDITS - All courses and units (including those units earned on a "pass-no pass" basis) used to satisfy requirements, including graduation requirements, educational program requirements and transfer core curriculum requirements, shall be from accredited institutions, unless otherwise specified in this Board Rule.

  "Accredited institution" shall mean a postsecondary institution accredited by an accreditation agency recognized by either the U.S. Department of Education or the Council on Postsecondary Accreditation. It shall not mean an institution "approved" by the California Department of Education or by the California Council for Private Postsecondary and Vocational Education. E.C. 66721, Title 5, C.C.R., 53406, 55000, 55022 (Board Rule 6701.10).

- RECORDING OF GRADE - A student who is enrolled in a course on the "pass-no pass" basis shall receive both course and unit credit upon satisfactory completion of the course. Satisfactory completion (earned 70% or higher) is equivalent to the grade of "C" or better. A student with unsatisfactory performance (earned less than 70%) will be assigned a "no pass" grade. Title 5, C.C.R., 55022 (Board Rule 6701.11).

- GRADE POINT CALCULATION - Units earned on a "pass-no pass" basis shall not be used to calculate grade point averages. However, units attempted for which the "NP" (No Pass) symbol is recorded shall be considered in probationary and dismissal procedures. Title 5, C.C.R., 55022 (Board Rule 6701.12).

- CONVERSION TO LETTER GRADE - A student who has received credit for a course taken on a "pass-no pass" basis may not convert this credit to a letter grade. Title 5, C.C.R., 55022 (Board Rule 6701.13).

CAMPUS PROCEDURE:

- LATTC Adopted Policy: Discipline/Program faculty may designate courses in the college catalog wherein all students are evaluated on a "pass-no pass" basis or wherein each student may elect on registration or no later than the end of the first 30% of the term, whether the basis of evaluation is to be "pass-no pass" or a letter grade. A final list of faculty-designated courses shall be annually approved by the LATTC Curriculum Committee; and such courses will be noted in the college catalog as being eligible for the "pass-no pass" option. (Approved, LATTC Academic Senate, 09/04/18).
- Certain courses are evaluated on a Pass/No Pass basis only. Letter grades may not be assigned for these courses.
- In addition to courses mentioned above, a student has the option of selecting one course per semester to be graded on a Pass/No Pass basis. This option is available only for courses listed in the Schedule of Classes under "Courses Offered on a Pass/No Pass Basis."

- Selection of courses to be taken on a Pass/No Pass basis must be made during the time indicated in the schedule. Late requests will not be accepted.
- Once a course has been selected to be graded on a Pass/No Pass basis, a student cannot receive a letter grade for the course. The decision to take a course on this basis is irrevocable.
- The general practice at most four-year colleges is not to accept "Pass/No Pass" grades for courses required for the major or preparation for the major. Consult with the University Transfer Center utc@lattc.edu and the intended university for policies.

DESIGNATED COURSES PASS/NO PASS

Architecture	All courses
Astronomy	001
Biology	003, 006, 007
Chemical Technology	All courses
Chemistry	All courses
Cooperative Education	All courses
Electronics	All courses
Electronics Technology	All courses
Geology	001, 006
Labor Studies	101, 102, 103, 104, 105, 106, 107, 108, 109, 113, 114, 115, 118, 121, 122, 123, 125, 126, 127, 128, 132, 134, 135
Learning Skills	All courses
Mathematics	All courses
Microbiology	All courses
Microcomputer Technician	All courses
Physics	All courses
Solid Waste Management	All courses
Supply Water Technology	All courses
Waste Water Technology	All courses

Grades and Grade Changes

(Board Rule 6703)

The Instructor of Record for the course shall determine the grade to be awarded to each student. The determination of the student's grade by the instructor is final in the absence of mistake, fraud, bad faith, or incompetency. For purposes of this section, "mistake" may include, but is not limited to, clerical errors and errors made by an instructor in calculating a student's grade. The removal or change of an incorrect grade from a student's record shall only be done upon authorization by the Instructor of Record for the course, or upon authorization by the College President upon the conclusion of the grade grievance process.

In the case of fraud, bad faith, or incompetency, the final determination concerning removal or change of grade will be made by the College President.

No grade may be challenged by a student more than one year from the end of the term in which the course was taken absent extenuating circumstances; if a college's academic senate has determined that extenuating circumstances apply, then that period of time during which grades may be challenged should be more than one year, such longer period shall apply at that college. EC 76224 Title 5, C.C.R., Section 55760

Students should file a petition for grade change in the Admissions and Records Office to have an instructor reevaluate a course grade, provided the grade in question was originally issued within the last year.

Transcripts

Upon written request of the student, a copy of the student's academic record shall be forwarded to the student or his or her designated addressee promptly by U.S. mail, electronically or another responsible forwarding agency.

A student or former student shall be entitled to two free copies of the transcript of his or her record or two free verifications of student records. Additional copies shall be made available to the student, or to an addressee designated by the student, at a cost of $3. Students may request special processing to expedite their request for an additional fee of $7 per transcript or verification. This option is subject to the College's ability to provide this service. Requests for transcripts or verifications may be obtained online. Transcripts from another institution are not available for copying.

The student's transcript and/or verification of enrollment may be withheld if 1) any library books or other library materials are charged to the student and are unreturned, 2) there are any unpaid fees or charges due to the College, or 3) any other unreturned college property. The transcript may be withheld until these obligations of the student to the College are discharged.

Course Repetitions and Withdrawals

(Board Rule 6704)

Effective Summer 2012, course withdrawal ("W") and/or a substandard grade ("D," "F," or "NP") count as an attempt at a course. Only three attempts at any one course will be allowed, with some exceptions. Listed below are the new rules that all students need to know about.

- Students who drop or are excluded after the last day to drop without a grade of "W" will have a "W" appear on their transcript. The "W" will count as an attempt for that course.
- A course in a student's transcript which currently shows a recorded "W" counts as an attempt for that course.
- Students will not be allowed to register for any course within the LACCD if there are three recorded attempts for that course in any combination of W, D, F, or NP grades.
- Add permits for a course within the LACCD will not be processed if there are three recorded attempts for that course in any combination of W, D, F, or NP grades.
- For courses specifically designated as "repeatable," students may repeat up to three times. (See Title 5 California Code of Regulations sections 55040, 55041, 58161).
- When the student's number of enrollments in a course exceeds the allowable amount, the student may petition for an additional enrollment in cases of extenuating circumstances.
- Be sure you are academically ready for classes you enroll in.
- If you must drop a course, drop before the specified deadline for dropping a class without a grade of "W."
- See a counselor before making decisions that could affect your educational plan.

Course Repetition in which a satisfactory grade was recorded

(Board Rule 6704.30)

Repetition of courses for which a satisfactory grade ("A", "B", "C", "CR", "P") has been recorded shall be permitted only upon advance petition of the student and with the written permission from the college president, or designee, based on a finding that extenuating circumstances exist which justify such repetition or that there has been a significant lapse of time since the student previously took the course. Significant lapse of time is defined as no less than 36 months since the most recent grade was awarded.

When course repetition under this section occurs, the student's permanent academic record shall be annotated in such a manner that all work remains legible, ensuring a true and complete academic history.

Grades awarded for courses repeated under the provisions of subsection "a" and "b" of this section shall not be counted in calculating a student's grade point average.

When such repetition is necessary for a student to meet a legally mandated training requirement as a condition of continued paid or volunteer employment, such courses may be repeated for credit any number of times, and the grade received each time shall be included for purposes of calculating the student's grade point average. The college shall establish policies and procedures requiring students to certify or document that course repetition is necessary to complete legally mandated training pursuant to this subsection. The college's process for certification or documentation of legal training requirements shall be developed in accordance with the provisions of Chapter XVIII of the Board Rules -- ACADEMIC SENATE AND BOARD OF TRUSTEES SHARED GOVERNANCE POLICY.

A student may repeat any course if the college has properly established a recency prerequisite for a course, if there has been "significant lapse of time." In no instance shall this be less than three years.

A student with a disability may repeat a class any number of times, if such repetition is required as a disability-related accommodation for that particular student (Title 5, C.C.R., Sections 55763 and 58161).

Credit by Examination

(Board Rule 6702)

LATTC Adopted Policy: Discipline/Program faculty may designate courses in the college catalog for Credit by Examination designation. A final list of faculty-designated courses shall be annually approved by the LATTC Curriculum Committee; and such courses will be noted in the college catalog as being eligible for Credit by Examination. (Approved, LATTC Academic Senate, 09/04/18)

For courses listed in the college catalog wherein any student who satisfies the following requirements may be granted credit by examination:

a. The governing board shall adopt and publish policies and procedures pertaining to credit by examination; and

b. The governing board may grant credit to any student who satisfactorily passes an examination approved and conducted by proper authorities at each college. Such credit may be granted only to a student who is registered at the college and in good standing and only for a course listed in the college catalog.

c. The nature and content of the examination shall be determined solely by faculty in the discipline who normally teach the course for which credit is to be granted in accordance with policies and procedures approved by the college curriculum committee. The faculty shall determine that the examination adequately measures mastery of the course content as set forth in the outline of record. The faculty may accept an examination conducted at a location other than the college.

d. A separate examination shall be conducted for each course for which credit is to be granted. Credit may be awarded for prior experience or prior learning only in terms of individually identified courses for which examinations are conducted.

e. The student's academic record shall be clearly annotated to reflect credit was earned by examination.

f. Grading shall be according to the regular grading system, except that students shall be offered a "pass-no pass" option if that option is ordinarily available for the course.

g. Units for which credit is given for credit by examination shall not be counted in determining the 12 semester units in residence required for an associate degree.

h. The college may charge a student fee for administering an examination provided the fee does not exceed the enrollment fee which would be associated with enrollment in the course for which the student seeks credit by examination.

Title 5, C.C.R., Section 55050

Courses Offered on a Credit-By-Exam Basis

The following Credit by Examination listing has been established per LACCD Board Rule 6702

Architecture:	All courses
Automotive Collision Repair:	All courses
Automotive Technology:	All courses
Baking, Professional	112
Building Construction Techniques:	All courses
Carpentry:	All courses
Chemical Technology	113, 123, 141
Culinary Arts	112
Diesel and Related Technology:	All courses
Drafting:	All courses
Electrical Construction and Maintenance:	All courses
Electronics Technology:	All courses
Environmental Science	001
Fashion Design	111, 112, 120, 122, 222, 223, 224, 225, 226, 227, 228, 229, 236, 237, 238, 239, 240, 241
Fashion Merchandising	001, 010
Geography	001
Geology	001
Health	046
Health Occupations	062, 063, 064, 065
History	011, 012

Credit by Exam (cont'd)

Kinesiology Major	134, 135
Machine Shop-CNC:	All courses
Mathematics:	All courses
Manufacturing and Industrial Technology:	All courses
Microcomputer Technician:	All courses
Motorcycle Repair Mechanic:	All courses
Nursing, Registered	131, 132
Physics	012, 029A
Psychology	001
Plumbing:	All courses
Refrigeration and Air Conditioning:	All courses
Sign Graphics	101, 102
Solid Waste Management Technology:	All courses
Street Maintenance:	All courses
Supply Water Technology:	All courses
Tailoring	250
Visual Communications	103, 105, 118, 119, 129
Waste Water Technology:	All courses
Welding Gas and Electric:	All courses

Transfer Credit Policy

Transfer credit for lower division courses taken at regionally accredited institutions of higher education in the United States is accepted toward Associate Degrees or Certificates. Students must provide official transcripts. Please have your school(s) mail them directly to Admissions & Records.

Students should make an appointment with a counselor for transcript evaluation.

Disclaimer: Every effort has been made to ensure the articulation information for the California State Universities and the University of California institutions are accurate, including the CSU GE and IGETC areas. However, this information is unofficial and should be checked against the official information found on the ASSIST website at www.assist.org.

Foreign Transcript Credit Policy

Students who have completed college level courses at schools outside the United States may petition for an unlimited number of lower division units of credit toward an Associate Degree or Certificate under the following conditions:

1. Students must submit a detailed evaluation from an approved evaluation service. Students are responsible for the cost of this service.
2. The foreign university or college must have been approved by that country's Ministry of Education at the time the student attended.
3. No courses taken outside the United States may be used to satisfy the Associate Degree's Reading and Written Expression or Oral Communication requirement.
4. No course may be used to satisfy the Associate Degree's American Institutions requirement.
5. In cases where equivalent course credit is not granted, elective credit may be awarded.

Students should make an appointment with a counselor for a transcript evaluation.

Advanced Placement Credit (AP)

(Administrative Regulation E-110)

1. Course Equivalency

Course equivalency for Advanced Placement exams, for purposes other than meeting General Education and graduation competency requirements for the Associates Degree, shall be determined by the college, using policies developed in consultation with the college's Academic Senate, in accordance with the provisions of LACCD Board Rules, Chapter XVIII, Article I.

Course equivalency does not award unit credit. For unit credit policy, see item 3 below.

2. Use of Advanced Placement exams for meeting General Education Requirements and graduation competency requirements for the Associate of Arts and Associate of Science Degrees

Advanced Placement (AP) Exams shall be used toward meeting General Education requirements and Graduation Competency for the Associate of Arts and Associate of Science Degrees, as defined in Board Rule Chapter VI, Article II.

Students must receive a passing score (3, 4, or 5) on an AP exam to receive the credit indicated in Appendix A.

3. Advanced Placement Unit Credit

For the purpose of granting unit credit towards meeting General Education and graduation competency requirements, the LACCD shall follow the guidelines for Advanced Placement credit set by the American Council on Education:

In general, the recommended minimum number of semester hours from ACE corresponds to the status of the corresponding high school AP course:

- 3 semester hours are recommended in the case of a half-year course
- 6 semester hours for most full-year courses
- 8 semester hours for some of the mathematics, sciences, and foreign languages

4. CSU GE Breadth and IGETC

The placement of courses in the California State University General Education Breadth (CSU GE Breadth) and the Intersegmental General Education Transfer Curriculum (IGETC) Plans is determined by the University of California and California State University systems respectively; therefore it is not necessary for the college to grant course equivalency for this to occur. Appendix A indicates how AP tests are used to meet these requirements.

College Level Examination Program (CLEP)

(Administrative Regulation E-123)

1. Course Equivalency

Course equivalency for CLEP (College-Level Examination Program) exams, for purposes other than meeting the LACCD General Education Plan and Graduation Competency requirements for the Associate Degree, shall be determined by the college, using policies developed in consultation with the college's Academic Senate, in accordance with the provisions of LACCD Board Rules, Chapter XVIII, Article I.

Course equivalency does not award unit credit. For unit credit policy, see item 3 below.

2. Use of CLEP exams for meeting General Education Requirements and Graduation Competency Requirements for the Associate of Arts and Associate of Science Degrees

Students must receive a passing score (50) on most CLEP exams, except Foreign Language level 2 exams which require a higher score as noted in Appendix A.

Students who take an Advanced Placement (AP) exam, an International Baccalaureate (IB) exam or College-Level Examination Program (CLEP) exam in the same topic area will receive credit for only one exam. (For example, if a student takes both the CLEP exam in Biology and the AP exam in Biology, they will only be awarded credit for one exam because the topics are duplicative). The college should award credit for the exam that most benefits the student.

3. CLEP Unit Credit

For the purpose of granting unit credit towards meeting General Education and Graduation Competency requirements, the LACCD shall follow the guidelines for CLEP credit set by the American Council on Education:

- 3 semester hours are recommended in the case of a half-year course.
- 6 semester hours for most full-year courses.
- 12 semester hours for Level 2 Foreign Language exams equivalent to four semesters of college level foreign language course work.

Credit for Military Service Training

Students who are currently serving in or have served in the military service, should, after successful completion of at least one course with the Los Angeles Community Colleges, request an evaluation of credit earned through military service training schools and/or military occupational specialties.

PREREQUISITE POLICY

(Board Rule 8605)

Many courses listed in the class schedule will indicate suggested prerequisite, co-requisite, concurrent enrollment or recommended preparation/advisory listed after the name of the course. These recommendations were made after careful consideration by the faculty of that department. The Los Angeles Community College District has adopted a policy based upon a model developed by the State Chancellor's Task Force in conjunction with the State Academic Senate and Chief Instructional Officers and based upon Title V Article 2.5 Section 55200 and Article 4 Section 55530 of the Matriculation Regulations. In other words, your success is our primary goal.

Prerequisite - A prerequisite is a condition of enrollment that a student is required to meet in order to demonstrate readiness for enrolling a course or educational program

Co-Requisite - are courses that a student is required to take simultaneously in order to enroll in another course.

Advisory - An advisory is a course that a student is advised, but not required, to take in conjunction with, or prior to, a course or program.

A student can satisfy a prerequisite several ways:

1. Take the prerequisite course at LATTC or another college in the District and achieve a grade of "C" or better, so that it shows on your transcript;
2. Provide Provide proof that you've successfully completed the requirement(s) at another college. You can bring official transcripts/ AP scores from another school to the Assessment Center and they will be reviewed. Please provide the Assessment Center with a copy of your proof. If your Prerequisite petition for the course is approved, you'll be given a clearance to register. Please note: Prerequisite Clearance may take up to 10 business days.
3. Take a test-known as a Challenge Exam-to demonstrate that you have the knowledge and skills necessary to successfully prepare you for the course you want to take. Please submit challenge exam one month prior to the start of the term you plan to take the course.
4. If the course you want to take has an assessment test scores as prerequisite, you'll need to visit the Assessment Center and complete the required test. Your score will then be given to you, and the prerequisites(s) will be cleared once you receive a copy of your placement score(s).

For any questions or need more information, please contact the Assessment Center at (213) 763-5339.

Prerequisite Challenge Process

Prerequisites, co-requisites/concurrent enrollment requirements must be followed. If you do not agree with the requirement made by the faculty, you have the right to challenge. Contact the Assessment Center for the challenge process procedures and form. Once a challenge form is submitted, the committee will review your request and documentation. You will be notified within five (5) working days of the final decision.

Challenge Process Information:

1. Complete the Challenge Application; provide an explanation and supporting documentation for your reason to challenge. You will need to present a valid photo ID to the Assessment proctor at the time of challenging.
2. Complete the Subject Exam of the prerequisite course you are challenging. This exam is to be completed in the Assessment Center.

3. This is a one-time test. You will not be given any credit or grade for successfully passing the Challenge Exam. You will need to receive at least 70% to pass. If you are challenging several levels within the same subject you will need to pass the first test before you can challenge the next level.
4. Once you have completed the Challenge Exam it will be reviewed for approval by the Challenge Committee.
5. The Assessment Center along with the committee has five business days (working) to notify you of your results. The committee consists of the following: Student Services Dean, General Counselor, and a Faculty of the subject you are challenging. Once your challenge results are in, you will be notified by phone or in-person. You will also receive a copy of the challenge application for your records.
6. Deadline to challenge: If you plan to enroll for the course in the most current term you will need to complete the challenge exam one month before the semester begins. Otherwise, you will need to wait for the next semester to enroll in the course.

Your rights entitle you to file a "Challenge Form" to challenge any prerequisite if you believe one or more of the following:

1. I have the knowledge, ability or skill to succeed in the course despite not meeting the prerequisite or co-requisite.
2. I will be subject to undue delay in attaining the goal of my educational plan because of the enrollment limitation, or because the prerequisite or co-requisite course has not been made reasonably available.
3. The prerequisite or co-requisite has not been established in accordance with applicable college policies and procedures.
4. The prerequisite or co-requisite is in violation of Title 5, Section 55200-55202 of the California Code of regulations.
5. The prerequisite or co-requisite, or enrollment limitation is either unlawfully discriminatory or is being applied in an unlawfully discriminatory manner.
6. The basis upon which the college established the enrollment limitation does not exist. Note: You have the right to participate in all activities related to matriculation components whether eligible for exemption or not. The matriculation program is our plan to ensure your success. For more information contact the Assessment Center, 213-763-5339.

Academic Probation and Dismissal

(Board Rule 8200)

Academic Standards for Probation

The following standards for academic and progress probation shall be applied as required by regulations adopted by the Board of Governors of the California Community Colleges.

Probation

A student enrolled in the LACCD shall be placed on academic or progress probation, under the following conditions:

Academic Probation - The student has attempted at least 12 semester units of work and has a grade point average of less than a "C" (2.0).

Progress Probation - The student has enrolled in a total of at least 12 semester units, and the percentage of all units in which they enrolled with recorded entries of "W" (Withdrawal), "I" (Incomplete), "NC" (No Credit) or "NP" (No Pass) reaches or exceeds fifty percent (50%).

California College Promise Grant (CCPG) – loss of eligibility. A student eligible to receive a grant shall lose eligibility if they are placed on academic or progress probation for two consecutive semesters. Loss of eligibility shall become effective at the first registration opportunity after such determination is made.

Foster youth, or former foster youth under the age of 24, are exempt from the loss of the grant due to academic or progress probation (EC 76000, Title 5, C.C.R., Section 55754).

Transfer Student - The student has met the conditions of academic or progress probation at another college within the Los Angeles Community College District.

Units Attempted

"Units attempted" means all units of credit in the LACCD (Board Rule 8200.12).

Units Enrolled

"Units enrolled" means all units of credit in the LACCD for which the student is enrolled after census (Board Rule 8200.13).

Removal from Probation

(Board Rule 8201)

A student shall be removed from probation upon meeting the criteria specified in this section.

Academic Probation - A student on academic probation for a grade point deficiency shall be removed from probation when the student's cumulative grade-point-average is 2.0 or higher.

Progress Probation - A student on progress probation because of an excess of units for which entries of No Pass (NP), formerly No Credit, Incomplete (I), and/or Withdrawal (W) are recorded shall be removed from probation when the cumulative percentage of units in this category drops below fifty percent (50%).

Academic Standards for Dismissal

A student shall be subject to dismissal and subsequently be dismissed under the conditions set forth within this section. Dismissal shall be determined based on student course work dating from Fall 1981; course work completed prior to Fall of 1981 is excluded from dismissal calculations.

Academic Probation - A student who is on academic probation shall be subject to dismissal if the student has earned a cumulative grade point average of less than 2.0 in all units attempted in each of 3 consecutive semesters. A student who is on academic probation and earns a semester grade-point-average of 2.0 or better shall not be dismissed as long as this minimum semester grade-point-average is maintained.

Progress Probation - A student who is on progress probation shall be subject to dismissal if the cumulative percentage of units in which the student has been enrolled for which entries of No Pass (NP), formerly No Credit, Incomplete (I), and/or Withdrawal (W) are recorded in at least 3 consecutive semesters reaches or exceeds fifty percent (50%). A student who is on progress probation shall not be dismissed after a semester in which the percentage of units in which the student has been enrolled for which entries of "W," "I" and "No Pass" (NP), formerly "No Credit", are recorded is less than fifty percent (50%).

Appeal of Dismissal

A student who is subject to dismissal may appeal to the Registrar and Records. Dismissal may be postponed and the student continued on probation if the student shows significant improvement in academic achievement but has not been able to achieve to a level that would meet the requirements for removal from probation.

Dismissal

A student who is subject to dismissal, and who has not been continued on probation through the appeal process, shall be notified by the College President, or designee, of dismissal which will become effective the semester following notification. Dismissal from any one college in the District shall disqualify a student from admission to any other college in the District.

Re-admission after Dismissal

A student who has been dismissed may request reinstatement after two semesters have elapsed. The student shall submit a written petition requesting readmission to the College in compliance with College procedures. Readmission may be granted, denied, or postponed subject to fulfillment of conditions prescribed by the College.

Academic and Administrative Petitions

Students should file an Academic Petition form when they are requesting assistance with: course repetition, course substitution, enrollment in more than 19 units, catalog rights and other related concerns. The petition forms may be obtained from the Counseling Office. Petitions must be signed by a counselor before submittal to the Admissions and Records.

Students should file an Administrative Petition form when they are requesting assistance with academic renewal, return from disqualification (dismissal), and other related concerns. Administrative Petition forms are available in the Office of Admissions and Records, and submitted in the same office. When filing for return from disqualification, the petition forms must be reviewed and signed by the counselors before submittal to Admissions and Records Office. Specific petition forms are available for requesting permission for: grade changes, Credit By Examination, and lining out non- passing grades that have been successfully repeated.

Academic Renewal

(Board Rule 6705)

Students may petition for an academic renewal action in order to alleviate substandard academic performance under the following conditions:

- Students must have achieved a grade point average of 2.5 in their last 15 semester units, or 2.0 in their last 30 semester units completed at any accredited college or university, and
- At least one calendar year must have passed since the course work to be removed was completed.

Granted, academic renewal shall result in:

- Eliminating up to 30 semester units of coursework taken within the Los Angeles Community College District from consideration in the student's cumulative grade point average, and
- Annotating the student academic record to note which courses have been removed through academic renewal. Academic renewal actions are irreversible.

STUDENT INFORMATION AND COLLEGE POLICIES

Academic Freedom

The Board of Trustees reaffirms its commitment to academic freedom, but recognizes that academic freedom does not allow Prohibited Discrimination. The discussion of ideas, taboos, behavior or language which is an intrinsic part of the course content shall in no event constitute Prohibited Discrimination. It is recognized that an essential function of education is a probing of received opinions and an exploration of ideas which may cause some students discomfort. It is further recognized that academic freedom insures the faculty's right to teach and the student's right to learn.

Campus Security Act

As required by the federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act ("Clery Act"), the college's Annual Security Report contains policy statements and crime statistics for the campus. The Annual Security Report includes statistics for the previous three years concerning certain reported crimes that occurred on campus, in off-campus buildings or property owned or controlled by the college, and on public property within or immediately adjacent to the college. The report also includes institutional policies concerning campus safety and security, such as policies on drug and alcohol use, crime prevention, the reporting of crimes, sexual assault, and emergency response and evacuation procedures. You can obtain the college's Annual Security Report online at https://college.lattc.edu/sheriff/crime-reporting-procedures/annual-security-report/ You may also request a paper copy by contacting the Office of the Vice President of Administrative Services, (213) 763-7040.

Drug-free Workplace Policy

The Los Angeles Community College District is committed to drug-free and alcohol-free campuses. Students and employees are prohibited from unlawfully possessing, using or distributing illicit drugs and alcohol on District premises, in District vehicles, or as part of any activity of the District or colleges of the District.

LACCD BOARD RULE 9803.19: Alcohol and Drugs. Any possession of controlled substances which would constitute a violation of Health and Safety Code section 11350 or Business and Professions Code section 4230, any use of controlled substances the possession of which are prohibited by the same, or any possession or use of alcoholic beverages while on any property owned or used by the District or colleges of the District or while participating in any District or college-sponsored function or field trip. "Controlled substances," as used in this section include, but are not limited to, the following drugs and narcotics:

a. opiates, opium and opium derivatives

b. mescaline

c. hallucinogenic substances

d. peyote

e. marijuana

f. stimulants and depressants

g. cocaine

Equal Employment Opportunity

(Board Rule 101301)

It is the Los Angeles Community College District's policy to ensure that all qualified applicants for employment and employees have full and equal access to employment opportunity and are not subjected to discrimination in any program or activity of the District on the basis of actual or perceived ethnic group identification, race, color, naturalization, national origin (including language and accent), ancestry, religion, creed, sex (including gender-based sexual harassment), gender identity and expression, pregnancy, marital status, cancer-related medical condition of an employee, genetic information, sexual orientation, age, physical or mental disability, or veteran status. The Board of Trustees commits the District to vigorous equal employment opportunity in all aspects of its employment programs, including recruitment, assignment, retention, promotion, and transfer. Inquiries regarding Equal Employment Opportunity at Los Angeles Trade-Technical College should be directed to the Office of Diversity, Equity and Inclusion at (213) 891-2315.

Public and Student Free Speech Areas

Following LACCD Administrative Regulation B-38, the College President shall designate an area or areas on the college campus as areas for free discussion and expression by all persons. A Free Speech Area may only be located where there is a normal flow of student traffic with unlimited accessibility. Necessary campus rules governing the operation of such areas shall govern only the time, place and manner in which said areas are to be used. All such rules shall be applied equally and fairly to all persons desiring to use the Free Speech Areas. No restrictions shall be placed on subject matter, topics or viewpoints expressed in Free Speech Areas.

In compliance with the Administrative Regulation, the college president has designated Public and Student Free Speech Areas; please refer to LATTC Campus Map for specific areas. All persons or organizations may complete the "Voluntary Acknowledgement Form" and submit it to the Office of Student Life or the Office of the Vice President Student Services. Completing the "Voluntary Acknowledgement Form" is completely voluntary. No person or organization will be denied access to the Public or Student Free Speech Areas for refusing to complete the "Voluntary Acknowledgement Form." The form is not a permit to use any of the Free Speech Areas (Public and Student). The information provided on the form will be used to document your presence on campus, assess the need for security, and address capacity issues and overcrowding.

Penalties for Copyright Infringement and Illegal File Sharing

Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer may subject students to civil and criminal liability. Civil liability for copyright infringement may include payment of monetary damages to the copyright owner. Criminal penalties for copyright infringement may include fines up to $250,000 and imprisonment up to ten years. Students who violate the District's computing facilities usage policy (LACCD Administrative Regulation B-28) may also be subject to college disciplinary action, including, but not limited to, suspension or expulsion.

Limited English Proficiency

Occupational education classes are open to all students. Although the lack of proficiency in English is not a barrier to enrollment in occupational education courses, it is recommended that students needing remedial English assistance utilize the services of the college that are provided for persons who are limited in English proficiency or have English as a second language as a bridge for entry into the vocational program.

Open Enrollment

Unless specifically exempted by statute, every course, every section or class where FTES is to be reported for state appointment, wherever offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to the college(s) and who meets such established prerequisites.

Prohibited Discrimination, Unlawful Harassment, and Sexual Misconduct

(Board Rule, Chapter XV, 15001).

It is the policy of the Los Angeles Community College District (LACCD) to provide a safe educational, employment and business environment free from Prohibited Discrimination, Unlawful Harassment, and Sexual Misconduct, as defined in the Administrative Regulations associated with this policy. Employees, students, or other persons acting on behalf of the District who engage in Prohibited Discrimination, Unlawful Harassment, or Sexual Misconduct as defined in the Administrative Regulations related to this policy or by state or federal law shall be subject to discipline, up to and including discharge, expulsion, or termination of contract. It is against the law and LACCD policy to engage in sexual misconduct (including but not limited to sexual assault and sexual harassment) with a student, employee, or other individual associated with the LACCD, on property owned or operated by LACCD, or involving a participant in a LACCD-sponsored event. Any victim of a sexual assault who is one of LACCD's students, faculty, staff, or visitors shall promptly receive appropriate treatment and full and accurate information. The names of sexual assault victims shall not be revealed by persons responsible for implementing and enforcing the provisions of this policy, except with the consent of the victim.

Complaint Procedure

LACCD Administrative Regulation C-14 outlines specific informal and formal procedures for Prohibited Discrimination, Unlawful Harassment, and Sexual Misconduct Complaints.

To file a complaint, a LACCD Unlawful Discrimination and Complaint Form must be downloaded, filled out and submitted to the Office for Diversity, Equity, and Inclusion. The form can be found at the following link: http://www.laccd.edu/Departments/DistrictResources/OfficeOfDiversity/Documents/NEW%20LACCD%20Unlawful%20Discrimination%20Complaint%20Form.pdf LATTC students may receive assistance filling out the form by contacting the Office of Student Services at (213) 763-7078/7038 or may request for assistance online at http://college.lattc.edu/studentrights/title-ix/complaint.

The Office for Diversity, Equity, and Inclusion can be contacted at (213) 891-2315 or diversity-programs@email.laccd.edu. Inquiries relating to disabilities and special academic accommodations per the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 should be directed to the Office of Disabled Students Programs and Services (DSPS) at (213) 763-3773.

Family Education Rights and Privacy Acts

The Family Educational Rights and Privacy Act (FERPA) affords students the following rights with respect to their educational records:

- **The right to inspect and review the student's education records which includes discipline records, within 45 days from the date the College receives a request for access.**

Students may submit to the College Admissions Office written requests that identify the specific record(s) they wish to inspect. Within 45 days, the College Admissions Office will make arrangements for access and will notify the student of the time and place where the records may be inspected.

Education records are those records that are directly related to students and are maintained by the College. Students may not inspect education records

pertaining to parents' financial records and certain confidential letters or recommendations.

- **The right to request an amendment of the student's educational records which the student believes to be inaccurate, misleading or otherwise in violation of the student's privacy rights.**

With the exception of grade grievances, which are handled through Administrative Regulation E-55, students may ask the College President, or his/her designee to amend a record that they believe is inaccurate, misleading, or in violation of their privacy rights. A student seeking to amend an educational record should write to the College President and clearly identify the part of the record he/she wants changed, and specify why it is inaccurate, misleading, or in violation of his/her privacy rights.

If the College President, or his/her designee, decides not to amend the record as requested by the student, the College, in accordance with section 99.21 of the Code of Federal Regulations and section 76232 of the Education Code, will notify the student of the decision and of his/her right to a hearing.

- **The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA and California law authorize disclosures without consent.**

If a student authorizes the release of his/her education record to a third party, he/she shall provide a dated written consent to the College Admissions Office authorizing said release with a specific list of the information to be released.

Federal and California law authorize certain disclosures of personally identifiable information without a student's written consent. One such exception is the disclosure of personally identifiable information to school officials with legitimate educational interests. School officials with legitimate educational interests are employees or agents of the Los Angeles Community College District who need to review educational records in order to fulfill their professional responsibilities.

- **The right to restrict disclosure of personally identifiable information that the College has designated as directory information which may be released without the written consent of the student.**

Directory information may be disclosed without a student's consent unless the student has notified the college that he/she does not want all or portions of the directory information released. To do so, the student must submit the appropriate District form to the College Admissions Office requesting that some or all of the categories of directory information not be released without his/her consent. This form must be submitted in accordance with College policy.

Pursuant to Board Rule 5201.10, the Los Angeles Community College District has designated the following student information as directory information:

a. the student's name, city of residence, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most previous educational agency or institution attended by the student;

b. student employee records may be released in order to comply with collective bargaining agreements;

c. the names, addresses and telephone numbers of students or former students may be released to the College Foundation for each college for college-related activities at the discretion of the College President, unless the student or former student has informed the College that such information should not be released. The release of this information is conditioned upon the College Foundation's agreement that such information will be released in accordance with District policy and that information will not be released to third parties;

d, at the discretion of the College President, the names, addresses and telephone numbers of students from the College may be released to heads of private and/or public institutions of higher education, or their designees, for the purpose of providing information to students regarding transfer opportunities to those institutions, unless the student has indicated that such information should not be released. The release of this information will be conditioned upon the institution's agreement that student privacy rights under federal and state law will be protected and that information will not be released to third parties.

- **The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA.**

The name and address of the office that administers FERPA are:

Family Policy Compliance Office

U.S. Department of Education

400 Maryland Avenue, SW,

Washington, DC 20202-4605

For more information on student rights under the FERPA, please go to our Los Angeles Community College District www.laccd.edu/About/Documents/AdministrativeRegulations/E-105.pdf

Conflict Resolution and Informal Process

The College has an approved student conflict resolution process. If there is a conflict or issue between a student and an instructor, the student is to complete the required form at the following link - http://college.lattc.edu/studentrights/conflict-resolution. The Department Chairperson over the area will respond to your request within two business days (Monday-Friday) regarding your situation. The form can also be printed out or obtained from the Department Chair's office. This step must be completed before meeting with the Academic Dean.

If you have a non-classroom complaint please complete the online form at http://college.lattc.edu/studentservices/student-complaintgrievance-form/. If the issue is not resolved informally then students can submit a formal grievance.

IF YOUR COMPLAINT IS AGAINST:	CONTACT
Faculty	Department Chair over the area (see listing in Final section)
All other complaints	College Ombudsmperson at synodid@lattc.edu or at (213) 763-7078/7038

Student Grievance Procedures - Formal Process

(Board Rules 91101-91102)

The purpose of the Student Grievance Procedures is to provide a prompt and equitable means for resolving student grievances.

The grievance procedure may be initiated by one or more students who reasonably believe he/she/they have been subject to unjust action or denied rights involving their status or privileges as students. It is the responsibility of the student(s) to submit proof of alleged unfair or improper action. Grievances pertaining to grades are subject to the CA Education Code Section 76224(a).

The procedures enumerated in Administrative Regulation E-55 shall be available to any student or applicant for admission, who believes a College decision or action has adversely affected his or her status, rights, and/or privileges as a student. The procedures shall include, but not be limited to, alleged violations of Title IX of the Higher Education Amendments of 1972 (and applicable

regulations), and grievances relating to course grades to the extent permitted by Education Code Section 76224(a). Section 76224(a) provides:

"When grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor of the course, in the absence of mistake, fraud, bad faith, or incompetency, shall be final."

For additional information regarding the procedures for filing a student grievance, or for copies of the adopted Student Grade Grievance Procedures, contact the Campus Ombudsperson at (213) 763-7078/7038 or via Email at: synodid@lattc.edu or visit the ombudsperson website at: http://college.lattc.edu/student/services/office-of-the-ombudsperson/

State Complaint Process

Final federal regulations published October 29, 2010, and effective July 1, 2011, included in the State Authorization section of the package a new requirement that eligible institutions have and disclose a state administered complaint process (HEA Title IV, CFR, Sections 600.9 and 668.4(3)(b)). The intention behind the new requirement is that students and others have a method and process outside of the institution that takes, investigates and responds to complaints regarding the institution. For more information regarding the State Complaint Process, please go to https://www.cccco.edu/About-Us/Contact.

Student Records and Directory Information

The Los Angeles Community College District, in compliance with Federal and State law, has established policies and procedures governing student records and the control of personally identifiable information. The Los Angeles Community College District recognizes that student records are a confidential matter between the individual student and the College. At the same time the District has a responsibility to fulfill public information needs (i.e., information about students participating in athletics, announcement of scholarships and awards, etc.). To meet this responsibility the District may release Directory Information unless the student states in writing that he or she does not want it released. The responsibility for carrying out these provisions is charged to the Dean over Admissions and Records, designated by the chief student services officer on campus. The Dean may be contacted via the Admissions and Records Office. Copies of Federal and State laws and District policies and procedures are maintained by the Dean and are available for inspection and inquiry.

All student records maintained by the various offices and departments of the College, other than those specifically exempted by law, are open to inspection by the student concerned. The accuracy and appropriateness of the records may be challenged in writing to the Dean. A student has the right to receive a copy of his or her record, at a cost not to exceed the cost of reproduction. (Requests for transcripts should be made directly to the Admissions and Records Office).

No student records, including Directory Information, will be released without the written consent of the student concerned except as authorized by law. A log of persons and organizations requesting or receiving student record information is maintained by the College. The log is open to inspection only to the student and the community college official or his or her designee responsible for the maintenance of student records.

Directory Information includes the student's name, city of residence, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. This information will not be released to anyone if the student marks "NO" on question "permission to Release Student Information" on the College Application or if the student marks "NO" on the College's Release of Directory Information form. This form is available in the Admissions and Records Office.

In addition, under federal law, the military is entitled to receive the following student information for recruitment purposes: student directory information as defined above, student address, telephone number, date and place of birth, and major field of study. This information will not be released to the military if the student marks "NO" on question "permission to Release Student Information" on the College Application or if the student marks "NO" on the College's Release of Directory Information form.

All inquiries regarding student records, Directory Information, and policies for records access, release, and challenge should be directed to the Dean via the Admissions and Records Office. Students have the right to file a complaint with the United States Department of Education concerning alleged violations of Federal and State laws governing student records.

Student Right-To-Know

Student Right-To-Know refers to the Student Right-To-Know and Campus Security Act of 1990 (P.L. 101-542), which requires colleges and universities participating in Federal financial aid programs to disclose information about completion and transfer rates. The intent is to provide prospective students a statistic of comparable effectiveness that they can use to determine their college of choice. Los Angeles Trade-Technical College in compliance with the Federal Student Right-To-Know and Campus Security Act of 1990 provides access to the following sites:

- Consumer Information: http://college.lattc.edu/about-lattc/consumer-information/
- Student-related data: http://college.lattc.edu/research/accountability/student-right-to-know-act/
- LATTC and other California community colleges' completion and transfer rates: http://srtk.cccco.edu/index.asp
- Campus crime statistics: http://college.lattc.edu/sheriff/crime-reporting-procedures/annual-security-report/
- Graduation Rates: http://srtk.cccco.edu/index.asp.

STANDARDS OF CONDUCT

(Board Rule 9803)

A student enrolling in one of the Los Angeles Community Colleges may rightfully expect that the faculty and administrators of the colleges will maintain an environment in which there is freedom to learn. This requires that there be appropriate conditions and opportunities in the classroom and on the campus. As members of the college community, students should be encouraged to develop the capacity for critical judgment and to engage in the sustained and independent search for truth. All persons shall respect and obey civil and criminal law, and shall be subject to legal penalties for violation of laws of the city, county, state and nation.

All visitors making use of the facilities or grounds of any college of the District will be asked to sign a statement that they have received the Standards of Conduct and the rules relating to campus visitors adopted by the Board of Trustees. A signature will not be a prerequisite to activities on campus. A record will be kept of all persons who use the facilities or grounds of the college.

Conduct in all of the Los Angeles Community Colleges must conform to District and college rules and regulations. Violations of such rules and regulations may result in disciplinary action depending on the individual's status as student, faculty, staff or visitor. Violations of conduct on campus rules and regulations include but are not limited to the following:

Willful Disobedience
Willful disobedience to directions of College officials acting in the performance of their duties (Board Rule 9803.10).

Violation of College Rules and Regulations
Violation of College rules and regulations, including those concerning student organizations, the use of College facilities, or the time, place, and manner of public expression or distribution of materials (Board Rule 9803.11).

Dishonesty
Dishonesty, such as cheating, or knowingly furnishing false information to the colleges (Board Rule 9803.12).

Unauthorized Entry
Unauthorized entry to or use of the college facilities (Board Rule 9803.13).

College Documents
Forgery, alteration, or misuse of college documents, records, or identification (Board Rule 9803.14).

Disruption of Classes
Obstruction or disruption of classes, administration, disciplinary procedures, or authorized college activities (Board Rule 9803.15).

Theft of or Damage to Property
Theft of or damage to property belonging to the college, a member of the college community, or a campus visitor (Board Rule 9803.16).

Interference With Peace of College
The malicious or willful disturbance of the peace or quiet of any of the Los Angeles Community Colleges by loud or unusual noise, or any threat, challenge to fight, fight, or violation of any rules of conduct as set forth in this Article. Any person whose conduct violates this section shall be considered to have interfered with the peaceful conduct of the activities of the college where such acts are committed (Board Rule 9803.17).

Assault or Battery
Assault or battery, abuse or any threat of force or violence directed toward any member of the college community or campus visitor engaged in authorized activities (Board Rule 9803.18).

Alcohol and Drugs
(Board Rule 9803.19)

Any possession of controlled substance which would constitute a violation of Health and Safety Code section 11350 or Business and Professions Code section 4230, any use of controlled substances the possession of which are prohibited by the same, or any possession or use of alcoholic beverages while on any property owned or used by the District or colleges of the District. “Controlled substances,” as used in this section, include but are not limited to the following drugs and narcotics:

- opiates, opium and opium derivatives
- mescaline
- hallucinogenic substances
- peyote
- marijuana
- stimulants and depressants
- cocaine

Lethal Weapons
Possession, while on a college campus or at a college sponsored function, of any object that might be used as a lethal weapon is forbidden for all persons except sworn peace officers, police officers, Sheriff, and other governmental employees charged with policing responsibilities (Board Rule 9803.20).

Discriminatory Behavior
Behavior while on a college campus or at a college-sponsored function, inconsistent with the District’s non-discrimination policy, which requires that all programs and activities of the Los Angeles Community College District be operated in a manner which is free of discrimination on the basis of race, color, national origin, ancestry, religion, creed, sex, pregnancy, marital status, sexual orientation, age, handicap or veteran status (Board Rule 9803.21).

Unlawful Assembly
Any assemblage of two or more persons to 1) do an unlawful act, or 2) do a lawful act in a violent, boisterous or tumultuous manner (Board Rule 9803.22).

Conspiring to Perform Illegal Acts
Any agreement between two or more persons to perform illegal acts (Board Rule 9803.23).

Threatening Behavior
A direct or implied expression of intent to inflict physical or mental/emotional harm and/or actions, such as stalking, which a reasonable person would perceive as a threat to personal safety or property. Threats may include verbal statement, written statements, telephone threats or physical threats (Board Rule 9803.24).

Disorderly Conduct
Conduct which may be considered disorderly includes; lewd or indecent attire or behavior that disrupts classes or college activities; breath of the peace of the college; aiding, or inciting another person to breach the peace of the college premises or functions (Board Rule 9803.25).

Theft or Abuse of Computer Resources
(Board Rule 9803.26)

Theft or abuse of computer resources including but not limited to:

- Unauthorized entry into a file to use, read, or change the contents, or for any other purpose.
- Unauthorized transfer of a file.
- Unauthorized use of another individual’s identification and password.
- Use of computing facilities to interfere with the work of a student faculty member or college official, or to alter college or district records.
- Use of unlicensed software.
- Copying of software
- Use of computing facilities to access, send or engage in messages which are obscene, threatening, defamatory, present a clear and present danger, violate a lawful regulation and/or substantially disrupt the orderly

operation of a collage campus.

- Use of computing facilities to interfere with the regular operation of the college or district computing system.

Performance of an Illegal Act

Conduct while present on a college campus or at a location operated and/or controlled by the District or at a District-sponsored event, which is prohibited by local, State, or federal law (Board Rule 9803.27).

Academic Dishonesty

Violations of Academic Integrity include, but are not limited to, the following actions: cheating on an exam, plagiarism, working together on an assignment, paper or project when the instructor has specifically stated students should not do so, submitting the same term paper to more than one instructor, or allowing another individual to assume one's identity for the purpose of enhancing one's grade (Board Rule 9803.28).

Interference with classes

Every person who, by physical force, willfully obstructs, or attempts to obstruct, any student or teacher seeking to attend or instruct classes at any of the campuses or facilities owned, controlled or administered by the Board of Trustees of the Los Angeles Community College District, is punishable by a fine not exceeding five hundred dollars ($500) or imprisonment in a county jail not exceeding one year, or both such fine and imprisonment. As used in this section, "physical force" includes, but is not limited to , use of one's person, individually or in concert with other, to impede access to or movement within or otherwise to obstruct the students or teachers of the classes to which the premises are devoted (Board Rule 9804).

Interference with performance of duties of employees

Every person who attempts to cause, or causes, any officer or employee of any of the Los Angeles Community Colleges or any public officer or employee to do or refrain from doing, any act in the performance of his/her duties, by means of a threat to inflict any injury upon any person or property, is guilty of a public offense (Board Rule 9805).

Assault or abuse of Instructor

Every parent, guardian, or other person who assaults or abuses any instructor employed by the District in the presence or hearing of a community college student or in the presence of other community college personnel or students and at a place which is on District premises or public sidewalks, streets, or other public ways adjacent to school premises, or at some other place where the instructor is required to be in connection with assigned college activities is guilty of a misdemeanor (Board Rule 9805.10).

Unsafe Conduct

(Board Rule 9806)

Conduct which poses a threat or harm to the individual and/or to others. This includes, but is not limited to, the following types of conduct:

a. Unsafe conduct in connection with a Health Services Program (e.g., Nursing, Dental Hygiene, etc.);

b. Failure to follow safety directions of District and/or College staff;

c. Willful disregard of safety rules as adopted by the District and/or College; and/or

d. Negligent behavior which creates an unsafe environment.

Smoking Policy

Smoking is not permitted in any classroom or other enclosed facility. Smoking is permitted in designated areas only.

Student Discipline Procedures

(Education Code Section 66300, Board Rule 91101)

Community college districts are required by law to adopt standards of student conduct along with applicable penalties for violation. The Los Angeles Community College District has complied with this requirement by adopting Board Rule 91101, Standards of Student Conduct (See above).

Student Discipline Procedures provide uniform guidelines to assure due process when a student is charged with a violation of the Standards of Student Conduct. All proceedings held in accordance with these procedures shall relate specifically to an alleged violation of the established Standards of Student Conduct. These provisions do not apply to grievance procedures, or residence determination and other academic and legal requirements for admission and retention.

Disciplinary measures may be taken by the College independently of any charges filed through civil or criminal authorities, or both.

Copies of the Student Discipline Procedures are available in the Vice President of Student Services Office or online at http://www.laccd.edu/board_rules/documents/Ch.IX-ArticleXI.pdf

COLLEGE STORE

College Store Return/Refund Policy

Textbooks

Textbooks must be returned within the first 5 school days of the semester. Textbooks purchased after the 5th school day must be returned within 24 hours.

All textbooks being returned must be accompanied by an **ORIGINAL DATED CASH REGISTER SALES RECEIPT** issued by the College Store. **NO EXCEPTIONS!**

Refunds and/or exchanges will not be allowed on textbooks purchased during the last 4 (four) weeks of the semester. No refunds will be allowed after the 1st week of the Summer and Winter Sessions.

Textbooks must be returned in the same condition as when purchased, with final determination of condition made by the College Store Staff. New textbooks must be in new condition (no writing or marks of any kind). Textbooks failing to meet the policy will be considered Used and be governed by the Used textbook policy. Catalogs, Class Schedules, Paperbacks, Scantrons, regular supplies, Study Guides, Dictionaries, Clothing, Workbooks, Computer external drives, and specially assembled kits are not refundable.

Supplies and Tools

No returns on any supplies or tools.

Policy for Personal Checks

A current LATTC Registration Receipt or ASO card must be presented when making purchases by personal check a valid California Driver's License or California identification Card. Checks must be imprinted with the student's name and current address and drawn on a local bank. Checks will be accepted only for the amount of purchase. No third party checks accepted.

Book Buy-Back Period

Book Buy-Back periods occur during the final exam week of each Fall and Spring semester. Summer and/or Winter Buy-back dates are posted with signs and on the receipt.

FINANCIAL AID

What is Financial Aid?

The purpose of student financial aid is to provide financial assistance to students who, without such aid, maybe unable to attend college. Although it is expected that students and parents will make a maximum effort to meet the cost of education, financial aid is available to fill the gap between family resources and their annual educational expenses. Financial aid is intended to supplement the family's existing income/financial resources and should not be depended upon as the sole means of income to support other non-educational expenses.

Financial aid is available from various sources such as federal and state governments, institutional, and community organizations, as well as individual donors. Financial aid can be awarded in the form of grants, waivers, loans, work-study, scholarships, or a combination of these.

Who is eligible for Financial Aid?

To be considered for financial aid, students must meet the following minimum requirements:

- For federal aid eligibility, be a US citizen or an eligible non-citizen. An eligible non-citizen is a US permanent resident who has documentation from the Department of Homeland Security verifying that his/her stay in the US is for other than a temporary purpose.
- For state aid eligibility, be either a (1) US citizen or eligible non-citizen, or (2) be classified as an AB540 or AB1899 student by your college's Admissions & Records Office.
- Demonstrate financial need (for most programs).
- Have a valid high school diploma (as determined by the college Admissions & Records Office) or a recognized equivalent such as a General Education Development (GED) certificate, passed a high school proficiency examination, or completed a high school education in a home school setting. (Students, who were enrolled in a college or university prior to July 1, 2012 who do not meet this requirement should check with their Financial Aid Office for alternative qualifying options.
- Be enrolled as a regular student in an eligible baccalaureate degree, associate degree, transfer program, or certificate of achievement program.
- Be making Satisfactory Academic Progress in an eligible program of study.
- Not be in default on any student loan such as Federal Perkins Loan, Federal Stafford Loans (subsidized and/or unsubsidized), Federal Direct Loans (subsidized and/or unsubsidized), or Supplemental Loan to Assist Students (SLS) at any college attended.
- Not owe an overpayment on a Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (FSEOG), Academic Competitiveness Grant (ACG), SMART Grant, Iraq and Afghanistan Service Grant and Children of Fallen Heroes Scholarship.
- If a male, be registered with Selective Service (including California Dream Act applicants). Visit www.sss.govfor more details on who and when one must register.
- Have a valid Social Security Number (SSN) for federal aid eligibility (not required for California Dream Act Application applicants).
- Must have resolved all drug conviction issues.•File a federal income tax return if required to do so.

When to apply for Financial Aid?

The best time to submit the Free Application for Federal Student Aid (FAFSA)/ California Dream Act Application is between October 1st and March 2nd prior to the start of the academic year (Fall semester).

FOLLOW THE TIMELINE BELOW

October 1 - March 2	FAFSA/CA Dream Act priority application
March 2	Deadline to apply for Cal Grant
May 1	Priority deadline to submit required documents to the Financial Aid Office
September 2	Deadline for community college students to apply for Cal Grant

To be considered for Title IV Financial Aid, LATTC Financial Aid Office must have on file a valid Institutional Student Information Report (ISIR) by the last day of enrollment for a term/semester or by June 30 of the award year, whichever is earlier. Check the financial aid website at college.lattc.edu/financialaid for deadlines.

How to apply for Financial Aid?

We encourage all students to apply for financial aid online at studentaid.gov or at caldreamact.org (for AB540 students). Processing is fastest and most accurate when completing your application online. You may also apply using the myStudentAid app available on the Apple App store for (IOS) or Google Play (Android).If you want to request a paper application, you may print one from the websites above or you may contact the Federal Student Aid Information Center at (800) 433-3243 (for the FAFSA) or the California Student Aid Commission at (888) 224-7268 (for the CADAA).

How is Financial Aid Awarded?

Your financial aid eligibility is determined using Federal Methodology (for FAFSA applicants). Awards can consist of a combination of grants, waivers, work-study, scholarships and/or loans.

Financial Aid Verification Policy

Federal verification requirements apply to the following programs:

- Federal verification requirements apply to the following programs:
- Federal Pell Grant
- Iraq and Afghanistan Service Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study (FWS)
- Federal Direct Loan
- Cal Grant B and C
- California Chafee Grant
- Child Development Teacher Grant

- California National Guard Education Assistance Award Program (CNG-EAAP)
- Student Success Completion Grant (SSCG)

If your application has been selected for verification, you will be required to provide additional documentation with a specific deadline. Failure to meet this deadline will result in the denial of financial aid. For verification deadline dates, visit the Financial office website.

For the Federal Direct Loan Program, verification must be completed 45 days prior to the last day of enrollment period to allow for loan processing time.

Students whose applications are selected for verification may be paid on any corrected valid SAR/ISIR that is received within 120 days after the student's last day of enrollment.

If an applicant does not complete the verification by the established deadline, all federal financial aid is forfeited for the award year. The Financial Aid Office maintains the right to request additional information which may be required to process your application. Those may include but are not limited to:

- IRS Tax Transcript
- Verification of Untaxed Income
- Verification Worksheet
- Selective Service Certification
- Social Security Verification
- Permanent resident documents, if an eligible non-citizen.

English as a Second Language (ESL)

Students taking only ESL classes must submit a Student Educational Plan to the Financial Aid Office within the first semester.

Audited Classes

Students cannot receive financial aid, including the California College Promise Grant (CCPG), for enrollment in audited classes. No exceptions to this policy can be made.

Enrollment at other LACCD Colleges

Consortium Agreements are in effect for all colleges within the Los Angeles Community College District. If you ae attending more than one college within the LACCD in the same term, payment will be based on all financial aid units taken. Please note that if you are in an extension appeal due to Satisfactory Academic progress, you must be enrolled in approved units, meaning classes listed in your Student Educational Plan (SEP) you submitted with your petition to the Financial Aid office. If you are enrolled in classes not listed in your SEP, the units will not be included in the calculation of approved units. For further information, please contact the Financial Aid Office.

ITV Classes

Students taking ITV courses must be enrolled in at least one (1) approved unit at the Home campus (the college that is processing their financial aid) in order to receive financial aid, provided eligibility exists. For financial aid programs that are limited in funding, students must be enrolled in a minimum of six (6) approved units at the Home campus; units from other colleges may not be combined for all other programs. Students enrolled in ITV courses receive their transcripts for those courses from Los Angeles Mission College. Students enrolled only in ITV courses and wish to be considered for financial aid must apply at Los Angeles Mission College as the Home campus for financial aid purposes.

ITV classes are included in disbursements for all other classes.

Summer and Winter Financial Aid

Summer and Winter terms are included in the evaluation of Satisfactory Academic Progress standards. Summer is considered a separate semester for evaluation purposes. Winter, as it is combined with the Fall semester for disbursement purposes, will be included with the Fall semester for SAP evaluation purposes.

Please contact the Financial Aid Office for more information and deadlines.

Phone: (213) 763-7082

Email: finaid@lattc.edu

Location: E5, 1st Floor Lobby

Website: http://www.lattc.edu/services/financial-aid

Tax Benefit

Plan ahead – you may be able to take advantage of federal tax benefits for education. Most tax benefits have income limits; to learn more about each program, see IRS Publication 970, Tax Benefits for Education, available at www.irs.gov or by calling 1-800-829-3676. Also, be sure to consult a professional tax advisor.

American Opportunity Credit and Lifetime Learning Tax Credits allow you or your parents to subtract a portion of your college costs from the taxes you owe each year when you file your tax return.

Tuition and fees tax deduction and student loan interest deduction allows you to subtract a portion of your tuition and fees from your taxable income and to deduct up to $2,500 of the interest you pay on your student loan each year (or on any student loans you take out for your spouse's or child's education).

In addition, funds from your IRA, 529 college savings plan or Coverdell Education Savings Account may be withdrawn without a tax penalty to pay for qualified education expenses. There's also a tax break if you use certain U.S. savings bonds to pay for college. You should consult a tax professional for further details or consult the following website: http://www.irs.gov/pub/irs-pdf/ p970.pdf

TYPES OF FINANCIAL AID AVAILABLE

Federal Financial Aid Grants

Federal PELL Grant Program

The Federal PELL Grant Program is a federally funded program that provides assistance to undergraduate students who have not yet earned a baccalaureate or first professional degree and who demonstrate financial need. Awards are based on the student's Expected Family Contribution (EFC) and enrollment status. The EFC is calculated based on the information such as income and assets on the FAFSA.

NEW: Due to the Higher Education Opportunity Act (HEOA), students have a maximum lifetime PELL Grant eligibility of 600% (12 full-time semesters). Students may view their percentage of PELL Grant eligibility by logging into www.nslds.ed.gov The "Lifetime Eligibility Used" percentage will be displayed in the "Grants" section of the webpage.

Federal Supplemental Educational Opportunity Grant (FSEOG) The FSEOG is a federal grant program designed to supplement other sources of financial aid for students with exceptional need. FSEOG awards are based on financial need and fund availability. There is a six (6) approved unit

minimum enrollment requirement at the college where students are receiving financial aid. Since this is a limited funded program, priority will be awarded to students who are enrolled at least six (6) approved units at LATTC. FSEOG awards range upward from $100 to $400 per year, depending on need and packaging policy.

Iraq and Afghanistan Service Grant

A student whose parent or guardian was a member of the U.S. Armed Forces and died as a result of service performed in Iraq or Afghanistan after September 11, 2001 may be eligible to receive the Iraq and Afghanistan Service Grant. Student eligibility requirements are:

- Must be ineligible for a Federal PELL Grant due only to having less financial need than is required to receive PELL funds, and
- Be under 24 years old, or
- Enrolled in college at least part-time at the time of the parent's or guardian's death.
- The grant award is equal to the amount of a maximum PELL Grant for the award year – not to exceed the cost of attendance for that award year.

State Financial Aid Grants

To qualify for any of the state-funded grants, a student must be a California resident and be attending (or planning to attend) an eligible college in California.

California College Promise Grant (CCPG) (formerly known as BOG Fee Waiver Program)

The CCPG is offered by the California Community Colleges. Applicants do not have to be enrolled in a specific number of units or courses to receive the BOGFW. Please note that payment of health fees is no longer part of the grant. All CCPG recipients are required to pay the student health fee.

You are eligible to apply for a CCPG if you are:

- A California resident or meet the AB540 requirements, and
- You are enrolled in at least one unit and
- Meet the income standards

Cal Grants

Students must meet the following eligibility requirements for the Cal Grant Programs:

- Be a U.S. citizen or permanent resident
- Have a valid Social Security Number (SSN)
- Be a California resident
- Be attending at least half-time at a qualifying California college
- Have financial need at the college of attendance
- Be making satisfactory academic progress as determined by the college
- Have not already earned a bachelor's or professional degree, or the equivalent.
- Meet the income and asset ceiling as established by CSAC
- Meet Selective Service requirements

Deadline date: First deadline is March 2nd prior to the start of the academic year. A second deadline for community college applicants is September 2nd, but we highly recommend that applicants meet the March 2 deadline when more funding is available.

Students must submit a GPA Verification and FAFSA by the applicable deadlines to the California Student Aid Commission. GPA verification for students enrolled within the Los Angeles Community College District will be electronically sent to the Commission by the deadline date for those who meet specific criteria. Contact your Financial Aid Office to see if you meet the criteria to have your GPA electronically sent and for other possible options.

Types of Grants Available

Entitlement Grants

- Cal Grant A – provides grant funds to help pay for tuition/fees at qualifying institutions offering baccalaureate degree programs. If you receive a Cal Grant A but choose to attend a CA Community College first, your award will be held in reserve for up to three years until you transfer to a four-year college.
- Cal Grant B – provides subsistence payments for new recipients in the amount of $1,648 for a full-time, full year award. Payments are reduced accordingly for three-quarter and half-time enrollment for each payment period. Cal Grant B recipients who transfer to a tuition/fee charging school after completing one or two years at a community college may have their grant increased to include tuition and fees as well as subsistence.
- Cal Grant Transfer Entitlement Award is for eligible CA Community College students who are transferring to a four-year college and are under age 28 as of December 31 of the award year.

Competitive Grants

- Cal Grant A and B awards are used for the same purpose as the A and B entitlement awards, except that they are not guaranteed and the number of awards is limited.
- Cal Grant C recipients are selected based on financial need and vocational aptitude. Students must be enrolled in a vocational program at a California Community College, independent college, or vocational college, in a course of study lasting from four months to two years. Cal Grant C awards may not be used to pursue a four-year degree program, graduate study, or general education.

California Dream Act

Students who have been determined to be AB540 by the Admissions Office and are recent high school graduates may apply for the Entitlement Cal Grant Program by completing the California Dream Application at https://dream.csac.ca.gov & www.csac.ca.gov/dream_act.asp

AB540 students are not eligible for the Competitive Cal Grant

For additional information and resources, contact the California Student Aid Commission at (888) 224-7268 or visit their website at https://dream.csac.ca.gov/.

Chafee Grant

The California Chafee Grant is a federal grant administered by the California Student Aid Commission and provides assistance to current or former foster youth to use for college courses or vocational school training. Eligible students may receive up to $5,000 per academic year. To learn more about this program and to apply online, go to www.chafee.csac.ca.gov/default.aspx

Law Enforcement Personnel Dependents Grant Program (LEPD) This grant program provides need-based educational grants to the dependents and

spouses of California peace officers (Highway Patrol, Marshals, Sheriffs, Police Officers), Department of Corrections and California Youth Authority employees, and permanent/full-time fire- fighters employed by public entities who have been killed in the performance of duty or disabled as a result of an accident or injury caused by external violence or physical force incurred in the performance of duty. Grant awards match the amount of a Cal Grant award and range from $100 to $11,259 for up to four years.

For more information and application materials, write directly to: California Student Aid Commission, Specialized Programs, P.O. Box 419029, Rancho Cordova, CA 95741-9029 or call (888) 224-7268, Option #3.

Child Development Grant Program

This program is a need-based grant designed to encourage students to enter the field of child care and development in a licensed children's center. Students who plan to enroll at least half-time in course work leading to a Child Development Permit as a teacher, master teacher, site supervisor, or program director, are eligible to apply through the college they plan to attend. For more information, go to www.csac.ca.gov or call (888) 224-7268, Option #3.

California National Guard Education Assistance Award Program (CNG EAAP)

This state-funded program designed to provide an educational incentive to improve skills, competencies, and abilities for up to 1,000 services members who remain active in the National Guard, the State Military Reserve, or the Naval Militia. This program authorizes the California Student Aid Commission to make payments to eligible program participants. Participants can receive up to the amount of the Cal Grant A award for attending the University of California or California State University, up to the Cal Grant B award for attending a community college, up to the University Cal Grant A amount for attending a non-public institution, or up to the Cal Grant A award plus $500 for books and supplies for graduate students. To learn more about the program, visit the California Student Aid Commission website at www.csac.ca.gov.

Student Success Completion Grant (SSCG)

The SSCG is offered by the California Community Colleges Chancellor's Office (CCCCO)as a supplement to students receiving the state Cal Grant B (Entitlement or Competitive), or Cal Grant C. Students must be attending full-time and have received a full-time Cal Grant disbursement at a California Community College. The award amount for 2019-2020was $649 per semester (12-14.99 units) and $2,000 per semester (15 or more units).The SSCG may be limited by the availability of state funding during the academic year.

Federal Student Loans (AID THAT YOU HAVE TO PAY BACK)

CAUTION ABOUT STUDENT LOANS: It takes time for a loan application to be processed by the college, lender and/or the government. It may be several weeks after an application has been accepted in the Financial Aid Office before the student receives the loan funds. Student loan funds are delivered to the student after enrollment and satisfactory academic progress requirements have been verified. All loans require a minimum of six (6) approved units. Check with the Financial Aid Office or visit the website at college.lattc.edu/financialaid for deadlines to request for a student loan.

NSLDS Disclosure. Please note that any loan borrowed by the student or parent will be submitted to the National Student Loan Database System (NSLDS), and will be accessible by guaranty agencies, lenders, and schools determined to be authorized users of the data system. LATTC participates in the following loan program(s):

Federal Direct Loan

The Federal Direct Loan Program is a low-interest loan program for students and parents to help pay for the cost of higher education.

Loans are made by the federal government. The following are types of Direct Loans:

- Subsidized Loans - students must demonstrate financial need; no interest is charged while in school or attending college at least half-time.
- Unsubsidized Loans - this loan is not based on financial need; interest is charged during all periods.
- PLUS Loan - Unsubsidized loans for parents of dependent students and for graduate/professional students. Interest is charged during all periods. To learn more about the federal student loan program, visit the US Department of Education at www.studentloans.gov.

Federal Work-Study (FWS) - Part-time employment

The FWS program enables students to earn part of their financial aid award through part-time employment either on or off campus. To be eligible, a student must meet the eligibility requirements for federal financial aid and must maintain a good academic standing while employed under the program. Students must be enrolled in a mini- mum of six (6) approved units to be considered for this program. Since this is a limited funded program, priority will be awarded to students who are enrolled at least six (6) approved units at LATTC.

Scholarships

Throughout the year, the college receives announcements on scholarship opportunities. The focus of each scholarship is different; some require good grades, some require financial need, and some are awarded to students who are majoring in certain area of study. The Financial Aid Office has a listing of current scholarship offerings. Interested students are urged to go to the Financial Aid Office for information and assistance.

Disbursement

Students who submit their required financial aid documents by the May 1st priority deadline may expect to receive their first financial aid disbursement during the first week of the Fall semester, provided that all established deadlines have been met.

The award amount reflected on the Award Notification is for full-time enrollment. Disbursements will be adjusted if enrollment is less than full-time at the time of disbursement. Supplemental disbursements occur throughout the academic year. Disbursements will be adjusted if enrollment increases or decreases. After the second disbursement run date of the each semester, no further award adjustments can be made. Any outstanding institutional debt will be deducted from the financial aid disbursement. Student must be an active student (enrolled in at least one approved unit) at LATTC to be eligible for financial aid disbursement. Payment for late-starting classes will not be issued until the class begins. Students are encouraged to log-on the Student Information System portal to view their refund information. Please note that the disbursement schedules are based on full-time enrollment. The actual refund amount will depend on the enrollment status at the time of the disbursement run. Please note that if you are in an Extension Appeal due to satisfactory academic progress, you must be enrolled in approved units, meaning classes listed in your Student Educational Plan (SEP). If

the class you are enrolled in is not listed on your SEP, the units will not be included in the calculation of approved units.

Full–time is considered 12 or more units per semester; three fourths time is considered 9-11.5 units per semester; half-time is considered

6-8.5 units per semester; less than half-time is 1-5.5 units per semester.

Federal PELL Grant is scheduled for payment twice a semester. FSEOG and Cal Grants are scheduled once per semester and require an enrollment of six (6) or more approved units. Federal-Work Study (FWS) is paid through payroll every two weeks. Federal Student Loans are disbursed in two equal payments, once per semester, for students attending two semesters in the academic year. Federal Student Loans require an enrollment of six (6) approved units. For students request- ing a loan for one semester only, the loan will be disbursed in two equal payments within the one semester.

Change of Enrollment

If your enrollment status changes during the semester please inform the Financial Aid Office. Your financial aid award may be modified to reflect the correct number of units in which you were enrolled at the time of the second disbursement run. The adjustment of enrollment may cause an overpayment of financial aid funds. Repayment of financial aid funds is necessary if the adjustment of enrollment causes an overpayment. You must resolve your overpayment prior to receiving any additional financial aid. Having an overpayment of federal funds will prevent you from receiving federal financial aid from any institution.

Federal Refund Requirements - Return to Title IV

The student's eligibility for financial aid is based upon enrollment. The Higher Education Amendment of 1998 governs the Return of Title IV funds policy for a student who completely withdraws from a period of enrollment (i.e. semester). These rules assume that a student "earns" aid based on his/her semester enrollment. "Unearned" aid, other than Federal Work- Study, must be earned. Unearned aid is the amount of federal financial aid received that exceeds the amount the student has earned. Unearned aid may be subject to repayment.

STUDENTS WHO RECEIVE FINANCIAL AID AND TOTALLY WITHDRAW FROM ALL CLASSES MAY HAVE TO REPAY SOME OF THE FEDERAL

Funds Received prior to withdrawal

All students receiving federal aid and then withdraw from the institution in the first 60% of the term, are subject to Return Regulations. The Financial Aid Office will calculate the amount of federal funds earned by the student up to the point of withdrawal and students will be billed and must repay any federal grant funds received but not earned.

Failure to repay these funds will result in the denial of future federal financial aid at all colleges. Nonpayment of the unearned amount will be reported to the U.S. Department of Education for collection. The college is also required to report grant overpayments to the National Student Loan Data System.

If you owe a repayment, students will be notified in writing by the Financial Aid Office. The student will have 45 calendar days from the date of notification to repay; otherwise, a hold will be placed on the academic and financial aid records which will prevent the student from receiving college services and will jeopardize future financial aid.

It is advised that you contact the Financial Aid Office before withdrawing from all of your classes so you understand the results of your actions. For the refund policy on enrollment fees and non-resident tuition, please see the College Schedule of Classes or the College Catalog.

Determining financial need

Most financial aid awards are based on demonstrated financial need which is the difference between the Cost of Attendance (COA) and the Expected Family Contribution (EFC).

COA minus EFC = Financial Need COST OF ATTENDANCE

In order to treat all students equally, standardized budgets (Cost of Attendance) are established and applied to all applicants. This means all students with similar circumstances will receive the same allowance for tuition and fees, books and supplies, room and board, personal expenses and transportation.

The cost of attendance is based on the Student Expenses and Resources Survey (SEARS) data and updated for three years of inflation using the estimated California Consumer Price Index.

The following table shows the estimated 2016-2017 9-month Cost of Attendance budget for a CA resident student living at home with parents and a CA resident student living away from parents:

The financial aid office may also add the following to a student's cost of attendance, if applicable:

- Non-resident tuition cost plus $46 enrollment fee
- Child Care cost - $1,000 annually
- Direct Loan Origination/Insurance Fee - determined annually

Expected Family Contribution

Students and/or their parent(s) are expected to contribute something to the cost of higher education. Parental and/or student contribution (EFC) are determined from the information reported on the FAFSA and take into account the resources available such as income, assets, liabilities, size of family, number in college, taxes paid, etc.

Child Care Expenses

This is an adjustment to the Cost of Attendance provided to students with unusual and reasonable expenses for dependent/child care up to a maximum of $1,000. If you are paying for Child Care expenses during the academic year, you must notify the Financial Aid Office in writing to request for an adjustment to your Cost of Attendance.

Technical/Vocational Expenses

Institutions may make adjustments for students in trade vocational programs that require supplies and equipment above and beyond the normal budgeted allowance for books and supplies. Some of these programs include: Registered Nursing, Physical Therapy, Animal Health Technology, Auto Mechanics, Photography and others where documentation is submitted to support the additional cost.

Disabled Expenses

As documented and in excess of amounts provided by other agencies.

Financial Aid Student Rights and Responsibilities

All Los Angeles Community College District students who apply for and receive financial aid have a right to the following:

Rights

- Information on all financial assistance available, which includes all Federal, State, and institutional financial aid programs.
- Application deadlines for all financial aid programs including deadlines for the submission of requested supporting documentation.
- Specific information regarding enrollment fees, tuition and refunds due from students who withdraw from school prior to the end of the semester.
- An explanation of how financial need is determined. This process includes establishing budgets for the costs of tuition and fees, books and supplies, room and board, transportation, personal and miscellaneous expenses, child care, etc., plus the student's income and assets, parental contribution, other financial aid (such as scholarships) and so on. Financial need is determined by the Central Processor from the information provided on the FAFSA.
- Knowledge of what resources are considered in the calculation of student need.
- Knowledge of how a financial aid package is determined.
- An explanation of various programs awarded in the student's financial aid package. If a student feels he/she has been treated unfairly, a reconsideration of the award may be requested.
- An explanation regarding requests for repayment of funds. This situation occurs when students withdraw prior to the end of the semester. Students must receive a clear explanation of the program funds that do not need to be repaid as well as the portion of the grant aid that the student is required to repay. If the student received a loan, the student is informed about what the interest rate is, the total amount to be repaid, when the repayment is to begin, and the conditions of deferment and cancellation during loan counseling sessions.
- Knowledge of how the Los Angeles Community College District determines whether students are making "satisfactory academic progress" and what happens if they are not.
- Knowledge of what facilities are available for disabled students.

Responsibilities

Students must take responsibility for:

- Reviewing and considering all information regarding the Los Angeles Community College District's academic programs prior to enrollment.
- Having a valid Social Security Number (SSN) on file in the Admissions & Records Office for the purposes of receiving financial aid, reporting a Cal Grant Grade Point Average, loan deferments, etc.
- Enrolling in an eligible program, which is defined as a Certificate, an Associate Degree (AA/AS), or a two-year academic Transfer Program that is acceptable for full credit toward a Baccalaureate Degree. Students must declare an eligible educational goal and major, and update changes with the Admissions & Records Office.
- Students must provide a valid academic plan goal to the Admissions and Records office prior to having their their financial aid application reviewed.
- Maintaining Satisfactory Academic Progress (SAP) to receive financial aid and meeting with an academic counselor to develop or review an Educational Plan (The SAP Policy is also in the college catalog).
- Promptly returning all additional documentation, verification, corrections, and/or new information requested by either the Financial Aid Office or the agency or agencies to which an application was submitted.
- Completing all required financial aid forms ACCURATELY AND COMPLETELY. If this is not done, aid could be delayed. Errors must be corrected before any financial aid can be received. Intentional misreporting of information and intentionally committing fraud on application forms for financial aid is a violation of the law and is considered a criminal offense subject to penalties under the U.S. Criminal Code, and the denial of the student's application. Additionally, regulations require that all cases of suspected fraud emanating from misrepresentation, be reported to the Office of Inspector General.
- Reading and understanding all financial aid forms and information. We advise students to retain copies of all documents submitted.
- Choosing a home school to process financial aid. Students MAY NOT receive financial aid from more than one institution at the same time or periods of overlapping terms.
- Notifying the appropriate entity (college, lender, California Student Aid Commission, U.S. Department of Education, etc.) of changes in your name, address, school enrollment status, or transfer to another college.
- Repaying financial aid funds if it is determined that the student was ineligible to receive funds for any reason (i.e. Return to Title IV, overpayments, over-awards).
- Performing the work that is agreed upon in accepting a work-study award.
- Knowing and complying with the deadlines for application or reapplication for financial aid.
- Knowing and complying with the Los Angeles Community College District Title IV Refund Policy.

SATISFACTORY ACADEMIC PROGRESS POLICY

In accordance with the Higher Education Act of 1965, as amended, the Los Angeles Community College District (hereinafter referred to as LACCD) established the following Standards of Academic Progress. These standards apply to all students who apply for and receive financial aid from the programs listed below.

- Federal Pell Grant
- Iraq and Afghanistan Service Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study (FWS)
- Federal Perkins Loan
- Federal Direct Loan
- Cal Grant B and C
- California Chafee Grant
- Child Development Teacher Grant
- Full-Time Student Success Grant (FTSSG)

Satisfactory Academic Progress standards are reasonable if they are the same as or stricter than the institution's standards for a student enrolled in the same educational program who is not receiving assistance under Title IV Federal Financial Aid Programs.

Current and previous coursework earned at any college within the LACCD will be reviewed for compliance with the standards put forth in this policy.

General Requirements

Students receiving financial aid must be enrolled in an eligible program. An eligible program is defined as:

- An educational program that leads to an associate degree, or
- An educational program which is at least a two-year academic transfer program that is acceptable for full credit toward a bachelor's degree, or
- An educational program which is at least a one-academic-year training program that leads to a certificate, degree, or other recognized educational credential and that prepares a student for gainful employment in a recognized occupation.

To meet satisfactory academic progress standards student must:

a. Maintain a 2.0 or higher cumulative grade point average (GPA).

b. Complete a minimum of 67% cumulative units attempted.

c. Entries recorded in the student's academic record as Incomplete (I), No Credit (NCR), and/or Withdrawal (W) are considered non-grades and must be 33% or less than the cumulative units attempted.

d. Fewer than 150% of attempted units required for student's program of study.

- ESL and Basic Skills/Remedial classes are excluded from the 150% unit limit when determining units attempted. Students may receive federal aid for up to 30 units of remedial coursework.
- Students who have already earned an Associate or higher degree outside of the LACCD will need to follow the appeal procedure.
- In Progress (IP) grades count as attempted units in the maximum time frame only. It does not affect cumulative grade point average in the qualitative measure nor is it included as completed units in the quantitative measure.

Consortium Classes

- All classes throughout the LACCD will be included when reviewing satisfactory academic progress.
- For students aided under a Consortium Agreement with colleges outside the LACCD, consortium classes will be included during satisfactory academic progress review. The District Student Information System will collect, maintain, and utilize the number of outside units entered into the system for calculating student eligibility.
- Transfer coursework from institutions outside of the LACCD will be used and evaluated for SAP standing. College Admissions & Records Offices (A&R) will record incoming units as indicated on transcripts.
- Repeated Coursework
- Repeated coursework within the LACCD will be counted towards attempted units.
- For repeated coursework for which the student has petitioned the College to utilize the most recent grade received, only the most recent grade will be used for cumulative GPA calculation for SAP status determination.

Academic Renewal

All classes and all units that have been exempted from academic consideration (i.e. consideration for academic standing, college GPA calculation) due to Academic Renewal are still considered and counted towards all SAP standards for financial aid eligibility, unless otherwise affected by the Repeated Coursework rule above.

Application of Standards

- Satisfactory Academic Progress for financial aid students will be determined at the end of each payment period/semester (summer, fall/winter, or spring semester).
- Students who are initially in good standing but now have a cumulative GPA of less than 2.0 and/or their cumulative non-grades are greater than 33% will receive Warning Letters but remain eligible for the following term of enrollment in the LACCD.
- Students who are disqualified from financial aid will be notified by email or mail and receive information regarding the petition process.
- Students disqualified at any college in the LACCD are disqualified at all colleges within the LACCD.

Disqualification

Students will be disqualified if they have one or more of the following deficiencies:

- Cumulative GPA is less than 2.0 following a semester for which the student received a Warning Letter.
- Cumulative non-grades are greater than 33% following a semester for which the student received a Warning Letter.
- Total units attempted (excluding ESL and Basic Skills/Remedial classes) are equal to or greater than 150% of required units.
- An Associate or higher degree has been earned outside the LACCD. Degree information received and posted to the District Student Information System during a semester will be evaluated for the following semester for potential disqualification.

Warning Letter

Students will receive a Warning Letter (by mail or email) if they were initially in good standing (based on SAP standards) but at the end of their most current semester they show one of the following academic deficiencies:

- Cumulative GPA is less than 2.0.
- Cumulative non-grades are greater than 33%.

Maximum Time Length

Students who are attending for the purpose of obtaining an Associate of Arts Degree (AA), an Associate of Science Degree (AS), a Certificate, or completion of requirements for Transfer to a four-year college are allowed 90 attempted units in which to complete their objective.

Exceptions will be made only when the requirements of a student's objective cause the student to exceed the maximum time limit.

Short-Length Certificate Programs

Some certificate objectives in the LACCD colleges may be completed in less time than that required for the Associate of Arts, Associate of Science and Transfer objectives.

The following table shows the normal completion time and maximum time for certificate programs of varying length.

Units Required for the Certificate Program	Normal Length	Maximum Length
10 to 24	2 semesters	3 semesters
25 to 36	3 semesters	5 semesters
37 to 48	4 semesters	6 semesters

To be eligible for financial aid, a program must be at least six (6) months in length with a minimum of sixteen (16) units. Students enrolled in a certificate program may continue to qualify for financial aid up to ninety (90) attempted units, six (6) full-time semesters, or the equivalent, if they are planning to obtain an A.A. or A.S. Degree, or to Transfer to a four-year school in addition to obtaining the certificate.

Petition Process to Appeal for Financial Aid Disqualification

If the student is disqualified due to not meeting progress, the student may submit a petition for reinstatement or extension of financial aid.

To submit a Petition for reinstatement or extension of financial aid, you must attend the Satisfactory Academic Progress (SAP) workshop.

There are two (2) levels in the petition process at the college for each type of petition (reinstatement or extension).

1. The first-level petition must be reviewed by a committee. The result of the petition will generally be provided to the student in writing to the student's LACCD email within 45 working days. During peak periods, which are July through September and January through February, the review process may take up to six (6) weeks due to the number of petitions received. If the first-level petition is denied, the student may submit a second-level petition. The second-level petition form is available in the Financial Aid Office.

2. The second-level petition is reviewed by the Financial Aid Administrator or designee. Students will be notified in writing to the student's LACCD email of the result of the petition within 30 working days.

An Administrative District Review may be initiated by the student who reasonably believes that the college, state, and/or federal guidelines were applied incorrectly, and therefore, adversely affected the student's financial aid status, rights and privileges.

A request for Administrative Review can only be submitted until after denial from the first-level and second-level petitions.

An Administrative Review is conducted by a district-appointed administrator. Administrative Reviews must be submitted before the end of the specified semester for which the student is requesting reinstatement or extension of financial aid eligibility.

FRAUD

A student who attempts to obtain financial aid by fraudulent means will be suspended from financial aid for unsatisfactory conduct.

The college will report such instances to local law enforcement agencies, to the California Student Aid Commission, to the Federal Government and the Office of Inspector General.

Restitution of any financial aid received in such manner will be required.

Other Information You Should Know

Federal School Code: 001227

State Tax Offset

Students should be aware that state income tax refunds might be offset by the institution for repayment of financial aid funds if it is determined the students were ineligible to receive funds, have defaulted on a student loan, or owe other debts to the school.

Special Circumstances

In certain cases, a family's financial situation can change because of:

- Death in the family
- Separation or divorce
- Loss of employment
- Loss of non-taxable income or benefits

In such cases, the student should contact the Financial Aid Office.

Financial Aid Related Websites

- LATTC Financial Aid website – http://www.lattc.edu/services/financial-aid
- FAFSA on the Web – www.fafsa.ed.gov
- Information about the Cal Grant Program – www.calgrants.org
- California Student Aid Commission – www.csac.ca.gov
- National Student Loan Database System – www.nslds.ed.gov
- California Dream Act - Student Aid Commission - http://www. csac.ca.gov/dream_act.asp

Financial Aid Related-Telephone Numbers

- LATTC Financial Aid Office (213) 763-7082
  - Email: finaid@lattc.edu
- California Student Aid Commission (888) 224-7268
- Central Loan Administration Unit (Perkins Loan) (800) 822-5222
- Department of Veterans Affairs (VA Benefits) (888) 442-4551
- Federal Student Aid Information Center (800) 433-3243
- LATTC Veterans Office (213) 763-5572
  - Email: VeteransStudentCenter@lattc.edu

ONLINE EDUCATION

Website: https://ilearn.laccd.edu

Online courses at LA Trade-Tech College provide the opportunity for students to take classes in a setting other than the traditional face-to-face classroom. LATTC offers courses to meet your individual needs and preferences. All course materials and class activities can be accessed online 24/7 to meet your needs while you are at home, your office or on a trip. With the use of innovative course delivery software, our professors deliver quality instruction at a distance.

How to register for online classes:

If you are an existing LATTC student, just enroll in the online class as you would any other class, or if you are a new LATTC student, enroll in the college first. Please go to http://www.lacolleges.net/admissions/ to enroll online. Once you are enrolled in the college, you can proceed to register for your online class. You should print the confirmation of online enrollment page at the end of the process. The online application takes two days to process.

Are there any special meetings, either on campus or online? Do I have to log in at a specific time?

Each teacher has the right to request either on-campus or online meetings if they feel it is best to do so. Some of the reasons they may choose to require these meetings is to ensure the student is who s/he claims to be and is the person actually doing the work. This is a federal mandate. Or, teachers may require an on-campus meeting to provide materials or an orientation to help students get off to a great start. Some required orientations are done online.

Most online classes are done asynchronously. This means a student logs in at regular intervals of his/her choosing during the week. Some classes do schedule

conferences or webinars where students gather online at the same time. Some instructors have online office hours at set times for students to log on and get help. Students should log into their class every couple of days and more often for short term classes.

What is considered attendance in online classes?

Online classes consider the weekly submission of assigned work as attendance. Simply logging into the system is not considered attendance in online or hybrid classes.

Classes have already started - How do I get into an online class?

Send the instructor an email request to add the class. Full directions found: https://ilearn.laccd.edu/courses/1967/pages/getting-set-up-with-canvas.

How do I contact my instructor?

You can use the college directory to send an email. If you don't find your instructor listed, you can call 213-763-3988 or 213-763-3733 or send email to online@student.lattc.edu with your questions.

PARKING

You are responsible for knowing LATTC parking rules and regulations. This information is intended to provide students with basic guidelines on parking at the college. Student Parking Guidelines may be obtained from the LATTC Sheriff's Station, D4, Room 150, the Business Office, E5 1st Floor Lobby, and the Administrative Services Office, E5 Room 305.

- Student parking regulations are enforced starting the first day of classes each semester through final examinations. A student parking decal is valid for the current academic term only and must be displayed at all times a vehicle is parked on college property. Saturday and Sunday parking rules and regulations are enforced in the same manner as weekdays.
- Parking decals are made of removable mylar and should be affixed to the inside rear window, (lower right side, facing outward). Vehicles with tinted rear windows may display the decal in the lower right or lower left front window. Any vehicle displaying a decal which is expired, altered, reported lost or stolen, or not completely visible is subject to a citation.
- A valid college parking decal and a DMV placard must be displayed on any vehicle parked in a designated disabled stall.
- Regulations governing disabled parking, red curbs, no-parking zones, fire lanes, special permit areas, and areas that have parking time limitations are enforced 24 hours a day, including weekends and holidays. Failure to display a parking decal or parking in an area not authorized for student parking, including designated staff lots and levels and reserved spaces will result in the issuance of a citation. Illegally parked vehicles may be towed away at owner's expense.
- All traffic laws must be obeyed. Vehicles must be parked in stalls within the designated lines. The college speed limit is 7 miles per hour.
- The purchase of a student parking decal does not guarantee a parking space; it is only a permit to park one vehicle in the designated areas specified below (See Campus Map):

Preferred Student Parking ($27.00 for Fall & Spring Semesters and includes $7.00 ASO Membership) as available:

- Olive Street Parking Structure- Entrance: Olive St., between Washington Bl. and 21st St.
- Flower St. Lot (B1l) -Entrance: Southbound Flower St., between 22 St. and 23rd St.
- East Parking/24th Street Parking Structure, 2nd through 5th Fl. –Entrance: 23rd or 24th St., between Grand Ave. and Olive St.

General Student Parking ($20.00 for Fall & Spring Semesters):

- 24th St. Parking Structure, 6th Fl. (top level) -Entrance: 23rd or 24th St., between Grand Ave. and Olive St.

Preferred Student Parking ($10.00 for Winter & Summer Sessions):

- Valid in all Preferred and General Student Parking Lots.

  PLEASE NOTE: After 3:00 p.m. a student with any parking permit (preferred or general) is allowed to park in any designated student parking area (whether preferred or general).
- LATTC assumes no responsibility or liability for your car or its contents while parked in the lots. Also walking/wheelchair escort service only, is provided upon availability for students with physical or other limitations. Note: This is not a shuttle service. Call the College Sheriff's Station at (213) 763-3600 and an officer will be dispatched to your location.
- Inquiries regarding the college's parking program, parking rules and regulations, parking decal use and enforcement should be directed to the following offices during normal business hours: Business Office, (213) 763-7225, and the Administrative Services Office, (213) 763-7040. However, LATTC Sheriff's Station personnel are on duty 24 hours a day, 7 days a week to assist with parking decal use and enforcement issues. Please call (213) 763-3600.
- Decal Sales, Refunds, and Exchanges: Please contact the Business Office, E5, 1st Floor Lobby, (213) 763-7225.
- Parking Citation Appeals: Individuals who believe a citation was issued to them in error must appeal it immediately by completing an Administrative Review form (available in the Sheriff's Station, D4, Room 150) or the LATTC Sheriff's website under Parking Information). Appeals must be mailed to: Los Angeles Trade Technical College, c/o Parking Citation Service Center, P.O. Box 11923, Santa Ana, CA 92711. You may contact the LATTC Sheriff's Station for results within approximately three weeks. Failure to immediately pay or appeal a citation may result in substantial penalties and a Department of Motor Vehicle (DMV) hold on your vehicle registration.

  Note: This information is subject to change without notice.

Enforcement of Traffic and Parking Regulations

All persons driving a motor vehicle on campus are required to comply with the traffic laws of the State of California and the rules and regulations pursuant to Section 21113A of the California Vehicle Code. Violations of the regulations set forth above will result in a citation being issued. The College reserves the right to remove vehicles from parking lots as follows: abandoned vehicles; vehicles parked in such a manner as to constitute a serious hazard; vehicles which impede the operation of emergency equipment; vehicles which park illegally on a recurring basis. The registered owner is responsible for any removal costs which may occur.

Liability

Los Angeles Trade-Technical College, the Board of Trustees, and the Los Angeles Community College District shall not be responsible for damage to any motor vehicle, theft of its contents, or injury to persons operating a vehicle parked on or off the campus unless liable under Government Codes including, but not limited to Government Code 810 to 9666.6 inclusive (Reference: LACCD Board Rules 7401 and 7402) Direct inquiries to the College Sheriff's Station, D4, Room 150, (213) 763-3600.

Citations and Bail

Citations will be issued to all vehicles on college property in violation of parking rules and regulations and must be paid within 21 days of the date issued. Parking Citation Appeals: Individuals who believe a parking citation was issued to them in error must appeal it immediately by completing an Administrative Review form (available at the College Sheriff's Station, CY- 150, or the LATTC Sheriff's Station website under Parking Information). Appeals must be mailed to: Los Angeles Trade-Technical College, c/o Parking Citation Service Center, P.O. Box 11923, Santa Ana, CA 92711. Failure to immediately pay or appeal a citation may result in substantial penalties and a Department of Motor Vehicle (DMV) hold on vehicle registration. Please call or contact the Sheriff's Station in person to obtain the results of your appeal.

Transportation

The college is located near the intersection of the Harbor and Santa Monica freeways, and is directly across the street from the Metro Blue Line's Grand Avenue/LATTC and Metro Expo Line's 23rd Street/LATTC stations. In addition to the light rail system, there are more than 40 bus lines stopping at or within two blocks of the College. For more information, please consult the College website at http://college.lattc.edu/.

VETERANS

Credit for Prior Military Service Training

Veterans and other eligible persons who are receiving benefits must provide the College with documentation of all previous educational and training experience, including Military Service Training Schools and/or Military Occupational Specialties. This experience will be evaluated and appropriate credit granted.

Attendance and Withdrawal

Students are required to attend all meetings of every class in which they are registered. The last day of a student's attendance in class must be reported to the Veterans Administration (VA) to avoid overpayments. It is the responsibility of the student to immediately inform the Office of Veterans Affairs of any reduction in unit load. It is the responsibility of the instructor to notify the Admissions Office of the last day of attendance of students. The Veterans Administration will then be notified in a timely manner of the students who withdraw from class.

Program Planning for Veterans

To be eligible for VA Education Benefits the student must select a major and choose courses from those listed under the major in the catalog. All students will need an Educational Plan and seek counseling from Counseling Services. The Veterans Administration will not pay benefits for courses that do not fit in a student's selected major. If a student has prior training and education from another institution, it is the student's responsibility to have the transcripts forwarded to the Admissions Office.

Academic Requirements

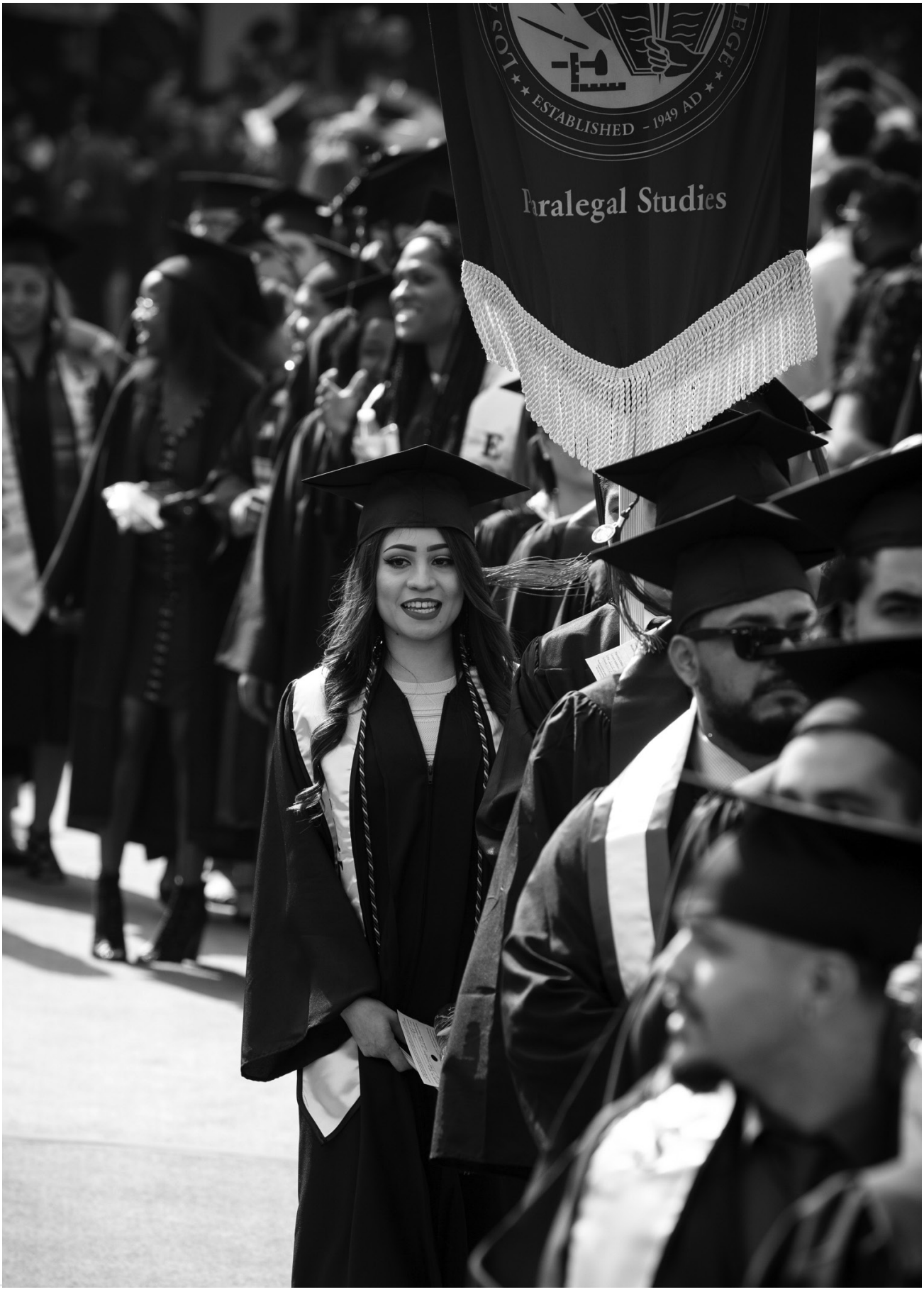
All students are subject to the academic standards for probation and dismissal as listed in this catalog. If a Veteran or other eligible person fails to obtain a cumulative grade point average of 2.0 or better after 3 consecutive semesters, the student's educational benefits will be discontinued.

60 Unit Rule and Unit Workload

Once the student has received units sufficient to equal or exceed the normal program printed in the catalog, the Office of Veteran's Affairs must certify the additional units needed for the student to complete the Associate degree in any major. The student is eligible for further training at the college only by taking courses which are required for upper division status at a transfer institution, or by changing the objective. These courses must be approved by the Veterans Administration. The 60 Unit Rule requires that an eligible student see a counselor before any more courses can be certified by the Office of Veteran's Affairs for payment of benefits.

The Veterans Administration uses the following definition for eligibility:

- Full-time benefits: 12 or more units
- 3/4-time benefits: 9 through 11 units
- 1/2-time benefits: 6 through 8 units


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Section IV: Graduation Requirements, Pathways and Programs of Study

GRADUATION REQUIREMENTS

Authorization Board Rule

The Board of Governors of the California Community Colleges has authorized the Los Angeles Community College District Board of Trustees to confer the degrees of Associate in Arts, Associate in Science, Associate Degrees for Transfer and Certificates of Achievement (Board Rule 6200).

Catalog Rights

(Board Rule 6203)

For these purposes, a catalog year is defined as beginning Fall semester and continuing through the subsequent summer. A student remaining in the College District may elect to satisfy the degree, certificate or graduation requirements in effect at the college from which the student will either earn his/her degree, certificate or graduate:

1. At the time the student began such attendance at the college, or
2. at the time of graduation.

For the purposes of implementing this policy, the college may develop a policy to:

1. authorize or require substitutions for discontinued courses; or
2. require a student changing his/her major to complete the major requirements in effect at the time of the change;
3. allow students to select an intervening catalog in years between time student began continuous attendance and time of graduation.

a. LATTC adopted policy: Recommendation to augment student catalogue rights, so they may apply for degrees and certificates in any time frame during their academic career. (Academic Senate - 05/05/2015)

The college's policy shall be developed in consultation with the college Academic Senate in accordance with the provisions of Chapter XVIII of the Board Rules - ACADEMIC SENATE AND THE BOARD OF TRUSTEES SHARED GOVERNANCE POLICY, and published in all college catalogs under appropriate headings.

This policy does not apply to college programs which are governed or regulated by outside government agencies or which require licensure or certification through one of these agencies.

Continuous Attendance

(Board Rule 6204)

"Continuous attendance" means no more than one semester absence within a school year, excluding Summer Sessions and Winter Intersession.

Students granted a "military withdrawal" under the provisions of Board Rule 6701.10, will be considered to be in "continuous attendance" for their required period of military service.

ASSOCIATE DEGREES FOR TRANSFER (AA-T OR AS-T)

The Student Transfer Achievement Reform Act, Senate Bill 1440 codified in California Education Code sections 66746-66749, guarantees priority consideration for admission to a California State University (CSU) campus for any community college student who completes an "associate degree for transfer", a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated a "high-unit" major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

The following is required for all AA-T or AS-T degrees:

- Minimum of 60 CSU-transferable semester units.
- Minimum grade-point average (GPA) of a least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
- Completion of a minimum of 18 semester units in a "AA-T" or "AS-T" major. All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass/No-Pass" basis (Title 5, 55063).
- Completion of the California State University General Education-Breadth (CSU GE Breadth) or Intersegmental General Education Transfer Curriculum (IGETC) pattern.

The college of the LACCD shall not impose any requirements in addition to the CSUGE plan or IGETC requirements, including any local college or district requirements, for students completing either of these general education plans for an associate degree.

ASSOCIATE DEGREE REQUIREMENTS (AA OR AS)

(Title 5 section 55063)

Associate in Science (AS) and Associate in Arts (AA) degree programs are comprised of two parts: major program requirements (required and elective courses), and general education program requirements. An Associate Degree shall be granted by Los Angeles Trade - Technical College to any student who successfully completes a sequence of courses established by the department and approved by the college in certain designated programs. Associate Degrees have the following common requirements:

Unit Requirement

A minimum of 60 semester units of course credit in a selected curriculum with at least 18 semester units of study in a major or area of emphasis and at least 18 semester units of study in general education (Board Rule 6201.10).

Residency Requirement

(Board Rules 6201.11, 6201.14)

a. Students must complete no fewer than 12 units at the college conferring the degree.

b. When the same major is offered at multiple colleges in the LACCD, the degree shall be conferred by the college where the student has taken the majority (greater than 50.0%) of units in the major. When units are split equally among two or more colleges, the college where the student was last enrolled shall award the degree.

c. Exceptions may be made under special circumstances.

Scholarship Requirement

A "C" (2.0) grade average or better in all work attempted in the curriculum upon which the degree is based. Effective for all students admitted for the Fall 2009 term or any term thereafter, each course counted toward the major requirements must be completed with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis (Board Rule 6201.12).

Competency Requirement

(Board Rule 6201.13)

Students must satisfy the requirements for meeting competency in written expression and mathematics. Through the collegial consultation process, the Chancellor, acting on behalf of the Board of Trustees, shall rely primarily upon the recommendation of the District Academic Senate, to establish procedures for determining competency.

Additional details may be found in the LACCD Administrative Regulation E-79.

General Education Requirement

(Board Rule 6201.15)

General Education is designed to introduce students to the variety of means through which people comprehend the modern world. For every major, students must complete a series of courses that make up the general education requirement of the degree.

While a course might satisfy more than one general education requirement, it may not be counted more than once for these purposes. A course may be used to satisfy both a general education requirement and a major requirement.

General Education Requirements: Minimum of 21 semester units. This plan may not be used for the Associate Degrees for Transfer f (ADT's). ADT degrees require completion of either CSU GE or IGETC. See General Education pattern in the following pages.

Policy on general education fulfillment for students with prior degree: Local Los Angeles Community College District associate degree general education requirements are fully satisfied by students who have an Associate, Baccalaureate or higher degree from a United States regionally accredited Institution.

Note: Students completing "high-unit" Degrees with 39.5 or more Major Units may waive up to 3 units of General Education in Area E based on the following:

Degree major/area of emphasis total units that cannot be double-counted to meet LACCD GE areas	Units in LACCD Area E (E1 and/ or E2) that shall be waived
39.5	0.5
40.0	1.0
40.5	1.5
41.0	2.0
41.5	2.5
42.0 or greater	3.0

For more information, please consult with a counselor.

Additional and Concurrent Associate Degrees

(Board Rule 6205)

Additional Associate Degrees:

Students who have previously earned an associate degree from a United States regionally accredited institution will be granted an additional associate degree when the following requirements have been met:

- Pursuant to catalog rights, described in Board Rule 6202, completion of all current degree requirements – i.e., scholarship, residency, competency, general education and major requirements.
- For local associate degrees, completion of a minimum of six (6) units in the major at the college awarding the degree. For the Associate Degrees for Transfer (ADTs), there is no major unit minimum requirement that must be completed at the college awarding the degree.
- Major course requirements completed in previous degrees awarded can be used again for additional degrees.
- All courses that count towards the associate degree major or area of emphasis must be satisfactorily completed with a grade of "C" or higher or "P" (pass).
- There is no limit to the number of additional associate degrees that can be awarded provided that all the above requirements have been met.
- Completion of any additional requirements, including new units, as determined by the college through collegial consultation with the college Academic Senate in accordance with the provisions of Chapter XVII of the Board Rules – Academic Senate and the Board of Trustees Shared Governance Policy.

Concurrent degrees:

Concurrent degrees are degrees awarded in the same semester. Students may petition and be awarded concurrent associate degrees in different majors if the following criteria are met:

- Pursuant to catalog rights, described in Board Rule 6202, completion of all current degree requirements: scholarship, residency, competency, general education and major requirements.
- There is no maximum number of concurrent degrees that a student may be awarded.
- If a course is a major requirement for each concurrent degree, it may be applied toward satisfaction of each major degree requirement.
- Completion of the General Education requirements for one associate degree will fulfill the general education requirements for concurrent degrees, if the same general education pattern applies to the additional degree. If each degree requires the completion of different general education patterns, the general education pattern of each degree must be fulfilled. Courses may be applied toward the general education requirements for each concurrent degree.
- All courses that count towards the associate degree major or area of emphasis must be satisfactorily completed with a grade of "C" or higher or "P" (pass).
- The LACCD does not offer double majors.

Note: Students who have taken college courses elsewhere (outside the LACCD system) must have an official transcript sent from each of those colleges to LATTC's office of Admissions and Records when they enroll at the college.

Double-Counting of Coursework

(Board Rule 6201.18)

A course may only be counted once for General Education purposes. However, a course may be used to simultaneously satisfy both a General Education requirement and a major/area of emphasis requirement. There is no limit on the number of courses that may be used simultaneously in this manner.

Students may also simultaneously apply the same course toward satisfaction of the LACCD General Education Plan, the CSU GE Breadth Certification requirements and the Intersegmental General Education Transfer Curriculum (IGETC) requirements.

CERTIFICATE OF ACHIEVEMENT REQUIREMENTS

A Certificate of Achievement is issued in State-approved programs designed for students who are looking for instruction with a high degree of specialization. Certificate programs vary in length, but most have 12 or more semester units, and may be pursued on a full-time or part-time basis. A Certificate program is specific, and no course substitution will be permitted unless approved by the department.

The Certificate of Achievement shall be granted by Los Angeles Trade - Technical College to any student who successfully completes a sequence of courses established by the department and approved by the college in certain designated programs. That sequence of courses shall include but not be limited to the essential occupational courses required in the major.

All courses applied to a certificate program must be completed with a grade of "C" or better.

Residency Requirement (Board Rule 6202.10 and 6202.12)

a. Students must complete a minimum of one-fifth of the units required for a certificate at the college conferring the certificate.

b. When multiple colleges in the LACCD offer identical Certificates of Achievement, as defined by Top Code, the certificate shall be awarded by the college where the majority (greater than 50.0%) of the certificate units were taken. When units are split equally among two or more colleges, the college where the student was last enrolled shall award the certificate.

Scholarship Requirement

A "C" (2.0) grade average or better, or a "P" if the course is taken on a "pass-no pass" basis, in all work attempted in the curriculum upon which the certificate of achievement is based (Board Rule 6202.11).

Automatic Awarding of Certificates of Achievement

Students who have completed the degree requirements for which there is a paired Certificate of Achievement or other State approved and transcripted certificate(s), will be awarded the certificate(s) automatically (Board Rule 6202.13).

Important Information Regarding Gainful Employment Disclosure Requirements

To qualify for federal financial aid, the law requires that an educational program at a community college must lead to a degree (associate, bachelor's, graduate, or professional) or prepare students for "gainful employment in a recognized occupation. Further, federal regulations [75 FR 66832] require community colleges that participate in the Federal student financial assistance programs to report certain information about students who are enrolled in Gainful Employment Programs. At Los Angeles Trade-Technical College, Gainful Employment programs are programs that prepare students for obtaining a Certificate of Achievement.

In accordance with the Gainful Employment disclosure regulations, a website has been developed to provide students with important information on each Certificate of Achievement program (e.g., Gainful Employment program) at the college including, but not limited to: program costs, employment projections and profiles related to the occupation(s) the program trains students for, and program completers. The Certificate of Achievement website is available at: http://college.lattc.edu/catalog/gainfulemployment/. The information provided for each Certificate of Achievement program on this website fulfills the Gainful Employment federal reporting requirements described above.

APPRENTICESHIP PROGRAMS

Apprenticeship programs prepare students for any profession, trade, or craft that are learned through a combination of supervised, on-the-job training with off-the-job formal education. Los Angeles Trade-Technical College's apprenticeship programs are intended for students who are indentured to learn a trade under agreement with the State of California Division of Apprenticeship Standards. As such these programs are restricted to **indentured apprentices only**.

NONCREDIT PROGRAMS

Noncredit Instruction is one of several educational options offered within the California Community College System. It offers students access to a variety no cost courses that can assist them in reaching their personal and professional goals. Noncredit courses are intended to provide students with lifelong learning, college transfer and career preparation opportunities. Although students may not need or desire unit credit, noncredit often serves as a first point of entry for many underserved students as well as a transition point to credit instruction.

GRADUATION INFORMATION

To graduate from LATTC you must:

- Complete all requirements for a certificate or degree as outlined in the General Catalog. Graduation requirements will be determined using the catalog year in effect when you were most recently admitted to the College. Please contact Pathway Counselor if you have questions about completion of program requirements.
- If necessary, submit any requests for course substitutions and waivers and receive approval from the department or dean prior to submitting a graduation application.
- Students with transfer credits must have former official college(s) transcript (s) on file in the Admissions and Records Office and see a counselor to have their credits evaluated prior to submitting a graduation application. Failure to provide transcripts may delay your graduation intent. Please note LATTC does not accept hand carried or unofficial transcripts.
- The Los Angeles Community College District:
  1. Accepts degree applicable coursework completed at other regionally accredited institutions for the purpose of fulfilling Associate Degree requirements (Please refer to LACCD Administrative Rule E-93)
  2. Grants Associate Degree credit for course work completed at institution higher education outside the United States (Please refer to LACCD Administrative Rule E-101)
  3. Accepts Upper-Division Coursework to Meet Associate Degree Requirements (Please refer to LACCD Administrative Rule E-119)
- Complete all incomplete ("I") grades required by your program of study.
- Resolve financial obligations to LACCD. Transcripts and degrees will be held until outstanding financial obligation holds are cleared.

Graduation Application Process:

- Students should meet with a counselor to go over the degree and/or certificate requirements and to fill out the application.
- Application for degree/certificate should be completed online through the student information system (SIS), before the deadline (please check dates on the website). Late applications will be reviewed after evaluation is completed of those submitted on time.
- Applications are reviewed throughout the semester for accuracy and missing information; applicants may receive an email notification with application status during this phase.
- The degree audit is finalized at the end of the semester, once grades have been entered. During this phase, ineligible notices are emailed to students via their LACCD email.
- If requirements are successfully completed, degree and certificates will be posted on student's permanent record approximately 2 to 14 weeks after the semester ends.
- All degree/certificates will be available for pick up once degree audit is completed and diplomas are printed and validated. Please allow approximately 4 to 6 months, from the end of the semester, for your degree/certificate to become available. Students will be notified to their LACCD email that their degree/certificate is ready for pick up.
- Resolve all financial obligations to LACCD. All transcripts and diplomas will be held until outstanding financial holds are cleared.

Graduation and Commencement

Los Angeles Trade Tech College's Commencement ceremony is held once a year at the end of the spring semester as a celebration for students projected to successfully complete all their graduation requirements by the end of spring or previous semesters. Although students may have graduated at the end of the fall, winter or summer semesters, there is only one Commencement ceremony held at the end of the spring semester, so graduates are encouraged to attend.

During the commencement ceremony, students do not receive their actual degree or certificate at the ceremony. Confirmation of degrees/certificates will not take place until the end of the semester and grades are posted. Graduation indicates that all the requirements have been satisfied and verified by the Admissions and Records Evaluation Unit.

Distinguished Graduate Award

The Distinguished Graduate Award is one of the most significant and prestigious honors available to the students in the Los Angeles Community College District. This honor is bestowed on graduates during the College Commencement.

In order to be considered for the award, a candidate must:

1. Petition for the Associate Degree.

2. Achieve a grade point average point average of 3.70 or better in all college work completed at LACCD at the time of petition, and is in good standing.

3. Achieve a grade point average of 3.70 or better in all college work completed at LACCD at the end of Fall semester; if graduation requirements will not be competed until the end of the spring semester.

4. Students who have earned an Associate Degree or equivalent or advanced degree are not eligible for the award.

Commencement Inquiries:

Inquiries regarding the Commencement ceremony, regalia, and rehearsals should be directed to Office of Student Life.

Student | Student ID | Program of Study/Major

Los Angeles Trade Technical College

2020 - 21 ◊ LACCD GENERAL EDUCATION REQUIREMENTS ◊ 2020 - 21

General Education Requirements: Minimum of 21 semester / 28 quarter units.

Major Requirements: Minimum of 18 semester units in an approved area of emphasis. Effective for all students entering Fall 2009 or later, each course counted towards the major or area of emphasis requirements must be completed with a "C" (2.0 or equivalent) or better or a "P" if the course is taken on a pass-no-pass basis. Please see a counselor and check the college catalog or the LATTC homepage "Program Fact Sheets" for specific major requirements.

NOTE: ††Students completing High Unit Programs of Study (majors with 39.5 units or more) may waive up to 3 units in AREA E. Please refer to Page 2 and consult with a counselor for more details.

THIS FORM IS SUBJECT TO CHANGE EACH YEAR

	C	IP	N
A. NATURAL SCIENCES — **3 Semester/ 4 quarter units minimum** **ANATOMY** 1; **ANTHRO** 101, 111; **ASTRON** 1, 5^; **BIOLOGY** 3, 5, 6, 7; **CHEM** 51, 70, 101, 102, 211, 212, 221; **EARTH** 1: **ELECTRN** 2; **ENG GEN** 151, 220, 231; **ENV SCI** 1; **GEOG** 1; **GEOLOGY** 1, 6^; **MICRO** 1, 20; **PHYSICS** 6, 7, 11, 12, 14^, 101, 102, 103; **PHYSIOL** 1; **PSYCH** 2 *^ these lab courses alone will not meet unit requirement* OTHER COLLEGE COURSE _____ AP/IB/CLEP EXAM _____			
B. SOCIAL AND BEHAVIORAL SCIENCES — **6 Semester/ 8 quarter units minimum** **B1. AMERICAN INSTITUTIONS (3 Semester / 4 quarter units minimum)** **HISTORY** 11, 12, 41, 42, 43, 44; **LABR ST** 1, 4; **POL SCI** 1 **B2. SOCIAL AND BEHAVIORAL SCIENCES (3 Semester / 4 quarter units minimum)** **ADM JUS** 1, 2, 4, 67: **ANTHRO** 102; **BUSINESS** 1, 5; **CH DEV** 1, 2, 10, 11, 42, 46; **EDUC** 1; **ECON** 1, 2; **GEOG** 2, 7; **HEALTH** 101; **HISTORY** 2**, 52**, 86, 87; **KIN MAJ** 109, 120: **POL SCI** 2, 7; **PSYCH** 1, 13, 14, 32, 41, 69, 74**; **SOC** 1, 2, 11, 28, 31 OTHER COLLEGE COURSE _____ AP/IB/CLEP EXAM _____			
C. HUMANITIES — **3 Semester/ 4 quarter units minimum** **A S L** 1, 2, 3, 4; **ARC** 130*, 131* (*only 2 sem. units); **ART** 101, 102, 103, 201, 300, 501, 502; **ENGLISH** 102**, 127, 203, 205 **ENGLISH** 206, 207, 208, 212, 215, 240; **FASHDSN** 112, 119A*^, 119B*^ (*^only 1.5 sem. units); **FRENCH** 1, 2; **HISTORY** 2**, 52** **HUMAN** 1, 2, 60; **KIN MAJ** 106, 108 (formerly PHY ED 762); **LABR ST** 21; **MUSIC** 101, 116, 141; **PHILOS** 1, 20; **SPANISH** 1, 2, 35, 36; **THEATER** 100; **VISCOM** 106*, 108*, 120*, 130* (*only 2 sem. Units) OTHER COLLEGE COURSE _____ AP/IB/CLEP EXAM _____			
D. LANGUAGE AND RATIONALITY — **6 Semester / 8 quarter units minimum** **D1. ENGLISH COMPOSITION ^(3 semester / 4 quarter units minimum)** **ENGLISH** 28, **101** **D2. COMMUNICATION AND ANALYTICAL THINKING ^(3 semester / 4 quarter units minimum)** **COMM** 101; **CO INFO** 701; **EDG TEK** 101; **ENG GEN** 122, 131; **ENGLISH** 102**, 103; **LIB SCI** 101; **MATH** 114, 115, 120, **125**, **125S**, **137**, 215, 227, 227S, 230, 235, 236, 240, 241, 241S, 245, 260, 260S, 265, 266, 267, 270, 272, 275; **PHILOS** 8: **PSYCH** 74** *^Competency Requirements on page two.* OTHER COLLEGE COURSE _____ AP/IB/CLEP EXAM			
E. HEALTH AND PHYSICAL EDUCATION†† — **3 Semester / 4 quarter units minimum** **E1. HEALTH EDUCATION (at least 2 semester / 3 quarter units minimum)** **HEALTH** 2°, 6°, 8, 11, 12, 21, 43, 51; **KIN MAJ** 100, 101, 134 Note: °Health 2 and 6 includes the physical education activity. **E2. ONE PHYSICAL EDUCATION ACTIVITY (1 semester / 1.5 quarter unit minimum)** **KIN** 047- 500; **KIN ATH** 504, 513, 516, 517, 552, 561; **KIN MAJ** 135 OTHER COLLEGE COURSE _____ EXEMPT: Military Credit DD-214 ☐			

C = Completed IP = In Progress N = Need

** Courses can only be used in one GE area.

_____ **Counselor's Signature** _____ **Date**

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

Los Angeles Trade Technical College

2020 - 2021 ◊ LACCD ◊ ASSOCIATE DEGREE ◊ GENERAL EDUCATION REQUIREMENTS								
Major / Area of Emphasis:						C	IP	N
Major Courses (min. 18 units)								
Electives								
LACCD GE Units								
Competencies Met:	English: 101		Math: 125 or higher		TOTAL			

C = Completed IP = In Progress N = Need

The LATTC Associate Degree has the Following Common Requirements (Title 5: 55063):

1. **Unit Requirement:** A minimum of 60 degree-applicable, semester units of course credit in a selected curriculum.
2. **General Education Requirements:** Minimum 21 semester units.
   a. Students may satisfy their associate degree general education by completing either the **LACCD GE** pattern (21 units), **CSU GE Breadth** or **IGETC** pattern (BR 6201.15)
3. **Major Requirement:**
   a. Minimum of 18 units is a single or related field or specific courses determined by department.
   b. Each course counted toward the major requirement must be completed with a grade of "C" or better or a "P" if the course is taken on a "pass- no pass" basis.
4. **Scholarship Requirement:** A "C" (2.0) grade average or better in all work attempted in the curriculum upon which the degree is based.
5. **Competency Requirements** Administrative Regulation **E-79:** Beginning Fall 2009, students must demonstrate competency in Reading & Writing and Math by completion of the following ***with a grade of "C" or higher***.
   i. Reading and Writing Competency
      1. English 101 or equivalent (at another college)
      2. A score of 3 or higher on one of the following AP Exams: English Language and Composition or English Composition and Literature
      3. or placement at one level above English 101.
   ii. Math Competency:
      1. Completion of one of the following courses (or its equivalent at another college) **Math 125 or higher.**
      2. A score of 3 or higher on one of the following AP Exams: Calculus AB, Calculus BC, Statistics.
      3. or placement at one level above Math 125, Intermediate Algebra, or higher.
6. **Residency Requirement:** A minimum of 12 semester units of the units used toward the degree must be completed in residence at LATTC.

†† HIGH UNIT PROGRAMS OF STUDY INFORMATION

LACCD Board 6201.15 Chapter VI Article II:

Area E shall be waived for degrees in Nursing. **For other "high-unit" degrees:** the number of units in Area E (E1 and/or E2) specified below shall be waived:

Degree major/area of emphasis total units that cannot be double-counted to meet LACCD GE areas:	Units in LACCD Area E (E1 and/or E2) that shall be waived:
39.5	0.5
40.0	1.0
40.5	1.5
41.0	2.0
41.5	2.5
42.0 or greater	3.0

2020 - 2021 CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION CHECK SHEET — 39 Sem. Units Required

Disclaimer: Every effort has been made to ensure that the information below is accurate and timely. However, this information is unofficial and should be checked against the official information found on the ASSIST website: www.assist.org *Note: CSU GE is only part of the 60 transferrable units required to transfer to a Cal State or University of California campus, see back page.* COURSES UNDERLINED ARE C-ID APPROVED.

** COURSES LISTED IN MORE THAN ONE AREA SHALL NOT BE CERTIFIED IN MORE THAN ONE AREA

AREA A	ENGLISH LANGUAGE COMMUNICATION & CRITICAL THINKING 3 courses - Select ONE from each group: A1, A2 AND A3	9 sem. or 12 qtr. units	units completed	units in progress	units needed	pass-along or exam
A1	**Oral Communication** • Communication Studies (formally Speech) 101	3 units				
A2	**Written Communication** • English 101	3 units				
A3	**Critical Thinking** • English 102**, 103 • Philosophy 008	3 units				

AREA B	SCIENTIFIC INQUIRY & QUANTITATIVE REASONING 3 courses: 1. Select ONE course from group B1 *Physical Science* AND ONE course from group B2 *Life Science* 2. LAB requirement: At least ONE course from B1 OR B2 must include a corresponding lab. Eligible courses are identified with * 3. Select ONE course from group B4; *Mathematics / Quantitative Reasoning*	9-12 sem. or 12-15 qtr. units	C	IP	N	pass-along or exam
B1	**Physical Science** • Astronomy 001, 005* • Chemistry 051*, 070*, 101*, 102*, 211*, 212*, 221* • Earth 001 • Geography 001 • Geology 001, 006* • Physics 001*, 002*, 003*, 004*, 006*, 007*, 011*, 012, 014*, 101*, 102*, 103*	1 course				
B2	**Life Science** • Anatomy 001* • Anthropology 101, 111* • Biology 003*, 005*, 006*, 007* • Microbiology 001*, 020* • Physiology 001* • Psychology 002	1 course				
B3	**LABORATORY Requirement* met with:** _____		☐	☐	☐	
B4	**Mathematics / Quantitative Reasoning** • Math 227, 227S, 235, 236, 241, 245, 260, 265, 266, 267, 270, 272, 275	1 course				

AREA C	ARTS & HUMANITIES Select 3 courses: at least ONE from each group C1 & C2	9 sem. or 12 qtr. units	C	IP	N	pass-along or exam
C1	**Arts (Arts, Cinema, Dance, Music, Theater)** • Architecture 130 (2 units), 131 (2 units) • Art 101, 102, 103, 201 • Music 101, 116, 141 • Theater 100					
C2	**Humanities (Literature, Philosophy, Languages Other than English)** • American Sign Language 001, 002, 003, 004 • English 102**, 127, 203, 205, 206, 207, 208, 212, 215, 240 • French 001, 002 • History 002** • Humanities 001, 002, 060 • Kinesiology Major 106 • Labor Studies 021 • Philosophy 001, 020 • Spanish 001, 002, 035, 036					

AREA D	SOCIAL SCIENCES Select 3 courses: at least ONE from TWO different disciplines. ≠ denotes courses meeting CSU American Institution	9 sem. or 12 qtr. units	C	IP	N	pass-along or exam

≠ CSU GRADUATION REQUIREMENTS: The CSU graduation requirements listed below may be completed prior to transfer. AMERICAN INSTITUTIONS – 6 semester units or 9-12 quarter units, with one course selected from each group. These courses may also be credited toward satisfying GE requirements from Area D and are identified with this symbol ≠.
Group 1: Political Science 1≠ (3 units). Group 2: History 11≠, 11H≠, 12≠, 41≠, 42≠, 43≠, 44≠, 52≠; Labor Studies 1≠

- Administration of Justice 001, 004
- Anthropology 102
- Child Development 001**
- Economics 001, 002
- Geography 002, 007
- Health 101
- History 002**, 011≠, 012≠, 041≠, 042≠, 043≠, 044≠, 052≠, 086, 087
- Labor Studies 001≠, 004
- Political Science 001≠, 002, 007
- Psychology 001, 013, 014, 032, 069, 074
- Sociology 001, 002, 011, 028**, 031

AREA E	LIFELONG LEARNING & SELF-DEVELOPMENT KIN∞ courses considered activity are limited to one unit for this area	3 sem. or 4 qtr. units	C	IP	N	pass-along or exam

- Child Development 001**
- Counseling 020, 040
- Health 002, 006, 008, 011, 021, 043, 051
- Kinesiology 047 to 500
- Kinesiology Athletics 516, 563∞
- Kinesiology Major 101
- Psychology 013, 041
- Sociology 028**

Counselor (print) _____ Counselor's Signature _____ Date _____ ◯ CSU Full Cert

Evaluator (print) _____ Evaluator's Signature _____ Date _____ ◯ CSU Partial Cert.

Los Angeles Trade-Technical College AO DRE: 05/2020

LAST NAME FIRST NAME M.I. STUDENT ID

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

2020 - 2021 CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION CHECK SHEET — 39 Sem. Units Required

CSU GE Policy & Information

- This CSU GE Plan totals approximately 39 units. A minimum of 60 CSU transferrable semester units is required for admission. You will need to complete additional coursework for your major and maybe some elective courses. Please consult **ASSIST.ORG** for specific major prep coursework and see a counselor to develop an Educational Plan.
- CSU GE Plan courses must be completed with a passing grade. At LATTC that is a grade of A, B, C, D, or P. **However, areas A1, A2, A3 and B4, must be completed with a "C-" or better.**
- Courses may be used only once to satisfy one GE area, even if they are listed in the course agreement under more than one subject area. Courses may be used to satisfy both CSU GE and major requirements.
- This advising form may not be the best general education preparation pathway for ALL majors (such as Engineering, Computer Science and Liberal Studies-Teacher Prep). Please consult with a counselor to determine the best plan to meet your educational goals.

WARNING: Many students attend multiple California Community College campuses. If that's you, be sure to follow the CSU GE at each college of attendance. CSU policy states that CSU coursework completed in a specific subject area will be used in the same area designated by the California Community College at which the course was completed. This is also the policy if you complete courses at more than one of the LACCD colleges.

Governed by CSU Executive Order 1100
Note: USE www.assist.org to check admission and selection for impacted majors and programs.

CSU Admission Requirements

- **Golden Four:** ***All courses must be completed with a grade of "C-" or better.***
  - **A1.** Communication Studies (formally Speech) 101
  - **A2.** English 101
  - **A3.** Critical Thinking (one course) English 102 or English 103 or Philosophy 8
  - **B 4.** Mathematics (one course)
    (Check your major requirements to make sure your math also satisfies this requirement)
- **60 transferrable units are required for admission to CSU as an upper division student.**

The Admission and unit requirements must be completed prior to admission

- Fall semester: completed by spring for following fall (September)
- Spring semester: completed by summer for following spring semester (January)
- Spring quarter: completed by fall for following spring quarter (March)

Certification is not automatic:

- You must meet with a counselor to review CSU GE completion.
- Make sure to have this certificate added to your program plans in PeopleSoft.
- Official transcripts must be on file in Admissions & Records for GE credit from other institutions attended outside of LACCD.
- Counselor must sign this verification before submission to the Admissions & Records office.
- CSU GE must be fully certified to earn an AA-T or AS-T degree for CSU.

LAST NAME

FIRST NAME

M.I.

STUDENT ID

Los Angeles Trade-Technical College AO DRE: 05/2020

2020 – 2021 I G E T C CSU/UC GENERAL EDUCATION CHECKSHEET — 37 Sem. Units Required

Disclaimer: Every effort has been taken to ensure that the information below is accurate and timely. However, this information is unofficial and should be checked against the official information found on the ASSIST website: www.assist.org *Note: IGETC is only part of the 60 transferrable unit to transfer to a Cal State or University of California campus, see back page*

** Courses listed in more than one area shall not be certified in more than one area except for ^Languages other than English, which can be certified in AREAS 3B and 6.
Courses underlined are C-ID approved.

AREA 1	**ENGLISH COMMUNICATION** — **6-9 sem. or 9-12 qtr. UNITS** ***UC:*** *2 courses required, ONE each from **Group 1A and 1B** (6 semester units)* ***CSU:*** *3 courses required, ONE from each **GROUP 1A, 1B & 1C** (9 semester units)*					
1A	**English Composition** — 3 units • English 101					
1B	**Critical Thinking – English Composition** — 3 units • English 102**, 103					
1C	**Oral Communication (CSU admission and CSU ADT only)** — 3 units • Communication Studies (formally Speech) 101					
AREA 2	**MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING** — **3-5 sem. or 4 qtr. UNITS**	C	IP	N	pass-along or exam	
2A	**Mathematics** • Math 227, 227S, 235, 236, 245, 260, 265, 266, 267, 270, 272, 275					
AREA 3	**ARTS & HUMANITIES** — **9 sem. or 12 qtr. UNITS** **Select 3 courses: at least ONE from each group 3A AND 3B**	C	IP	N	pass-along or exam	
3A	**Arts** • Art 101, 102, 103 • Music 101, 116, 141 • Theater 100**					
3B	**Humanities** • American Sign Language 002^, 003^, 004^ • English 102**, 203, 205, 206, 207, 208, 212, 215, 240 • French 002^ • History 002** • Humanities 001, 002, 060 • Labor Studies 021 • Philosophy 001, 020 • Spanish 002^, 035, 036^ • Theater 100**					
AREA 4	**SOCIAL & BEHAVIORAL SCIENCES** — **9 sem. or 12 qtr. UNITS** **Select 3 courses: at least ONE from any TWO different disciplines** **# denotes courses meeting CSU American History & Institutional graduation requirements**	C	IP	N	pass-along or exam	
	• Administration of Justice 001, 004 • Anthropology 102 • Child Development 001 • Economics 001, 002 • Geography 002, 007 • History 002**, 011#, 012#, 041#, 042#, 043#, 044#, 052#, 086, 087 • Labor Studies 001#, 004 • Political Science 001#, 002, 007 • Psychology 001, 013, 014, 032, 069, 074 • Sociology 001, 002, 011, 028, 031					
AREA 5	**PHYSICAL AND BIOLOGICAL SCIENCES** — **7-9 sem. or 10.5-12 qtr. units** **Select 2 courses: at least ONE from Section 5A Physical Science AND at least ONE from Section 5B Biological Science** **LAB Requirement: at least ONE science course with a lab from 5A OR 5B (lab courses are identified with *)**	C	IP	N	pass-along or exam	
5A	**Physical Science** — 1 course • Astronomy 001, 005* • Chemistry 051*, 070*, 101*, 102*, 211*, 212*, 221* • Earth 001 • Environmental Science 001 • Geography 001 • Geology 001, 006* • Physics 006*, 007*, 011*, 012, 014*, 101*,102*, 103*					
5B	**Biological Science** — 1 course • Anatomy 001* • Anthropology 101, 111* • Biology 003*, 005*, 006*, 007* • Microbiology 001*, 020* • Physiology 001* • Psychology 002					
5C	**LAB Requirement** met with: _____	☐	☐	☐		
AREA 6	**LANGUAGES OTHER THAN ENGLISH (*UC Requirement Only*)** **(Proficiency equivalent to two years of high school study in the same language.)**	C	IP	N	pass-along or exam	
	• American Sign Language 001, 002^, 003^, 004^ • French 001, 002^ • Spanish 001, 002^, 035, 036^ • 2 years of the same language Foreign Language from high school with "C-" or better (Need official HS transcripts). • Validation by completing level 2^ or higher in AREA 3B • AP Exam Language with score of 3 or higher (Need official AP scores)					
CSU:AI	**CSU GRADUATION REQUIREMENTS IN AMERICAN INSTITUTIONS (CSU Only)** **Select ONE course from A. AND B.** **CSU Requirement in U.S. History, Constitution, and American Ideals. Not part of IGETC, but may be completed prior to transfer. These courses may be satisfied in Area 4. *# denotes eligible courses.***	C	IP	N	pass-along or exam	
	A. Political Science 001# **B.** History 011#, 012#, 041#, 042#, 043#, 044#, 052#; Labor Studies 001#					

Counselor (print) _____ Counselor's Signature _____ Date _____

Evaluator (print) _____ Evaluator's Signature _____ Date _____

◯ **Full Certification**
◯ **Full UC for CSU**
Area 1C completed
◯ **IGETC for STEM**
AS-T in Biology only
◯ **Partial Certification**

Los Angeles Trade-Technical College AO:DRE 5/2020

2020 – 2021 I G E T C CSU/UC GENERAL EDUCATION CHECK SHEET — 37 Sem. Units Required

This IGETC Plan totals approximately 34-37 CSU / UC transferrable semester units. A minimum of 60 transferrable semester units is required for transfer. You will need to complete additional coursework in your major and maybe some elective courses. Transferring to highly selective UC campuses prioritizes major prep for admission selection. Please visit the ASSIST website www.assist.org and consult with a counselor to develop an Educational Plan so that you can reach your goals.

IGETC Standards

- Courses must be a minimum of 3 semester / 4 quarter units to meet the requirements for IGETC (except area 5C).
- A minimum of a "C" grade is required in each college course for IGETC
- A "C" is defined as a minimum of 2.0 grade points on a 4.0 scale

Governed by IGETC Standards: www.ccctransfer.org

IGETC Policy & Information

- To be certified, all courses must be completed with a grade of "C" or better. A grade of "P" (pass) may be used if the grading policy of the community college states that "P" is equivalent to a grade of "C" or better. The UC will allow no more than 14 semester units taken with "P" towards eligibility for IGETC.
- Courses may be used only once to satisfy one IGETC subject area, even if they are listed in the course agreement under more than one subject area. Courses may be used to satisfy both IGETC and major requirements.
- ***Which type of student should NOT follow IGETC:***
  Certain students, however, will not be well served by following IGETC. Students who intend to transfer into majors that require extensive lower-division preparation, such as engineering or the physical and natural sciences, should concentrate on completing the many prerequisites for the major that the college screens for to determine eligibility for admission.
- UC AREA 6: Language other than English - IGETC Standards: Additional mechanisms to demonstrate competency: (1) Satisfactory completion, with "C" grade or better, of two years of formal schooling at the sixth grade level or higher in an institution where the language of instruction is not English; (2) AP exam with a score of 3 or higher; or IB exam with a 5 or higher. (3) SAT language scores (see counselor to review IGETC standards); (4). Validating proficiency by completing a higher level language course.
- When combining quarter and semester unit values within an IGETC area, units shall be converted to either all quarter units or all semester units to best serve the student.

WARNING: Many students attend multiple California Community College campuses. If that's you, be sure to follow the IGETC pattern at each college of attendance. IGETC policy states that coursework completed in a specific subject area will be used in the same area designated by the California Community College at which the course was completed. This is also the policy if you complete courses at more than one of the Los Angeles Community College District (LACCD) college.

Certification is not automatic:

- You must meet with a counselor to review IGETC completion.
- Official transcripts must be on file in Admissions & Records for GE credit from other institutions attended outside of LACCD.
- Counselor must sign this verification before submission to the Admissions & Records office.
- To be certified IGETC, all courses must be completed or in progress at time of petition for the certificate.
- All course grades must be posted and transcripts on file for certification.
- **Students using IGETC for AA-T or AS-T**
  - If transferring to a CSU, IGETC must be fully certified as **IGETC for CSU** including **Area 1C (a CSU admissions requirement).**
- **IGETC for STEM:** Allows for partial certification in high unit AS-T majors (Biology) Complete the following:
  - All courses in Areas 1, 2, and 5 of the traditional IGETC
  - AREA 3: 6 units: One course in Area 3A; one course in Area 3B;
  - AREA 4: 6 units: two courses in Area 4 from two different disciplines.
  - AREA 6: Foreign Language proficiency: not required for certification but may be completed prior to transfer.
- Students who do not complete IGETC (more than two areas missing) before enrolling at a UC campus will be required to satisfy the native lower-division general education/breadth requirements of the UC campus college or school.
- **PARTIAL IGETC**: California community colleges may grant partial certification of IGETC to students who are missing no more than two requirements, other than Areas 1 and 2. Students submitting partial IGETC certification should complete the missing requirements at either UC or a California community college as designated by their department. Students who have been granted partial IGETC certification should not return to the community college for a full certification.

Learning Outcome Information

Outcomes are used to describe the anticipated or achieved results of programs, courses or the accomplishment of institutional objectives. Los Angeles Trade Technical College identified and assesses the following four different types of student-related outcomes:

Institutional Learning Outcomes (ILOs)

The ILOs represent the broad categories of competence that enable students to be successful in further education, in careers, as citizens, and in their personal lives. Upon completion of a degree, students will be able to:

Critical Thinking and Problem Solving
Students will be able to select and synthesize information to develop or support an argument, position, or solution based on evidence, sound reasoning, and/or creativity.

Creativity and Innovation
Students will be able to use visual, numerical/ quantitative, verbal, written, computer, and emerging technological skills to create useful and original products.

Occupational Competence
Students will be able to demonstrate technical skills that meet industry and/ or employment standards.

Communication
Students will be able to express and exchange thoughts to persuade, inform, and/or convey ideas in academic, professional, informal, and community settings using a variety of means, including written, oral, numeric/quantitative, graphic, and visual modes of communication.

Diversity and Citizenship
Students will be respectful of differences in identities in order to live and work effectively in a culturally and socio-economically diverse environment.

General Education Learning Outcomes (GELOs)

LATTCs general education programs are distinctively unique, characteristically interdisciplinary, and a constant and integral component of an associate's degree. General Education Learning Outcomes (GELOs) statements for each area are listed below:

Ethical and Effective Citizenship (ACCJC Standard II.A.11)
- Compare and contrast the values, attitudes, modes of creative expression, and/or dynamics of interpersonal interactions of people from diverse cultural and societal backgrounds.
- Demonstrate ethical reasoning and/or cultural, political, or social awareness in order to be effective citizens participating in a diverse world.

Humanities
- Articulate the human condition through language, reasoning, artistic and/or cultural creation.
- Explain and evaluate the importance and ways in which arts, literature, philosophy and/or foreign languages reflect historical, intellectual, and cultural contexts, as well as aesthetic tastes.

Language and Rationality
- Apply and construct written, verbal, numeric or non-verbal expression to convey logical thought, analyze arguments and self-express.
- Critically evaluate communication in a symbol system appropriate to the academic discipline.

Behavioral and Social Sciences
- Examine the perspectives, principles, theories, methods, and core concepts of the social and behavioral sciences within their contemporary, historical, cultural and geographical contexts.

Natural Sciences
- Apply scientific principles, theories, and/or models to explain or predict the behavior of natural physical phenomena.
- Apply scientific knowledge and reasoning to evaluate the human interaction with the natural world and identify major issues impacting society.

Health & Physical Education
- Ilustrate attributes for healthy physical and psychological life styles.
- Practice proper techniques and skills as related to the designated physical activities.

Program Learning Outcomes (PLOs)

Program Learning Outcomes (PLOs) describe the measurable characteristics including knowledge, skills, abilities, and determining behaviors that students will be able to demonstrate by the time they complete a program. It allows students the opportunity to demonstrate what they know, what they can do and what they value, upon completion of a program of study.

Student Learning Outcomes (SLOs)

Student Learning Outcomes (SLOs) identify what the student will know and be able to do by the end of a course– the essential and enduring knowledge, abilities (skills) and attitudes (values, dispositions) that constitute the integrated learning needed by a graduate of a course.

LATTC CERTIFICATE AND DEGREE PROGRAM BY DEFINITION

A description and requirements for each program offered at the college is provided in the following section. The College's website also contains the following additional program-related information:

- Gainful Employment information: tuition and fees, books and supplies, program length and completers: http://college.lattc.edu/catalog/gainfulemployment/
- Employment projections and occupational profiles: https://lattc.emsicc.com/
- Standards for student achievement (ISS): http://college.lattc.edu/research/accountability/institution-set-standards/

Pathway Overview Information

WHAT IS A PATHWAY?

A collection of programs of study and support services that enable a student to satisfy graduation, transfer, and employment requirements as well as earn industry-recognized credentials.

WHAT IS A PROGRAM OF STUDY?

A program of study is comprised of a structured sequence of course(s), within a specified field of study, that culminates in an industry-recognized credential, Certificate of Achievement, Associate of Art or Science (AA/AS) degree, transfer readiness, and/or IGETC/CSU Certification.

COMMON PATHWAY CHARACTERISTICS:

- **Pathway Team:** A team of faculty and staff members located in each pathway that will work with students on their journey to academic and career success.
- **Cohorts:** A group of students working together through the same academic curriculum.
- **Guided Choices:** A group of recommended General Education courses that are relevant or add meaning to a program of study.
- **Wraparound Services:** Support services offered within each pathway to help students throughout their college experience and quickly attain a certificate, degree and/or prepare them for transfer.

LATTC PATHWAYS:

1. Advanced Transportation & Manufacturing (ATM)
2. Applied Sciences (AS)
3. Business & Civic Engagement (BCE)
4. Construction, Maintenance & Utilities (CMU)
5. Cosmetology (COS)*
6. Culinary Arts (CA)*
7. Design & Media Arts (DMA)
8. Health & Related Sciences (HRS)
9. Liberal Arts (LA)

The following pages provide detailed information about each pathway and their programs of study including program descriptions, required courses, and program learning outcomes. To find out more about pathways, please visit us on the web at: http://pathways.lattc.edu/.

*Pathway name under review.

Pathways and Programs of Study

- Advanced Transportation & Manufacturing Pathway (ATM)
- Applied Sciences Pathway (AS)
- Business & Civic Engagement Pathway (BCE)
- Construction, Maintenance & Utilities Pathway (CMU)
- Cosmetology (COS)*
- Culinary Arts (CA)*
- Design & Media Arts Pathway (DMA)
- Health & Related Sciences Pathway (HRS)
- Liberal Arts (LA) and Transfer Prep Pathway

*Pathway name under review.

Program of Study Title	Academic Plan Code	Award	FA Eligible	Major Units	Pathway
Architectural Technology and Environmental Design *Formerly Architectural Technology*	T008467C	AA	Y	42	CMU
	T021825D	C	Y	42	
Accounting	T002891C	AA	Y	47	BCE
Accounting Clerk	T021826D	C	Y	30	BCE
Administration of Justice	T032910H	AST	Y	18	BCE
Advanced Manufacturing: Welding & Fabrication	T008487D	C	Y	30	ATM
American Sign Language	T033805D	C	N	18	LA
Architectural Technology	T008467C	AA	Y	47	CMU
	T021825D	C	Y		
Automotive and Related Technology	T002906C	AS	Y	36	ATM
	T021845D	C	Y		
Auto & Related Technology: Transmission Repair	T010751D	C	Y	18	ATM
Auto & Related Technology: Tune-Up	T010752D	C	Y	18	ATM
Automotive Collision Repair	T002907C	AS	Y	46	ATM
	T021846D	C	Y	36	
Baking Professional	T008503C	AA	Y	48	CA
	T021868D	C	Y	48	
Barbering	T032703D	C	Y	48	COS
Biology	T037241H	AST	Y	33-35	HRS
Biotechnology	T033682C	AS	Y	33	AS
	T033225D	C	Y		
Business Administration	T038910H	AST	Y	29-30	BCE
CAOT: Administrative Assistant	T002897C	AA	Y	43	BCE
	T021835D	C	Y	31	
CAOT: Information Processing Specialist	T008470C	AA	Y	44	BCE
	T021833D	C	Y	33	
CAOT: Office Assistant-Clerical	T008471C	AA	Y	39	BCE
	T021834D	C	Y	32	
Carpentry	T002909C	AS	Y	48	CMU
	T021848D	C	Y		
Carpentry - Construction Technologies	T008479C	AA	Y	48	CMU
	T021849D	C	Y		
Chemical Technology	T002913C	AS	Y	47	AS
	T021859D	C	Y		
Chemistry	T031207C	AS	Y	38	AS
Child and Adolescent Development	T038461G	AAT	Y	19-20	BCE
Child Development	T010403C	AA	Y	47	BCE
Community Planning & Economic Development	T009266C	AA	Y	36	BCE
	T021871D	C	Y	21	
Computer Information Systems	T002900C	AS	Y	45	BCE
	T021839D	C	Y		
Correctional Science	T030002C	AS	Y	36	BCE
	T030001D	C	Y		
Cosmetology	T002940C	AA	Y	48	COS
	T021873D	C	Y		
CSU General Education (CSU-GE-Breadth)	T036134D	C	N	39	LA
Culinary Arts	T002938C	AA	Y	48	CA
	T021869D	C	Y		
Digital Media	T035215C	AS	Y	28	DMA
	T035202D	C	Y	18	
Digital Media: Digital Video and Audio	T035296C	AS	Y	30	DMA
	T035292D	C	Y		
Digital Media Mobile Application and Web Design	T035275C	AS	Y	45	DMA
	T035278D	C	Y		
Early Childhood Education	T031018H	AST	Y	25	BCE
Economics	T039453G	AAT	Y	21-25	BCE

Program of Study Title	Academic Plan Code	Award	FA Eligible	Major Units	Pathway
Electrical Construction & Maintenance: Electrician	T002910C	AS	Y	48	CMU
Electrical Construction & Maintenance: Electrician	T021853D	C	Y	48	CMU
Electrical Construction & Maintenance: Construction Technician	T008481C	AA	Y		
Electrical Construction & Maintenance: Construction Technician	T021852D	C	Y	48	CMU
Electronics Communications	T002902C	AS	Y	44	ATM
Engineering – Civil Engineering Track	T021841D	C	Y	44	ATM
	T038590C	AS	Y	66	AS
Engineering – Electrical Track	T038588C	AS	Y	56	AS
Engineering – Mechanical, Aerospace and Manufacturing Track	T038589C	AS	Y	62	AS
English	T032905G	AAT	Y	18	LA
Fashion Design	T002925C	AA	Y	48	DMA
Fashion Design	T021865D	C	Y	48	DMA
Fashion Merchandising	T008653C	AS	Y	45	DMA
Fashion Merchandising	T021867D	C	Y	45	DMA
Fashion Technology	T008501C	AA	Y	42	DMA
Heavy Truck, Transit and Equipment Technology *Formerly Diesel and Related Technology*	T002905C	AS	Y	48	ATM
	T021844D	C	Y	48	
Heavy Truck, Transit and Equipment Technology *Formerly Diesel and Related Technology*	T021844D	C	Y	48	ATM
	T008478D	C	N	12	
History	T038966G	AAT	Y		LA
Hybrid & Electric Plug-In Vehicle Technology	T008478D	C	N	12	ATM
Industrial Applied Science Core Competencies	T038703D	C	Y	20	AS
Industrial Safety, Regulatory and Biomanufacturing	T038737D	C	Y	11	AS
IGETC	T036231D	C	N	37-39	LA
Interdisciplinary Studies: Arts & Sciences	T018856C	AA	Y	18	LA
Kinesiology	T032948G	AAT	Y	20-23	HRS
Labor Studies	T002898C	AA	Y	36	BCE
Labor Studies	T021836D	C	Y	24	BCE
Liberal Arts: Behavioral & Social Sciences	T033815C	AA	Y	24	LA
Liberal Arts and Sciences: Emphasis in Mathematics, Physical and Natural Sciences *Formerly Natural Sciences*	T018857C	AA	Y	18	AS
Nursing Registered - 30-Unit Option	N/A		N	28-30	HRS
Nursing, Registered	T002922C	AS	Y	42	HRS
Nursing, Registered: LVN-RN Career Ladder	T008498C	AS	Y	33	HRS
Machine Shop: CNC	T002914C	AS	Y	48	ATM
Machine Shop: CNC	T021860D	C	Y	48	ATM
Management/Supervision	T002892C	AA	Y	47	BCE
Management/Supervision	T021829D	C	Y	33	BCE
Marketing and Public Relations	T002894C	AA	Y	44	BCE
Marketing and Public Relations	T021831D	C	Y	33	BCE
Mathematics	T031014H	AST	Y	21-22	LA
Medical Office Assistant	T010750D	C	Y	32	BCE
Microcomputer Technician	T008473C	AS	Y	42	ATM

FA = Program is Financial Aid Eligible

Pathways and Programs of Study

- Advanced Transportation & Manufacturing Pathway (ATM)
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*Pathway name under review.

Program of Study Title	Academic Plan Code	Award	FA Eligible	Major Units	Pathway
Microcomputer Technician	T021840D	C	Y	42	ATM
Motorcycle Repair Mechanics-Adjunct	T002908D	C	Y	23	ATM
Operating Engineer – Apprenticeship Program	T039228C	AS	Y	40	CMU
Operation & Maintenance Engineering: Steam Plant	T008474D	C	Y	36	CMU
Paralegal Studies	T031262C	AA	Y	42	BCE
Paralegal Studies	T031182D	C	Y	42	BCE
Physics	T036300H	AST	Y	30	AS
Plumbing	T002911C	AS	Y	48	CMU
Plumbing: Construction Tech	T021855D	C	Y	48	CMU
	T008484C	AA	Y	45	CMU
Plumbing: Construction Tech	T021856D	C	Y	45	CMU
Pre-Health Professions II	T037706D	C	N	18-19	HRS
Political Science	T039216G	AAT	Y		LA
Preschool Associate Teacher	T031060D	C	N	15	BCE
Process Technology	T019109C	AS	Y	45	AS
Psychology	T038883G	AAT	Y		LA
Public Health Science	T039531H	AST	Y	33	HRS
Process Technology	T019108D	C	Y	45	AS
Rail Vehicle Maintenance	T035649C	AS	Y	40	ATM
Rail Vehicle Maintenance	T035618D	C	Y	40	ATM
Real Estate	T002896C	AA	Y	45	BCE
Real Estate	T021832D	C	Y	30	BCE
Refrigeration & Air Conditioning Mechanics	T002904C	AS	Y	48	CMU
Refrigeration & Air Conditioning Mechanics	T021842D	C	Y	48	CMU
Renewable Energy: Energy Efficiency Emphasis	T031090C	AS	Y	40-42	CMU
-Energy Systems Technology Fundamentals	T030906D	C	Y	16	CMU
- Weatherization and Energy Auditor *Formerly, Weatherization and Energy Efficiency*	T030210D	C	N	14	CMU
Powerline Worker *Formerly: Renewable Energy Generation, Transmission, and Distribution: Powerline Mechanic*	T030963C	AS	Y	40-43	CMU
-Powerline Worker: Pole Climbing *Formerly: Powerline Mechanic*	T030905D	C	Y	18-20	CMU
-Utility Industry Fundamentals	T030904D	C	Y	19-21	CMU
- Photo Voltaic (PV) Solar Installation & Maintenance *Formerly Renewable Energy with Emphasis in Solar PV Instillation and Maintenance*	T031280C	AS	Y	42	CMU
-Solar PV Installation and Maintenance Technician	T031081D	C	Y	24-26	CMU
Renewable Energy Technician: Solar Thermal	T031089C	AS	Y	42	CMU
-Solar Thermal Installation and Maintenance *Formerly Solar Thermal Instillation & Maintenance Technician*	T031082D	C	Y	30	CMU
Restaurant Management	T002939C	AA	Y	42	CA
Retail Management	T002895C	AA	Y	47	BCE

Program of Study Title	Academic Plan Code	Award	FA Eligible	Major Units	Pathway
Retail Management	T035286D	C	Y	24	BCE
Senior Care Technician	T033802D	C	Y	16.5	HRS
Senior Exercise Leader, Land & Aquatics Programming Certificate	T038533D	C		16.5	HRS
Sign Graphics	T002921C	AA	Y	44	DMA
Sign Graphics	T021862D	C	Y	44	DMA
Site Supervisor	T031063D	C	Y	43	BCE
Skin Therapy	T031396D	C	Y	24	COS
Small Business Entrepreneurship	T033813C	AA	Y	41	BCE
Small Business Entrepreneurship	T008469D	C	Y	32	BCE
Solid Waste Management Technology	T008489D	C	Y	24	CMU
Social Justice – General Option	T039403G	AAT	Y		LA
Social Justice – Gender Studies	T039546G	AAT	Y		LA
Sociology	T038753G	AAT	Y	18	LA
Specializing in Children with Special Needs *Formerly: Teacher Special Needs*	T031059D	C	Y	36	BCE
Specializing in Infant and Toddler Teaching *Formerly: Infant Toddler Teacher*	T031061D	C	Y	27	BCE
Specializing in Preschool Teaching *Formerly: Preschool Teaching*	T031018H	C	Y	39	BCE
Specializing in School Age Programs *Formerly: School Age Program Teacher*	T031062D	C	Y	32	BCE
Street Maintenance Technology	T008488C	AA	Y	36	CMU
Street Maintenance Technology	T021870D	C	Y	36	CMU
Supply Water Systems Technology	T010754D	C	Y	30	CMU
Tailoring	T002926D	C	Y	20	DMA
Truck and Transit Preventative Maintenance	T008476D	C		24	ATM
Visual Communications	T008493C	AA	Y	48	DMA
Visual Communications	T021863D	C	Y	48	DMA
Water Systems Technology: Supply Water Technology	T002917C	AS	Y	30	CMU
Water Systems Technology-Wastewater Technology	T010755C	AS	Y	30	CMU
Welding, Gas and Electric	T002916C	AS	Y	48	CMU
Welding, Gas and Electric	T021861D	C	Y	48	CMU

Noncredit Programs					
College Readiness	T024218E	CN	N		
English Literacy and Civics	T024029E	CN	N		
Entry Level Laborer for the Energy & Construction Sectors	T024029E	CN	N		
ESL: Beginning	T024459E	CN	N		
Lifeguard Training	T024459E	CN	N		
Recreation and Community Services Assistant	T024048E	CN	N		
Sewing Operator	T024048E	CN	N		
Sustainable Small Business Development	T037088E	CN	N		
Utilities and Construction Preparation	T024132E	CN	N		
Water Safety Instructor	T024132E	CN	N		
Workplace Readiness	T024169E	CN	N		

FA = Program is Financial Aid Eligible

Pathways/Departments and Academic Subjects

Advanced Transportation & Manufacturing Pathway

Pathway Chair: Jesus (Jess) Guerra ~ GuerraJ@lattc.edu ~ 213-763-7081 ~ B1, Room 225

AUTOCOR	Automotive Collision Repair	MSCNC	Machine Shop
AUTORTK	Automotive Mechanics Tech	MIT	Manufacturing and Industrial Technology
DIESLTK	Diesel and Related Technology	MICROTK	Microcomputer Technician
ELECTRN	Electronics	MCYCMEK	Motorcycle Repair Mechanic
ETNTLGY	Electronics Technology		

Applied Sciences Pathway

Pathway Chair: Dr. Miguel A Moreno ~ MorenoMA@lattc.edu ~ 213-763-7295 ~ C4, Room 405

ASTRON	Astronomy	ENG GEN	Engineering, General
BIOTECH	Biotechnology	ENV SCI	Environmental Science
CHEM T	Chemical Technology	GEOLOGY	Geology
CHEM	Chemistry	PHYSICS	Physics
EGD TEK	Engineering Graphics & Design	PRPLTEK	Process Plant Technology
ENG ELC	Engineering, Electrical		

Business & Civic Engagement Pathway

Pathway Chair: Dr. Rose Maina ~ MainaRG@lattc.edu ~ 213-763-3953~ C4, Room 203D

ACCTG	Accounting	LAW	Law
ADM JUS	Administration of Justice	MGMT	Management
BUS	Business	MARKET	Marketing
CAOT	Computer Applications Office Technology	OFF MCH	Office Machines
CS	Computer Science	PALEGAL	Paralegal
CH DEV	Child Development	PUB REL	Public Relations
CIS	Computer Information System	REAL ES	Real Estate
COOP ED	Cooperative Education	SUPV	Supervision
FINANCE	Finance		

Department Chair: Kathleen Yasuda ~ YasudaKM@lattc.edu ~ 213-763-7160 ~ D3, Room 05

COMPLAN	Community Planning/Economic Dev	LABR ST	Labor Studies

Construction Maintenance & Utilities Pathway

Pathway Chair: William (Bill) Elarton ~ cdm@lattc.edu ~ 213-763-3700 ~ E2, Room 122

ARC	Architecture	OPMA AP	Engineer-Opr/Maintenance – Apprentice
BLDGCTQ	Building Construction Techniques	OPMAINT	Engineer-Operation/Maintenance
CRPNTRY	Carpentry	PLUMBNG	Plumbing
DRAFT	Drafting	REF A/C	Refrigeration & Air Conditioning Mech
ECONMT	Electrical Construction Maintenance	SWM TEK	Solid Waste Management Tech
ELECL	Power Line Mechanic Trainee	ST MAIN	Street Maintenance
ELECLNM	Electrical Lineman – Apprentice	WASTE	Wastewater Technology
ENV	Environmental Design	WATER	Supply Water Technology
INT	Architectural Interiors	WELDG/E	Welding Gas and Electric

Cosmetology*

Pathway Chair: Lidia Ley ~ LeyLG@lattc.edu ~ 213-763-7133 ~ B2, Room 129

BAR	Barbering	CSMTLGY	Cosmetology

Counseling

Department Chair: Eboni McDuffie ~ Mcduffe@lattc.edu ~ 213-763-7357 ~ E5, Room 214

COUNSEL	Counseling

* Pathway name under review

Pathways/Departments and Academic Subjects

Culinary Arts/Professional Baking*

Pathway Chair: Martin Gilligan ~ GilligMA@LATTC.EDU ~ 213-763-7342 ~ B4, Room 118

CLN ART	Culinary Arts	RESTMGT	Restaurant Management
PROFBKG	Baking, Professional		

Design & Media Arts Pathway

Pathway Chair: Joseph Guerrieri ~ GuerriJ@lattc.edu ~ 213-763-3640 ~ D4, Room 222

DIGLMD	Digital Media	SGNGRPH	Sign Graphics
FASHDSN	Fashion Design	TAILRNG	Tailoring
FASHMER	Fashion Merchandising	VISCOM	Visual Communications

Health & Related Sciences Pathway

Pathway Chair: Angela Gee ~ GeeAL@lattc.edu ~ 213-763-7296 ~ B3, Room 302

ANATOMY	Anatomy	KIN ATH	Kinesiology Athletics
BIOLOGY	Biology	KIN MAJ	Kinesiology Major
HEALTH	Health	MICRO	Microbiology
HLTHOCC	Health Occupations	PHYSIOL	Physiology
KIN	Kinesiology		

Nursing Department Chair: Paula Johnson ~ JohnsoP@lattc.edu ~ 213-763-7175 ~ B3, Room 165

REGNRSG	Nursing, Registered

Liberal Arts and Transfer Prep Pathway

Behavioral & Social Science Department Chair: Philip Huld ~ HuldPJ@LATTC.EDU ~ 213-763-5504 ~ F5, Room 516

ANTHRO	Anthropology	HISTORY	History
ECON	Economics	POL SCI	Political Science
EDU	Education	PSYCH	Psychology
GEOG	Geography	SOC	Sociology

English Department Chair: Jennifer Ortiz~ ORTIZJI@lattc.edu ~ 213-763-3923 ~ F5, Room 516

ENGLISH	English	ACAD PR	Academic Preparation

Language Arts/Humanities Department Chair: Deidre McDermott ~ woodd@lattc.edu ~ 213-763-3923 ~ F5, Room 516

A S L	American Sign Language	MUSIC	Music
ART	Art	PHILOS	Philosophy
COMM	Communication Studies	SPANISH	Spanish
FRENCH	French	THEATER	Theater
HUMAN	Humanities		

Math Department Chair: Tayebeh Meftagh~ MeftagT@lattc.edu ~ 213-763-7330 ~ F5, Room 516

MATH	Mathematics

Library

Department Chair: Gabriella Lopez ~ LopezGM@lattc.edu ~ 213-763-3967 ~ D3, 2nd Floor

LIB SCI	Library Science

Academic Connections & Workforce

Dean: Ramon Abrego ~ Abregor@lattc.edu ~ 213-763-3754 ~ D3, Room 109

BSICSKL	Basic Skills	LRNSKIL	Learning Skills
ESL NC	English as a Second Language Noncredit	LRNSK	Learning Skills Lab
ESLCVCS	English as a Second Language and Civics	TUTOR	Supervised Learning Assistance
HLTHED	Health & Safety Education	VOC ED	Vocational Education

*Pathway name under review.

Advanced Transportation & Manufacturing Pathway (ATM)

ABOUT THE PATHWAY

The Advanced Transportation & Manufacturing Pathway (ATM) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce Transportation Technologies, Electronics and Microcomputer Systems and Manufacturing sectors. LATTC ATM programs host external accreditation from the National Automotive Technicians Education Foundation (NATEF), Cisco, California Air Resources Board and prepare our students to successfully attain Automotive Service Excellence (ASE), California Air Resources Board, Cummins, Cisco, Federal Communications Commission (FCC), I-CAR, Mitchell Repair Estimating, Mobile Air Condition Society, NIDA, Snap On, and Volvo/Mack certifications.

PATHWAY TEAM

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CONTACT US

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Hours of operation: Monday – Thursday: 7:30am to 4:30pm; Friday: 7:30am to 3:00pm
Pathway website: http://pathways.lattc.edu/catalog-programs/atm1/

PATHWAY DEGREES AND CERTIFICATES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Advanced Manufacturing: Welding & Fabrication	C	Hybrid & Electric Plug-In Vehicle Technology	AS/C
Automotive and Related Technology	AS/C	Machine Shop: CNC	AS/C
Auto & Related Technology: Transmission Repair	C	Microcomputer Technician	AS/C
Auto & Related Technology: Tune-Up	C	Motorcycle Repair Mechanics-Adjunct	C
Automotive Collision Repair	AS/C	Rail Vehicle Maintenance	AS/C
Electronics Communications	AS/C	Truck And Transit Preventive Maintenance *(Formerly Diesel and Related Technology - Adjunct)*	C
Heavy Truck, Transit And Equipment Technology *(Formerly Diesel and Related Technology)*	AS/C		

ADVANCED MANUFACTURING: WELDING AND FABRICATION

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Advanced Manufacturing: Welding & Fabrication	T008487D	C		30	-	30
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The welding industry continues to be a critical component of manufacturing worldwide. Employment opportunities continue to thrive, and the demand for trained welding technicians in the field continues to increase. The Manufacturing Industrial Technology program trains students to work as professionals in this field using the Gas Metal Arc Welding (MIG), Gas Tungsten Arc Welding (TIG), and/or Flux-Cored Arc Welding (FCAW) processes.

By fulfilling the program requirements, students will have gained the skills necessary for certification thru the American Welding Society (AWS) Certified Welder Program and the Los Angeles Department of Building and Safety Certified Welder Examination using GMAW, GTAW, and FCAW. In addition to those conventional skills, the program will expose students to advanced automated welding techniques such as CNC plasma cutting, robotic welding, and friction stir welding.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Demonstrate safe work habits that reflect concern and care for self, others, and the environment.
- Produce industry quality weldments on carbon steel plate in various joint and groove configurations using the plasma arc cutting, GMAW, FCAW, GTAW, and SAW processes.
- Produce industry-quality welds using GTAW on stainless steel and aluminum sheet.
- Demonstrate the qualifying knowledge and skills in the GMAW, FCAW, GTAW, and SAW processes necessary for acquiring the local and national industry certifications (such as American Welding Society, American Society of Mechanical Engineers, and the American Petroleum Institute) recognized by employers in advanced manufacturing industries.
- Interpret blueprints and verbal orders, including weld symbols, in order to fabricate using tools of the welding trade.

ADVANCED MANUFACTURING: WELDING & FABRICATION

Certificate of Achievement

Major Units: 30

A Certificate of Achievement in Advanced Manufacturing: Welding & Fabrication may be earned by completing 30 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
MIT 221	Semi- Automatic Welding I (GMAW) in Adv Mfg	4.5
MIT 222	Gas Tungsten Arc Welding I Adv Manufacturing	4.5

SEMESTER II		UNITS
MIT 223	Semi-Automatic Welding II (FCAW) In Advanced Mfg	4.5
MIT 224	Gas Tungsten Arc Welding II Adv Manufacturing	4.5

SEMESTER III		UNITS
MIT 225	Gas Tungsten Arc Welding III (PIPE) in Advanced Manufacturing	4.5
MIT 226	Introduction to Robotic Welding and Automation	4.5
MIT 220	Introduction to Robotics	3

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.



AUTOMOTIVE AND RELATED TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Automotive and Related Technology	T002906C	A.S.	21*	36	-	36
Automotive and Related Technology	T021845D	C		36	-	36
Auto & Related Technology: Transmission Repair	T010751D	C		18	-	18
Auto & Related Technology: Tune-up	T010752D	C		18	-	18

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Los Angeles' long-time infatuation with the motorcar has made it a leading center in automotive design. Employment opportunities continue to thrive, and the demand for trained automotive technicians in the field continues to increase. The Automotive and Related Technology program trains students to work as professionals in this field, offering instruction in maintenance, diagnosis and overhaul procedures of electrical and fuel injection systems.

By fulfilling the program requirements, students will have gained the skills necessary to maintain, repair, and diagnose electrical, fuel injection systems, and overhaul procedures, as well as basic shop practices needed to meet industry standards.

AUTOMOTIVE AND RELATED TECHNOLOGY

Associate in Science Degree

Major Units: 36

Requirements for the Associate in Science degree in Automotive and Related Technology may be met by completing 36 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

Students who complete this degree will be able to perform jobs as a diagnostics, to troubleshoot and repair problems occurring in automotive anti-lock braking systems (ABS), electrical/electronic systems, engine performance, drivability, suspension and steering, automatic and manual transmissions, transaxles, engine repair, heating and air conditioning.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Diagnose and repair various types of vehicles using tools and equipment in accordance with industry standards and NATEF safety.
- Students will demonstrate problem solving skills and technical skills in the automotive industry.
- Write vehicle repair estimates in accordance with NATEF standards.

Students should take the 6 basic courses during Semester I and Semester II:

SEMESTER I & II		UNITS
AUTORTK 100	Heating and Air Conditioning Systems Theory, Inspection, & RPR (Repair)	3
AUTORTK 113	Drive Train Components Principles & Practices	3
AUTORTK 114	Steering, Suspension, Brakes, Principles & Practices	3
AUTORTK 121	Basic Engine Theory, Inspection & Repair	3
AUTORTK 122	Electrical/Electronic Systems Theory, Inspection & Repair	3
AUTORTK 123	Fuel & Emissions Systems Theory, Inspection & Repair	3
SEMESTER III		**UNITS**
AUTORTK 130	Advanced Automotive Diagnosis and Repair I	3
AUTORTK 131	Automotive Theory and Repair II	3
AUTORTK 135	Computer Control and Fuel injection	3
SEMESTER IV		**UNITS**
AUTORTK 140	Advanced Automotive Diagnosis and Repair IV	3
AUTORTK 141	Advanced Automotive Diagnosis and Repair V	3
AUTORTK 142	Advanced Automotive Diagnosis and Repair VI	3

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

AUTOMOTIVE AND RELATED TECHNOLOGY

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Automotive and Related Technology may be earned by completing 36 units of Required Courses listed under the Associate degree in Automotive and Related Technology with a "C" or better in each course.

AUTO & RELATED TECHNOLOGY: TRANSMISSION REPAIR

Certificate of Achievement

Major Units: 18

A Certificate of Achievement in Auto & Related Technology: Transmission Repair may be earned by completing 18 units of Required Courses with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Diagnose and repair various types of vehicles using tools and equipment in accordance with industry standards and NATEF safety.
- Students will demonstrate problem solving skills and technical skills in the automotive industry.
- Demonstrate transmission vehicle diagnosis and repair skills accordance with NATEF and industry standards.

REQUIRED COURSES		UNITS
AUTORTK 100	Heating and Air Conditioning Systems Theory, Inspection, & RPR (Repair)	3
AUTORTK 113	Drive Train Components Principles & Practices	3
AUTORTK 114	Steering, Suspension, Brakes, Principles & Practices	3
AUTORTK 121	Basic Engine Theory, Inspection & Repair	3
AUTORTK 122	Electrical/Electronic Systems Theory, Inspection & Repair	3
AUTORTK 123	Fuel & Emissions Systems Theory, Inspection & Repair	3

AUTO & RELATED TECHNOLOGY: TUNE-UP

Certificate of Achievement

Major Units: 18

A Certificate of Achievement in Auto & Related Technology: Tune-Up may be earned by completing 18 units of Required Courses with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Diagnose and repair various types of vehicles using tools and equipment in accordance with industry standards and NATEF safety.
- Students will demonstrate problem solving skills and technical skills in the automotive industry.
- Demonstrate tune-up vehicle repair skills accordance with NATEF and industry standards.

REQUIRED COURSES

		UNITS
AUTORTK 100	Heating and Air Conditioning Systems Theory, Inspection, & RPR (Repair)	3
AUTORTK 121	Basic Engine Theory Inspection and Repair	3
AUTORTK 122	Electrical/Electronic Systems Theory, Inspection & Repair	3
AUTORTK 123	Fuel & Emissions Systems Theory, Inspection & Repair	3
AUTORTK 131	Automotive Theory and Repair II	3
AUTORTK 135	Computer Control and Fuel Injection	3

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

AUTOMOTIVE COLLISION REPAIR

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Automotive Collision Repair	T002907C	A.S.	21*	36	10	46
Automotive Collision Repair	T021846D	C		36	-	36

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Los Angeles is a leading collision capital center in the automotive design world. Insurance companies are increasingly demanding Auto Collision Technicians trained in damage cost estimations. The demand for fully trained Automotive Repair Technicians is very high where skilled technicians are readily employable and command excellent incomes. These technicians use highly sophisticated devices, such as laser for straightening frames, computer for mixing paint, and dust control contamination vacuum tools for smoothing paint.

The LATTC Automotive Collision Repair program is designed for students who want to enter this growing field. Classes are a combination of classroom instruction coupled with hands-on training. Students learn welding procedures, diagnostic and repair procedures, body part alignment processes, metal finishing/shrinking/filling techniques, auto body electrical wiring systems, body section replacement and structural sectioning practices, body damage estimating techniques, auto body construction methods, paint color application skills, and body shop practices.

By fulfilling the program requirements, students are proficient in a variety of automotive collision techniques and will have the knowledge and skills necessary to maintain, repair, and diagnose body and fender repairs. They will be proficient at all aspects of preparation and painting, including computerized mixing and matching, damage estimation, creating computerized reports and digital imaging. Students who complete this degree will be able to perform jobs as estimators, service managers equipped to repair problems occurring in automotive collision systems.

AUTOMOTIVE COLLISION REPAIR

Associate in Science Degree

Major Units: 46

Requirements for the Associate in Science degree in Automotive Collision Repair may be met by completing 36 units of Required Courses and 10 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Identify and repair a variety of vehicle bodies with different frame types, components, and structure chemistries while adhering to industry standard procedures.
- Refinish collision repairs on a vehicle using various paints, primers, sealers, and tools according to I-CAR and ASE standards.
- Create collision repair estimates using industry recognized computer software in accordance with industry standards.

REQUIRED COURSES

SEMESTER I		UNITS
AUTOCOR 112	Auto Body Construction, Repair And Welding Fundamentals	9
SEMESTER II		**UNITS**
AUTOCOR 122	Intermediate Collision Repair-Parts Replacement, Metal Repair, Frame Straightening & Refinishing	9
SEMESTER III		**UNITS**
AUTOCOR 132	Unitized Body Panel, Section, & Frame; Replacement & Alignment	9
SEMESTER IV		**UNITS**
AUTOCOR 142	Advanced Automotive Collison Repair, Estimating, Refinishing	9

MAJOR ELECTIVES

Select at least 10 units from the courses below		UNITS
AUTOCOR 148	Paint Preparation and Application	3
AUTOCOR 149	Estimating Body Damage	3
AUTOCOR 185	Directed Study - Automotive Collision Repair	1
AUTOCOR 226	Collision Repair I	3
AUTOCOR 227	Auto Body & Fender II	3

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

AUTOMOTIVE COLLISION REPAIR

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Automotive Collision Repair may be earned by completing 36 units of Required Courses listed under the Associate degree in Automotive Collision Repair with a "C" or better in each course.

This program includes DuPont Paint Systems Certificate of Achievement for Rule 1151 of the South Coast Air Quality Management District (SCAQMD).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Identify and repair a variety of vehicle bodies with different frame types, components, and structure chemistries while adhering to industry standard procedures.
- Refinish collision repairs on a vehicle using various paints, primers, sealers, and tools according to I-CAR and ASE standards.
- Analyze collision repair estimates in accordance with industry standards.

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

DIESEL AND RELATED TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Heavy Truck, Transit and Equipment Technology (Formerly Diesel and Related Technology)	T002905C	A.S.	21*	48	-	48
Heavy Truck, Transit and Equipment Technology (Formerly Diesel and Related Technology)	T021844D	C		48	-	48
Truck and Transit Preventative Maintenance				24	-	24

At least 60 degree applicable units are required to earn an Associate degree
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

HEAVY TRUCK, TRANSIT AND EQUIPMENT TECHNOLOGY

Associate of Science Degree

Major Units: 48

PROGRAM OVERVIEW

If you live in the United States, almost every single thing you eat, wear or use has been transported by diesel powered vehicles and alternative/green power plants.

If you live in the United States, almost every single thing you eat, wear or use was delivered by a diesel-powered vehicle.

New EPA/CARB regulations have impacted the fuel technology and energy source/ design used. Trucks, trains, buses and many other medium and heavy-duty vehicles have evolved to match today's more stringent clean air emission standards.

Graduates of the Diesel Technology program are well paid and have a diverse choice of areas in which to specialize. In recent years, the demand from local employers has exceeded our supply of qualified graduates as the program continues to grow.

This program is designed to meet that growing demand for Heavy-duty truck and bus technicians.

After successful completion of the program requirements, students will become proficient in all aspects of heavy-duty truck, bus, and equipment engine fundamentals, electrical components, fuel systems, overhaul procedures, air brake system and the construction and operation of heavy-duty engines. Students completing this program of study include, but are not limited to: Bus and Truck Mechanics and Diesel Engine Specialists.

PROGRAM LEARNING OUTCOMES:

Upon completion of the Degree/Certificate program, students are able to:

- Identify and explain the operation of diesel vehicle systems (such as engine, transmissions, brakes, electrical and suspension) along with their related subsystems and related industry standards.
- Diagnose and repair diesel powered vehicles and systems using various manufacturer diagnostic software, tools, and shop equipment in accordance with industry standards.

REQUIRED COURSES

SEMESTER I		UNITS
DIESLTK 112	Heavy Duty Maintenance Shop Practices, Engine Fundamentals, and Electrical	12
OR		
DIESLTK 112A	Heavy Duty Maintenance Shop Practices	4
AND		
DIESLTK 112B	Heavy Duty Engine Fundamentals	4
AND		
DIESLTK 112C	Heavy Duty Electrical Systems	4

SEMESTER II		UNITS
DIESLTK 122	Heavy Duty Fuel Injection Systems, Hydraulics, and HVAC	12
OR		
DIESLTK 122A	Heavy Duty Fuel Systems	4
AND		
DIESLTK 122B	Hydraulics	4
AND		
DIESLTK 122C	Heavy Duty HVAC	4



SEMESTER III		UNITS
DIESLTK 132	Heavy Duty Transmissions, Brakes, and Suspension	12
OR		
DIESLTK 132A	Heavy Duty Transmissions	4
AND		
DIESLTK 132B	Heavy Duty Brake Systems	4
AND		
DIESLTK 132C	Heavy Duty Suspension Systems	4

SEMESTER IV		UNITS
DIESLTK 142	Heavy Duty Engine Overhaul, Electronic Engine Controls, and Emissions Systems	12
OR		
DIESLTK 142A	Heavy Duty Engine Overhaul	4
AND		
DIESLTK 142B	Electronic Engine Controls	4
AND		
DIESLTK 142C	Heavy Duty Emissions Systems	4

HEAVY TRUCK, TRANSIT AND EQUIPMENT TECHNOLOGY

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Heavy Truck, Transit and Equipment Technology may be earned by completing 48 units of Required Courses listed under the Associate degree in Heavy Truck, Transit and Equipment Technology with a "C" or better in each course.

By fulfilling the program requirements, students are able to enter the job market as diesel technicians.

TRUCK AND TRANSIT PREVENTIVE MAINTENANCE

Certificate of Achievement

Major Units: 24

PROGRAM OVERVIEW

If you live in the United States, almost every single thing you eat, wear or use has been transported by diesel powered vehicles and alternative/green power plants.

If you live in the United States, almost every single thing you eat, wear or use was delivered by a diesel-powered vehicle.

New EPA/CARB regulations have impacted the fuel technology and energy source/ design used. Trucks, trains, buses and many other medium and heavy-duty vehicles have evolved to match today's more stringent clean air emission standards. Graduates of the Diesel Technology program are well paid and have a diverse choice of areas in which to specialize. In recent years, the demand from local employers has exceeded our supply of qualified graduates as the program continues to grow.

This program is designed to meet that growing demand for Heavy-duty truck and bus technicians.

After successful completion of the program requirements, students will become proficient in heavy-duty truck, bus, and equipment engine fundamentals, shop practices, electrical components, fuel systems, hydraulics, and HVAC.

Students completing this program of study include, but are not limited to: Bus and Truck Mechanics and Diesel Engine Specialists.



PROGRAM LEARNING OUTCOMES (PLOs):

Upon completion of the Degree program, students are able to:

- Identify and explain heavy-duty vehicle shop practices, and the fundaments of heavy-duty vehicle engines and subsystems, including electrical, fuel, hydraulics, and HVAC.
- Diagnose and repair fundament heavy-duty vehicles and systems using various manufacturer diagnostic software, tools, and shop equipment in accordance with industry standards.

REQUIRED COURSES

SEMESTER I		UNITS
DIESLTK 112	Heavy Duty Maintenance Shop Practices, Engine Fundamentals, and Electrical	12
OR		
DIESLTK 112A	Heavy Duty Maintenance Shop Practices	4
AND		
DIESLTK 112B	Heavy Duty Engine Fundamentals	4
AND		
DIESLTK 112C	Heavy Duty Electrical Systems	4

SEMESTER II		UNITS
DIESLTK 122	Heavy Duty Fuel Injection Systems, Hydraulics, and HVAC	12
OR		
DIESLTK 122A	Heavy Duty Fuel Systems	4
AND		
DIESLTK 122B	Hydraulics	4
AND		
DIESLTK 122C	Heavy Duty HVAC	

ELECTRONICS COMMUNICATIONS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Electronics Communications	T002902C	A.S.	21*	44	-	44
Electronics Communications	T021841D	C		44	-	44

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

This program covers, circuit analysis of several complete FM systems. By completing the certificate and/or degree, students will be able to pass the Federal Communications Commission (FCC) Examination. In addition, by fulfilling the program requirements, students are proficient in the operation of AM/FM Transmitters and can trouble shoot AM/FM Receivers as well as install C Band, K/U Band, and digital satellites systems (DSS). Students will also have an understating of cordless phones, microwave receivers/transmitters, and cell phone systems

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Read electronic symbols and schematic diagrams.
- Perform mathematical calculations and measurements related to electronics circuit analysis.
- Troubleshoot and construct electronics communication devices, such as semiconductors devices and digital circuits, utilizing electronics communications, microcomputer, and/or cabling theory.

ELECTRONICS COMMUNICATIONS

Associate in Science Degree

Major Units: 44

Requirements for the Associate in Science degree in Electronics Communications may be met by completing 44 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ETNTLGY 150	Soldering Surface Mount Technology	3
ETNTLGY 151	DC Theory and Circuit Fundamentals	3
ETNTLGY 152	DC Theory and Circuit Fundamentals Lab	2
ETNTLGY 153	Applied DC Calculations	1
ETNTLGY 254	Computer Applications for Electronics Technology	3

SEMESTER II		UNITS
ETNTLGY 154	AC Theory and Circuit Fundamentals	3
ETNTLGY 155	AC Theory and Circuit Fundamentals Lab	2
ETNTLGY 156	Applied AC Calculations	1
ETNTLGY 255	Computer-Based Electronics I	1
PHYSICS 011	Introductory Physics	4

SEMESTER III		UNITS
ETNTLGY 157	Semiconductors Devices and Applications	3
ETNTLGY 158	Semiconductors Devices and Electronics Laboratory	3
ETNTLGY 159	Digital Circuits and Applications	3
ETNTLGY 160	Digital Circuits and Applications Lab	2

SEMESTER IV		UNITS
ETNTLGY 161	F.C.C. Radio Operator License	3
ETNTLGY 162	Introduction to Electronics Communications	3
ETNTLGY 163	Introduction to Electronics Communications Lab	3
ECONMT 142	Basic Programmable Logic Controls (PLC)	1

SUPPLEMENTARY ELECTIVES		UNITS
ETNTLGY 252	Networking Cabling Specialist	3
ETNTLGY 253	Fiber Optics	3
MICROTK 077	Cisco Networking Academy-Semester I	3
MICROTK 160	I.T. Essentials Application Software Fundamentals	2
MICROTK 162	I.T. Essentials Networking Personal Computers	4
MICROTK 164	I.T. Essentials Microcomputer Theory and Servicing	5

ELECTRONICS COMMUNICATIONS

Certificate of Achievement

Major Units: 44

A Certificate of Achievement in Electronics Communications may be earned by completing 44 units of Required Courses listed under the Associate degree in Electronics Communications with a "C" or better in each course.

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.



HYBRID & ELECTRIC PLUG-IN VEHICLE TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Hybrid & Electric Plug-in Vehicle Technology	T008478D	C		12	-	12
This program is not Financial Aid Eligible.						

PROGRAM OVERVIEW

The courses listed in this certificate compile a comprehensive list of job related skills needed to acquire hybrid and electric plug-in vehicle maintenance and repair technical skills. They cover basic, intermediate and advanced level training of these vehicles including the different configurations used in the automotive, transit and trucking industries. These skills will prepare an individual for entry-level employment or career advancement in the maintenance and repair of hybrid vehicles in all sectors of the transportation industry.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Identify and explain the operations of alternative fuel and hybrid electric vehicles and related safety standards.
- Diagnose and repair alternative fuel and hybrid electric vehicles using specialty tools and equipment in accordance with industry standards.

HYBRID & ELECTRIC PLUG-IN VEHICLE TECHNOLOGY

Certificate of Achievement

Major Units: 12

A Certificate of Achievement in Hybrid and Electric Plug-in Vehicle Technology may be earned by completing 12 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

		UNITS
DIESLTK 301	Introduction to Alternative Fuels & Hybrid Vehicle Technology	1
DIESLTK 302	Hybrid and Plug-in Electric Vehicle	6
DIESLTK 303	Advanced Hybrid and Plug-in Electric Vehicles	5

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

MACHINE SHOP: CNC

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Machine Shop CNC	T002914C	A.S.	21*	48	-	48
Machine Shop CNC	T021860D	C		48	-	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

LATTC offers an Associate in Science degree in Machine Shop CNC as well as a Certificate of Achievement.

The Associate in Science degree and Certificate of Achievement, is designed for individuals seeking entry level positions in the field. Students enrolling in this program should be able to commit to full-time student status, which is approximately 21 hours per week. This time commitment is necessary to allow for hands-on training in the lab applications used during the course of instruction.

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in the Machining Industry. Students will properly use related terminology, safely set-up and operate numerous conventional and computer numerically controlled (CNC) machine tools, use computers to program various CNC machines directly or with Computer Assisted Machinery (CAM), and interpret most related parts and assembly drawings. The general education component classes will give the student a well rounded education and provide knowledge and skills to assist in successful participation in all aspects of society.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Demonstrate the correct use of machine tools, such as lathes, milling machines, and machining centers, to produce machined products that meet precise specifications.
- Demonstrate knowledge of the working properties of metals in the production of precision metal parts.
- Program computer numerically controlled (CNC) machines to perform all of the necessary cuts to create a part.

MACHINE SHOP: CNC

Associate in Science Degree

Major Units: 48 units

Requirements for the Associate in Science degree in Machine Shop CNC may be met by completing 48 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
MSCNC 111	Principles of Machine Tools I	2
MSCNC 112A	Technology and Application of Machining IA	3
MSCNC 112B	Technology and Application of Machining (CAD) IB	1
MSCNC 114	Print Interpretation and Sketching (Blueprint I)	3
MSCNC 115	Basic Applied Mathematical Calculations	3
SEMESTER II		**UNITS**
MSCNC 121	Principles of Machine Tools II	2
MSCNC 122A	Technology and Application of Machining IIA	3
MSCNC 122B	Technology and Application of Machining IIB	1
MSCNC 124	Print Interpretation and Inspection (Blueprint II)	3
MSCNC 125	Intermediate Applied Mathematical Calculations	3
SEMESTER III		**UNITS**
MSCNC 131A	Principles of Machine Tools IIIA	2
MSCNC 131B	Principles of Machine Tools (CNC) IIIB	3
MSCNC 132A	Technology and Application of Machining IIIA	3
MSCNC 132B	Technology and Application of Machining (CAM) IIIB	1
MSCNC 135	Advanced Applied Mathematical Calculations	3
SEMESTER IV		**UNITS**
MSCNC 141	Principles of Machine Tools (CNC) IV	2
MSCNC 142A	Technology and Application of Machining IVA	3
MSCNC 142B	Technology and Application of Machining IVB	1
MSCNC 161A	Computer Assisted Machine Programming (CAM) IA	3
MSCNC 161B	Computer Assisted Machine Programming (CAM) IB	3

MACHINE SHOP: CNC

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Machine Shop CNC may be earned by completing 48 units of Required Courses listed under the Associate degree in Machine Shop CNC with a "C" or better in each course.

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

MICROCOMPUTER TECHNICIAN

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Microcomputer Technician	T008473C	A.S.	21*	42	-	42
Microcomputer Technician	T021840D	C		42	-	42

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Microcomputer Technician program is designed to prepare a technician to install, configure, and add auxiliary equipment for a microcomputer. The technician is also able to load software and suggest programs to answer the needs of individuals and companies. Microcomputer Technicians must be above average in knowledge of mechanical systems. They must also have interest and ability in mathematics to successfully apply the training presented in this program.

The computer industry is expanding due to the continuing drop in the price of computers and the introduction of new models with greater power. The fastest growing segment of this field is the microcomputer segment. The power and speed of these units continue to increase and, at the same time, the price continues to decrease. This has placed the computer within financial reach of many small businesses and individuals. With more systems being manufactured and installed, more technicians are needed. Students can acquire the basic skills and knowledge to earn the Microcomputer Technician Associate in Science Degree / Certificate of Achievement, in the Electronics Department. This program will not only prepare students for an award, but will also prepare them for the A+ Certification exam, and help them prepare for the Cisco Certified Networking Associate (CCNA).

By fulfilling the program requirements, students are able to format a computer, install the operating system, and install all the necessary drivers. Students will be able to successfully configure and create a network system consisting of a number of computers all for employment in a field related to microcomputer technician.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Install, configure, and add auxiliary equipment for microcomputers.
- Set up computers to certain specifications.
- Configure and create network systems consisting of a number of computers.

MICROCOMPUTER TECHNICIAN

Associate in Science Degree

Major Units: 42

Requirements for the Associate in Science degree in Microcomputer Technician may be met by completing 42 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
MICROTK 160	I.T. Essentials Application Software Fundamentals	2
MICROTK 162	I.T. Essentials Networking Personal Computers	4
MICROTK 164	I.T. Essentials Microcomputer Theory and Servicing	5
SEMESTER II		**UNITS**
MICROTK 077	Cisco Networking Academy-Semester I	3
ETNTLGY 252	Networking Cabling Specialist	3
ETNTLGY 253	Fiber Optics	3
ETNTLGY 254	Computer Applications for Electronics Technology	3
SEMESTER III		**UNITS**
ELECTRN 002	Introduction to Electronics	3
MICROTK 078	Cisco Networking Academy - Semester II	3
PHYSICS 011	Introductory Physics	4
SEMESTER IV		**UNITS**
MICROTK 079	Cisco Networking Academy - Semester III	3
MICROTK 080	Cisco Networking Academy - Semester IV	3
MICROTK 165	Linux Survival Course	3

MICROCOMPUTER TECHNICIAN

Certificate of Achievement

Major Units: 42

A Certificate of Achievement in Microcomputer Technician may be earned by completing 42 units of Required Courses listed under the Associate degree in Microcomputer Technician with a grade of "C" or better in each course.

This Certificate is designed for students who wish to train for employment as a microcomputer technician, but do not wish to transfer to a four year university.

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

MOTORCYCLE REPAIR MECHANICS

Award Title	Academic Plan	Award Type	Grad. Plan	GE Units	Required Course Units	Major Elective Units
Motorcycle Repair Mechanics: Adjunct	T002908D	C		16	7	23
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Certificate of Achievement in Motorcycle Repair is designed for both new students as well as industry professionals who want to upgrade their skills and show validation of technology training.

Courses leading to the Certificate are offered during evenings and on weekends. Upon completion of the program, students will have the skills necessary to maintain, repair, and diagnose electrical and fuel induction systems, and will be proficient in tune-up overhaul procedures and basic shop practices.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Diagnose and repair various models of motorcycles according to industry standards.
- Demonstrate shop safety practices when performing vehicle repairs in accordance with industry standards.

MOTORCYCLE REPAIR MECHANICS: ADJUNCT

Certificate of Achievement

Major Units: 23

A Certificate of Achievement in Motorcycle Repair Mechanics: Adjunct may be earned by completing 16 units of Required Courses and 7 units of Major Electives with a "C" or better in each course.

REQUIRED COURSES

		UNITS
MCYCMEK 210	Motorcycle Fuel Induction and Pollution Control	4
MCYCMEK 212	Motorcycle Tune-up and Chassis Maintenance	4
MCYCMEK 214	Motorcycle Electrical Principles and Repair	4
MCYCMEK 216	Motorcycle Engine Overhaul and Diagnosis	4

MAJOR ELECTIVES

Select at least 7 units from the courses below		UNITS
AUTORTK 122	Electrical/Electronic Systems Theory, Inspection & Repair	3
AUTORTK 123	Fuel & Emissions Systems Theory, Inspection & Repair	3
AUTORTK 135	Computer Control and Fuel Injection	3

NOTE: Students are required to provide basic hand tools, Transportation Technology uniform and personal safety equipment.

RAIL VEHICLE MAINTENANCE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Rail Vehicle Maintenance	T035649C	AS	21*	40	-	40
Rail Vehicle Maintenance	T035618D	C		40	-	40

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

In this program, students garner safety, electrical, and mechanical competencies required for the maintenance and repair of rail vehicles in these core areas: couplers, truck and axle, propulsion and dynamic braking, auxiliary inverters and batteries, friction brakes, HVAC, current collection and distribution, monitoring and diagnosing, car body, doors, communications systems, and car-borne cab signal control systems.

The Rail Vehicle Maintenance Degree and Certificate are designed to prepare students for employment in the Rail industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Locomotive Engineers
- Rail Car Repairers
- Rail-Track Laying and Maintenance Equipment Operators

By fulfilling the program requirements, students will have the necessary knowledge to develop the safe skills to perform preventive maintenance and inspections on light rail, passenger and freight rail cars; utilize basic computer skills to review, create, and update electronic work orders; and diagnose and repair stationary and rotary mechanical, electronic, low and high voltage electrical components and their issues.

The coursework in these programs meet the requirements for Snap-On 604 Meter Certification, Bendix Air Brake Certification, Single Car Testing per Association of American Railroads AAR S-486 Certification, and Mobil Air Conditioning Society (MACS) 608 and 609 Certification.

NOTE: Students are required to provide educational supplies, basic hand tools, Transportation Technology uniform, text book and personal protective equipment (PPE). Students are also required to complete the Snap-On 604 Meter and Bendix Air Brake certifications.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Identify and explain the operation of rail vehicles and systems along with related subsystems and related industry standards.
- Diagnose and repair rail vehicles and systems using various manufacturer diagnostic software, tools, and shop equipment in accordance with industry standards.

RAIL VEHICLE MAINTENANCE

Associate in Science Degree

Major Units: 40

Requirements for the Associate of Science degree in Rail Vehicle Maintenance may be met by completing 40 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
DIESLTK 401	Rail System Overview, Safety, Tools, and Mechanical Principles	10
-or-		
DIESLTK 401A	*Rail Systems Overview, Safety and Tools (5)*	
- and -		
DIESLTK 401B	*Mechanical Principles (5)*	

SEMESTER II		UNITS
DIESLTK 402	Rail Electrical and Electronic Principles	10
-or-		
DIESLTK 402A	*Rail Electrical Principles (5)*	
- and -		
DIESLTK 402B	*Rail Electronic Principles (5)*	

SEMESTER III		UNITS
DIESLTK 403	Rail Vehicle Pneumatic & Hydraulic Controls, HVAC & Car Body	10
-or-		
DIESLTK 403A	*Rail Vehicle Pneumatic & Hydraulic Controls (5)*	
- and -		
DIESLTK 403B	*Rail Vehicle HVAC and Car Body (5)*	

SEMESTER IV		UNITS
DIESLTK 404	Rail Diesel Engine Fundamentals and Rail Accessory/Support Systems	10
-or-		
DIESLTK 404A	*Rail Diesel Engine Fundamentals (5.5)*	
- and -		
DIESLTK 404B	*Rail Accessory/Support Systems (4.5)*	

RAIL VEHICLE MAINTENANCE

Certificate of Achievement

Major Units: 40

A Certificate of Achievement in Rail Vehicle Maintenance may be earned by completing 40 units of Required Courses listed under the Associate degree in Rail Vehicle Maintenance with a "C" or better in each course.


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Applied Sciences Pathway (AS)

ABOUT THE PATHWAY

The Applied Sciences Pathway (AS) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce and/or continue their education in fields such as chemistry, chemical technology, physics, pharmaceuticals, and sustainable energy, among others.

PATHWAY TEAM:

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Counselor: Kimberly Wicker ~ Email: WickerKC@lattc.edu

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Email: Science@lattc.edu

Hours of Operation: Monday - Friday 7:00 AM to 3:30 PM

Phone number: (213) 763-7295

Pathway Website: http://pathways.lattc.edu/catalog-programs/as/

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Biotechnology	AS/C	Industrial Applied Science Core Competencies	C
Chemical Technology	AS/C	Industrial Safety, Regulatory and Biomanufacturing	C
Chemistry	AS	Liberal Arts: Emphasis in Mathematics, Physical and Natural Sciences (Formerly Liberal Arts: Natural Sciences)	AA
Engineering – Civil Engineering Track	AS	Physics	AST
Engineering – Electrical Track	AS	Process Technology	AS/C
Engineering – Mechanical, Aerospace and Manufacturing Track	AS		

BIOTECHNOLOGY (BIOMANUFACTURING)

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Biotechnology	T033682C	A.S.	21*	34	-	34
Biotechnology	T033225D	C		34	-	34

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The goal of the Biotechnology/Biomanufacturing Program is to provide training and instruction in foundational science theory, biological principles, industrial equipment, processes and process variables, quality control and biomanufacturing regulations; leading to career technical certificates, associate degrees, and gainful employment.

The Biotechnology Degree and Certificate are designed to prepare students for employment in the Biotechnology, Pharmaceutical and Medical Device Industry/ Manufacturing industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Inspectors, Testers, Sorters, Samplers, and Weighers
- Life and Physical Science Technician
- Biologicals, Food, and Beverage Manufacturing/Processing Technician
- Quality and Regulatory Inspectors
- Agricultural and Food Science Technicians
- Food Processing Workers

By fulfilling the program requirements, students will have the necessary knowledge and skills for manufacturing and regulating quality of manufactured products; monitoring process and analytical parameters of manufactured products; proper use of safety equipment; understanding hazardous conditions; proper use of processing equipment; proper use of analytical instrumentation; proper collection of measurement, and an understanding of metrology principles (i.e., calibration and standardization); understanding the significance of microbiological control, and how it is achieved with facility design and best practices; and understanding regulation and Good Manufacturing Practices.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Apply basic biological principles to biomanufacturing.
- Explain and apply the processes in the biomanufacturing industry.
- Recognize and perform industrial regulatory processes.

BIOTECHNOLOGY

Associate in Science Degree

Major Units: 34

Requirements for the Associate in Science degree in Biotechnology may be met by completing 34 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BIOLOGY 003	Introduction to Biology	4
- or BIOLOGY 005	*Introduction to Human Biology (4)*	
CHEM 051	Fundamentals of Chemistry I	5
PRPLTEK 104	Introduction to Applied Sciences	4

SEMESTER II		UNITS
MICRO 020	General Microbiology	4
PRPLTEK 102	Process Measurement and Control Fundamentals	3
PRPLTEK 214	Industry Trends: Employment and Regulations	3

SEMESTER III		UNITS
BIOTECH 010	Introduction to Biomanufacturing I	4
PRPLTEK 103	Process Plant Equipment	3

SEMESTER IV		UNITS
BIOTECH 012	Introduction to Biomanufacturing II	4

BIOTECHNOLOGY

Certificate of Achievement

Major Units: 34

A Certificate of Achievement in Biotechnology may be earned by completing 34 units of Required Courses listed under the Associate degree in Biotechnology with a grade of "C" or better in each course.

CHEMICAL TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Chemical Technology	T002913C	A.S.	21*	38	-	38
Chemical Technology	T021859D	C		38	-	38

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The goal of the Chemical Technology Program is to provide training and instruction in foundational science theory, applied chemistry, instrumentation, quality control and industrial processes; leading to career technical certificates, associate degrees and gainful employment.

The Chemical Technology Degree and Certificate are designed to prepare students for employment in the Water Analysis, Environmental Compliance, Quality Control industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Chemical Technicians
- Chemical Plant and System Operators
- Chemical Equipment Operators and Tenders
- Agricultural and Food Science Technicians

By fulfilling the program requirements, students will have the necessary knowledge and skills for working in the chemical process industry, including treatment plants; monitoring safety/health and environmental regulations; sampling and handling chemical materials; measuring physical properties; performing chemical analysis; performing instrumental analysis; planning, designing and conducting experiments, and synthesizing compounds.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Perform laboratory processes consistent with industrial practice.
- Explain principles and applications of chemical instrumentation.
- Recognize and apply industrial regulatory processes.

CHEMICAL TECHNOLOGY

Associate in Science Degree

Major Units: 38

Requirements for the Associate in Science degree in Chemical Technology may be met by completing 38 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BIOLOGY 003	Introduction to Biology	4
- or BIOLOGY 005	*Introduction to Human Biology (4)*	
CHEM 051	Fundamentals of Chemistry I	5
PRPLTEK 104	Introduction to Applied Sciences	4

SEMESTER II		UNITS
CHEM T 132	Quantitative and Instrumental Analysis I	5
CHEM T 133	Organic Chemistry I	4
PRPLTEK 214	Industry Trends: Employment and Regulations	3

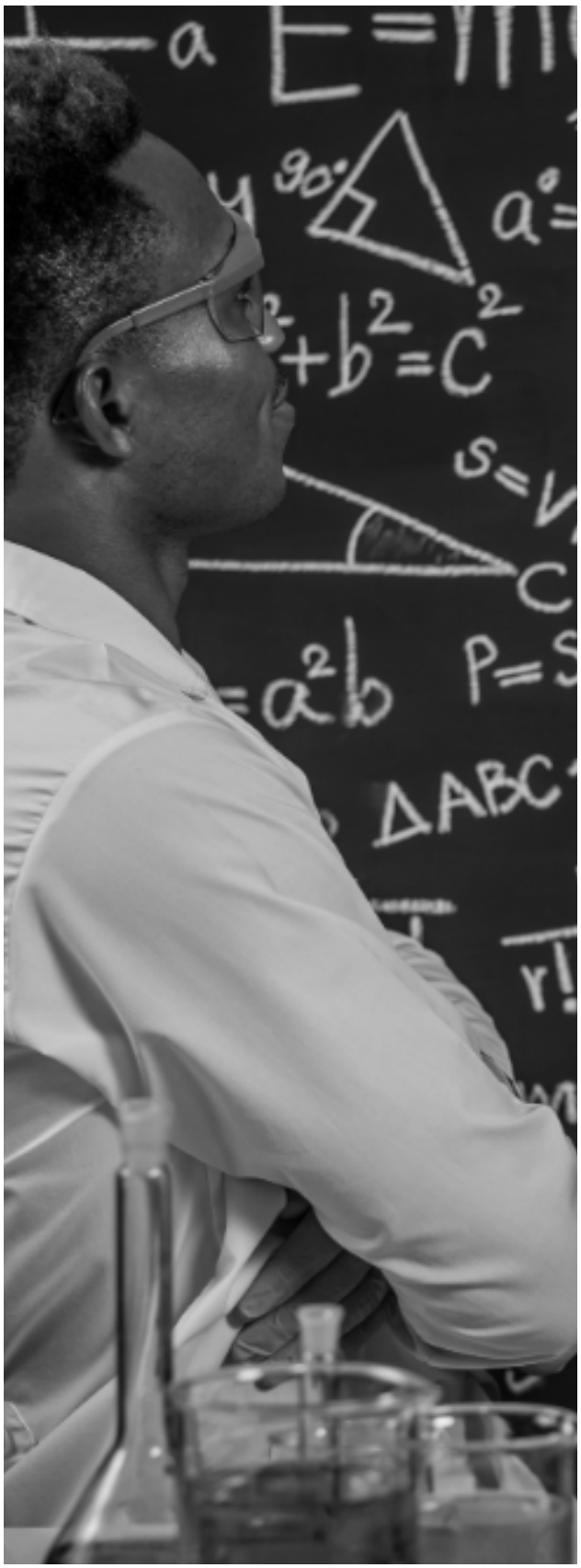
SEMESTER III		UNITS
BIOTECH 010	Introduction to Biomanufacturing I	4
CHEM T 142	Quantitative and Instrumental Analysis II	5
CHEM T 143	Organic Chemistry II	4

CHEMICAL TECHNOLOGY

Certificate of Achievement

Major Units: 38

A Certificate of Achievement in Chemical Technology may be earned by completing 38 units of Required Courses listed under the Associate degree in Chemical Technology with a "C" or better in each course.



CHEMISTRY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Chemistry	T031207C	A.S.	21*	40	-	40

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Associate of Science Degree in Chemistry provides students interested in the physical, health, and biological sciences with a strong academic background in chemistry and the coursework required to transfer to four-year institutions or professional schools. This degree certifies a students' ability to analyze and solve problems in the field of chemistry and other fields where expertise in chemistry is required.

Chemistry related fields include the pharmaceutical sciences, food sciences, biotechnology, biomanufacturing, nanotechnology, environmental sciences, engineering and many others. Our students pursue careers in chemistry, pharmacy, medicine, dentistry, physician assistant, laboratory technician and other health or physical science related careers. The degree presents curriculum in two major concentrations; one in Chemistry and the other in Biochemistry. Thus, students can select the concentration appropriate to their majors.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Student will be able to apply scientific principles to explain observations.
- Students will be able to perform precise, quantitative measurements using proper techniques, methods and instrumentation.
- Students will able to demonstrate problem-solving, analytical, and critical thinking skills.
- Demonstrate problem-solving, analytical, and critical thinking skills.

CHEMISTRY

Associate in Science Degree
Major Units: 40

Requirements for the Associate in Science degree in Chemistry may be met by completing 40 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

CHEMISTRY CONCENTRATION

SEMESTER I		UNITS
MATH 265	Calculus with analytical geometry I	5
CHEM 101	General Chemistry I	5

SEMESTER II		UNITS
MATH 266	Calculus with analytical geometry II	5
CHEM 102	General Chemistry II	5

SEMESTER III		UNITS
PHYSICS 101	Physics for Engineers and Scientists I	5
CHEM 211	Organic Chemistry for Science Majors I	5

SEMESTER IV		UNITS
PHYSICS 102	Physics for Engineers and Scientists II	5
CHEM 212	Organic Chemistry for Science Majors II	5

TRANSFER: Students interested in transferring to a four-year college or university should visit the University Transfer Center or meet with a counselor to select appropriate transferable courses.

ENGINEERING – CIVIL ENGINEERING TRACK

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Engineering – Civil Engineering Track	T038590C	A.S.	18			66

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

This degree is designed for students that plan to transfer to Civil Engineering four-year programs. LATTC offers the majority of the lower-division courses in mathematics, physics, and engineering needed to successfully start closer with a junior-level standing. Engineering in general is a high-unit major and completion of this degree may take more than two years. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with an engineering counselor for specific transfer course requirements in their major.

REQUIREMENTS FOR THE AS DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 degree applicable units
- Minimum 2.0 GPA
- Complete the LACCD GE pattern 18 units
- AREA E exempt
- Complete a minimum of 56 units from area of emphasis coursework
- Courses must be completed with a grade of "C" or better

PROGRAM LEARNING OUTCOMES

- Apply knowledge of math, science, and engineering to identify, formulate, and solve engineering problems.
- Design and perform tests or experiments utilizing appropriate engineering tools and equipment, analyze and interpret data, and prepare a report summarizing the results of the tests or experiments.
- Communicate effectively and work well in situations that require teamwork

REQUIRED COURSES

PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 275	Ordinary Differential Equations	3
CHEM 101	General Chemistry I	5
EGD TEK 101	Engineering Graphics	3
ENG GEN 101	Introduction to Science, Engineering and Technology	2
ENG GEN 122	Programming and Problem Solving in MATLAB	3
ENG GEN 131	Statics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
ENG GEN 231	Dynamics	3
ENG GEN 241	Strength of Materials	3
BIOLOGY 003	Introduction to Biology	4
OR		
MICRO 020	General Microbiology w/Lab	(4)
OR		
GEOLOGY 001	Physical Geology	(3)
AND		
GEOLOGY 006	Physical Geology Lab	(1)

ENGINEERING – ELECTRICAL TRACK

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Engineering – Electrical Track	T038588C	A.S.	18			56

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

This degree is designed for students that plan to transfer to Electrical Engineering four-year programs. LATTC offers the majority of the lower-division courses in mathematics, physics, and engineering needed to successfully start closer with a junior-level standing. Engineering in general is a high-unit major and completion of this degree may take more than two years. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with an engineering counselor for specific transfer course requirements in their major.

REQUIREMENTS FOR THE AS DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 degree applicable units
- Minimum 2.0 GPA
- Complete the LACCD GE pattern 18 units
- AREA E exempt
- Complete a minimum of 56 units from area of emphasis coursework
- Courses must be completed with a grade of "C" or better

PROGRAM LEARNING OUTCOMES

- Apply knowledge of math, science, and engineering to identify, formulate, and solve engineering problems.
- Design and perform tests or experiments utilizing appropriate engineering tools and equipment, analyze and interpret data, and prepare a report summarizing the results of the tests or experiments.
- Communicate effectively and work well in situations that require teamwork

REQUIRED COURSES

PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 275	Ordinary Differential Equations	3
CHEM 101	General Chemistry I	5
ENG GEN 101	Introduction to Science, Engineering and Technology	2
ENG GEN 122	Programming and Problem Solving in MATLAB	3
ENG GEN 131	Statics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
CS 115	Programming in C#	3
OR		
CS 116	Programming in C++	(3)

ENGINEERING – MECHANICAL, AEROSPACE AND MANUFACTURING TRACK

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Engineering – Mechanical, Aerospace and Manufacturing Track	T038589C	A.S.	18			62
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

This degree is designed for students that plan to transfer to Civil Engineering four-year programs. LATTC offers the majority of the lower-division courses in mathematics, physics, and engineering needed to successfully start closer with a junior-level standing. Engineering in general is a high-unit major and completion of this degree may take more than two years. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with an engineering counselor for specific transfer course requirements in their major.

REQUIREMENTS FOR THE AS DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 degree applicable units
- Minimum 2.0 GPA
- Complete the LACCD GE pattern 18 units
- AREA E exempt
- Complete a minimum of 56 units from area of emphasis coursework
- Courses must be completed with a grade of "C" or better

PROGRAM LEARNING OUTCOMES

- Apply knowledge of math, science, and engineering to identify, formulate, and solve engineering problems.
- Design and perform tests or experiments utilizing appropriate engineering tools and equipment, analyze and interpret data, and prepare a report summarizing the results of the tests or experiments.
- Communicate effectively and work well in situations that require teamwork

REQUIRED COURSES

PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 275	Ordinary Differential Equations	3
CHEM 101	General Chemistry I	5
EGD TEK 101	Engineering Graphics	3
ENG GEN 101	Introduction to Science, Engineering and Technology	2
ENG GEN 122	Programming and Problem Solving in MATLAB	3
ENG GEN 131	Statics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
ENG GEN 231	Dynamics	3
ENG GEN 241	Strength of Materials	3



INDUSTRIAL APPLIED SCIENCE CORE COMPETENCIES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Industrial Applied Science Core Competencies	T038703D	C	-	-	-	20

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Industrial Applied Sciences Core Competencies certificate of achievement is designed to prepare students for employment in the Chemical Technology, Process Technology, and Biotechology industries. By fulfilling the program requirements, students completing this certificate would have a basic understanding of chemistry and biology and their role in Industry, as well as Industrial Safety and Regulatory concerns. Building upon this certificate, students have the option of continuing their coursework to complete a certificate or Associates Degree in Chemical Technology, Process Technology or Biotechnology.

PROGRAM LEARNING OUTCOMES

- Students will be able to identify and describe industrial hazards, including hazards in the chemical, biomanufacturing and process industries
- Students will be able to ID and describe GLP and cGMP regulations
- Students will be able to identify the main areas affected by the validation process in the biomanufacturing industry and validation regulations that will require internal and external auditing.
- Students will be able to demonstrate mastery of appropriate industrial protocols and documentation Students will be able to demonstrate the ability to calculate solution concentrations, identify chemical compounds, perform unit conversions, apply basic chemistry concepts to solve problems using the scientific method and maintain proper documentation of work activities through the keeping of a lab notebook.
- Students will be able to apply the scientific method to understanding biological principles
- Students will be able to describe basic principles of human biology, such as biochemistry and the cell.
- Students will be able to describe different types of bacteria, their staining methods and how they cause disease.
- Students will be able to demonstrate an understanding of the purpose, fundamentals and regulations of biomanufacturing
- Students will be able to demonstrate an understanding of the science underlying biomanufacturing
- Students will be able to apply techniques and procedures applicable to biomanufacturing.

REQUIRED COURSES

PRPLTEK 104	Introduction to Applied Sciences	4
CHEM 51	Fundamentals of Chemistry	5
BIOLOGY 003	Introduction to Biology	4
OR		
BIOLOGY 005	Introduction to Human Biology	4
PRPLTEK 214	Industry Trends: Employment and	3
BIOTECH 10	Introduction to Biomanufacturing I	4



INDUSTRIAL SAFETY, REGULATORY AND BIOMANUFACTURING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Industrial Safety, Regulatory and Biomanufacturing	T038737D	C	-	-	-	11
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

The Industrial Safety, Regulatory and Biomanufacturing certificate of achievement is designed to prepare students for employment in the industrial safety and regulatory industry. By fulfilling the program requirements, students will have a basic understanding of Industrial Safety and Regulatory concerns, as well as knowledge of the career paths available in the Applied Sciences and Manufacturing. Building upon this certificate, students have the option of continuing their coursework to complete a certificate or Associates Degree in Chemical Technology, Process Technology or Biotechnology.

PROGRAM LEARNING OUTCOMES

- Students will be able to identify and describe industrial hazards, including hazards in the chemical, biomanufacturing and process industries
- Students will be able to ID and describe GLP and cGMP regulations
- Students will be able to identify the main areas affected by the validation process in the
- biomanufacturing industry and validation regulations that will require internal and external auditing.
- Students will be able to demonstrate mastery of appropriate industrial protocols and documentation
- Students will be able to demonstrate an understanding of the purpose, fundamentals and regulations of biomanufacturing
- Students will be able to demonstrate an understanding of the science underlying biomanufacturing
- Students will be able to apply techniques and procedures applicable to biomanufacturing.

REQUIRED COURSES

PRPLTEK 104	Introduction to Applied Sciences	4
PRPLTEK 214	Industry Trends: Employment and	3
BIOTECH 10	Introduction to Biomanufacturing I	4

LIBERAL ARTS AND SCIENCES: EMPHASIS IN MATHEMATICS, PHYSICAL AND NATURAL SCIENCES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Liberal Arts and Sciences: Emphasis in Mathematics, Physical and Natural Sciences (Formerly: Natural Sciences)	T018857C	A.A.	21*	18	-	18
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

This area of emphasis offers a broad and interdisciplinary foundation in the sciences necessary for continued training at the upper division (or advanced) level for many bachelor's degree programs in the natural sciences including biology, chemistry, geology, mathematics, physics, and many others. It is a starting point for students who are preparing for careers in business, industry, medicine, health sciences, education, and government, where scientific and technical skills are in great demand.

PLEASE NOTE: The courses that universities and colleges require for transfer vary. When selecting courses for transfer purposes, students should consult with Counseling Services to determine the particular transfer requirements of specific transfer institutions.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Apply scientific principles, theories, and/or models to explain or predict the behavior of natural physical phenomena.
- Apply scientific knowledge and reasoning to evaluate the human interaction with the natural world and identify major issues impacting society.

LIBERAL ARTS & SCIENCES: EMPHASIS IN MATHEMATICS, PHYSICAL AND NATURAL SCIENCES

Associate in Arts Degree

Major Units: 18

REQUIRED COURSES

Complete 18 units with a minimum of 3 units from each of the following categories listed below.

LIST A: LIFE SCIENCES:		UNITS
ANATOMY 001	Human Anatomy	4
ANTHRO 101	Physical Anthropology	3
BIOLOGY 003	Introduction to Biology	4
BIOLOGY 005	Introduction to Human Biology	4
BIOLOGY 006	General Biology I w/Lab	5
BIOLOGY 007	General Biology II w/Lab	5
MICRO 001	Introductory Microbiology w/ Lab	5
MICRO 020	General Microbiology w/Lab	4
PHYSIOL 001	Introduction to Human Physiology	4
PSYCH 002	Biological Psychology	3

LIST B: PHYSICAL SCIENCES:		UNITS
ASTRON 001	Elementary Astronomy	3
ASTRON 005	Fundamentals of Astronomy Lab.	1
CHEM 051	Fundamentals of Chemistry	5
CHEM 070	Introductory Organic and Biochemistry	4
CHEM 101	General Chemistry I	5
CHEM 102	General Chemistry II	5
CHEM 211	Organic Chemistry for Science Majors I	5
CHEM 212	Organic Chemistry for Science Majors II	5
CHEM 221	Biochemistry for Science Majors	5
EARTH 001	Earth Science	3
ELECTRN 002	Introduction to Electronics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
ENG GEN 231	Dynamics	3
ENV SCI 001	The Human Environment: Physical Processes	3
GEOG 001	Physical Geography	3
GEOLOGY 001	Physical Geology	3
GEOLOGY 006	Physical Geology Lab	1
PHYSICS 006	General Physics I	4
PHYSICS 007	General Physics II	4
PHYSICS 011	Introductory to Physics w/Lab	4
PHYSICS 012	Physics Fundamentals	3
PHYSICS 014	Physics Fundamentals Laborator	1
PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5

LIST C: MATHEMATICS:		UNITS
MATH 215	Principles of Mathematics I	3
MATH 227	Statistics	4
MATH 227S	Statistics with Support	4
MATH 230	Mathematics for Liberal Arts Students	3
MATH 235	Finite Mathematics	5
MATH 236	Calculus for Business & Social Sciences	5
MATH 241	Trigonometry with Vectors	4
MATH 241S	Trigonometry with Vectors with Support	4
MATH 245	College Algebra	3
MATH 260	Precalculus	5
MATH 260S	Precalculus with Support	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 270	Linear Algebra	3
MATH 272	Methods of Discrete Mathematics	5
MATH 275	Ordinary Differential Equations	3

NOTE: Which GE Pattern you choose to follow is based on your transfer plans. Speak with a counselor to find out more about which GE Pattern to follow.



PHYSICS

Award Title	Academic Plan	Award Type	GE Area	Required Course Units	Major Elective Units	Major Units
Physics	T036300H	AS-T	IGETC only	30	-	30
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Science Tranfer Degree in Physics provides students with a core curriculum that will prepare them with the knowledge and skills required to transfer and earn a Baccalaureate degree in Physics (or a similar major) at a California State University (CSU). Students will develop strong mathematical, analytical, and laboratory skills, and a solid understanding of the fundamental physical laws that govern the universe. This degree certifies a students' ability to analyze and solve problems in the field of physics and other fields where expertise in physics is required. The coursework to complete this degree will also satisfy the lower division requirements for a variety of Baccalaureate degrees including, Engineering, Chemistry, Mathematics, and Computer Science.

The Associate in Science in Physics for Transfer will be awarded upon completion of 60 transferable semester units to the California State University, including the following:

- Completion of the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.
- A minimum of 18 semester units required for the major.
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Collect data accurately and safely by performing precise, quantitative measurements using proper techniques and modern instrumentation.
- Use data obtained from lab equipment to construct graphs, and judge the accuracy and precision of results.
- Apply basic physics laws such as Newton's three laws of motion and the three laws of thermodynamics in problem solving. 4. Use algebra through multivariable calculus to set up and solve equations related to mechanics, electromagnetism, waves, optics and modern physics, demonstrating analytical and critical thinking skills.

PHYSICS

Associate in Science Transfer Degree

Major Units: 30

Requirements for the Associate in Science Transfer Degree in Physics may be met by completing 30 units of Required Courses with a grade of "C" or better along with IGETC General Education units. Information on the IGETC General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES		UNITS
PHYSICS 101	Physics For Engineers and Scientists I	5
PHYSICS 102	Physics For Engineers and Scientists II	5
PHYSICS 103	Physics For Engineers and Scientists III	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5

TRANSFER—Students interested in transferring to a four-year college or university should visit the University Transfer Center or meet with a counselor to select appropriate transferable courses.

PROCESS TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Process Technology	T019109C	A.S.	21*	38	-	38
Process Technology	T019108D	C		38	-	38
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

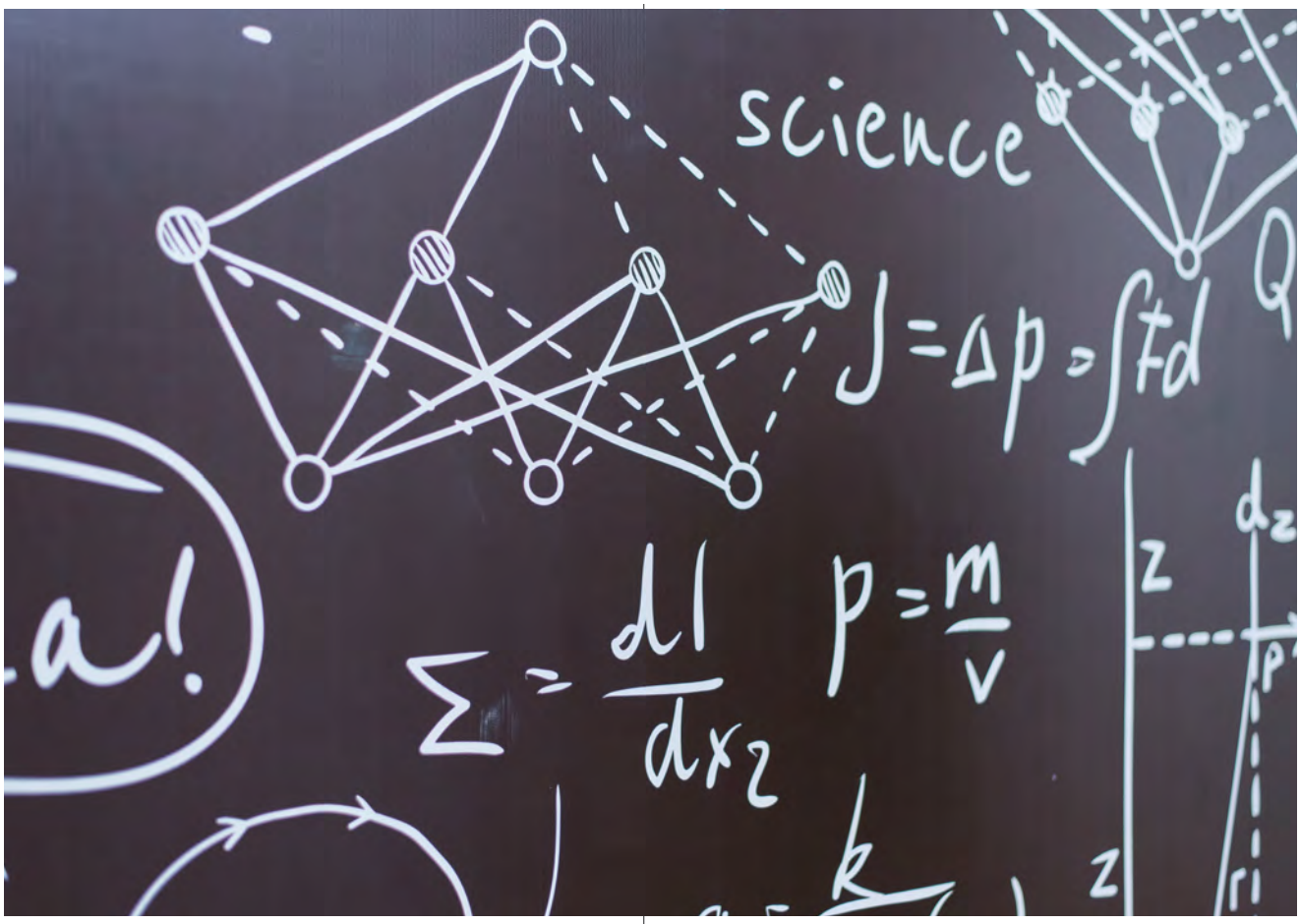
The goal of the Process Technology Program is to provide training and instruction in physical and mechanical science theory, industrial equipment, processes and process variables, troubleshooting process operations and operation and maintenance of process instruments and equipment; leading to career technical certificates, associate degrees and gainful employment within the chemical, refining, oil and gas production, water, waste management, food, and related manufacturing industries.

The Process Technology Degree and Certificate are designed to prepare students for employment in the Petroleum Industry and Industrial Manufacturing industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Electro-Mechanical Technicians
- Industrial Engineering Technicians
- Engineering Technicians, Except Drafters, All Other
- Chemical Equipment Operators and Tenders
- Power Plant Operators
- Chemical Plant and System Operators

By fulfilling the program requirements, students will have the necessary knowledge and skills for working in the refinery, biomanufacturing, petrochemical and other process industry, including waste and water treatment plants, food and related industries; monitoring safety/health and environmental regulations; sampling and handling chemical materials; measuring physical properties; operating, maintaining



and controlling process instruments and equipment; understanding process operations using P&IDs and associated documents; and troubleshooting process operations.

The Process Technology Degree & Certificate are North American Process Technology Alliance (NAPTA) Associated, the standard bearer for Process Technology curriculum.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Explain industrial operations and processes.
- Recognize and perform industrial regulatory processes.
- Recognize basic scientific principles in the industrial operation.

PROCESS TECHNOLOGY

Associate in Science Degree

Major Units: 38

Requirements for the Associate in Science degree in Process Technology may be met by completing 38 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BIOLOGY 003	Introduction to Biology	4
- or BIOLOGY 005	*Introduction to Human Biology (4)*	
CHEM 051	Fundamentals of Chemistry I	5
PRPLTEK 104	Introduction to Applied Sciences	4

SEMESTER II		UNITS
PHYSICS 011	Introductory Physics	4
PRPLTEK 102	Process Measurement and Control Fundamentals	3
PRPLTEK 200	Process Plant Systems	3
PRPLTEK 214	Industry Trends: Employment and Regulations	3

SEMESTER III		UNITS
BIOTECH 010	Introduction to Biomanufacturing I	4
PRPLTEK 103	Process Plant Equipment	3
PRPLTEK 202	Introduction to Process Plant Troubleshooting	3
PRPLTEK 204	PTECH Instrumentation - Computer Applications	2

PROCESS TECHNOLOGY

Certificate of Achievement

Major Units: 38

A Certificate of Achievement in Process Technology may be earned by completing 38 units of Required Courses listed under the Associate degree in Process Technology with a "C" or better in each course.

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

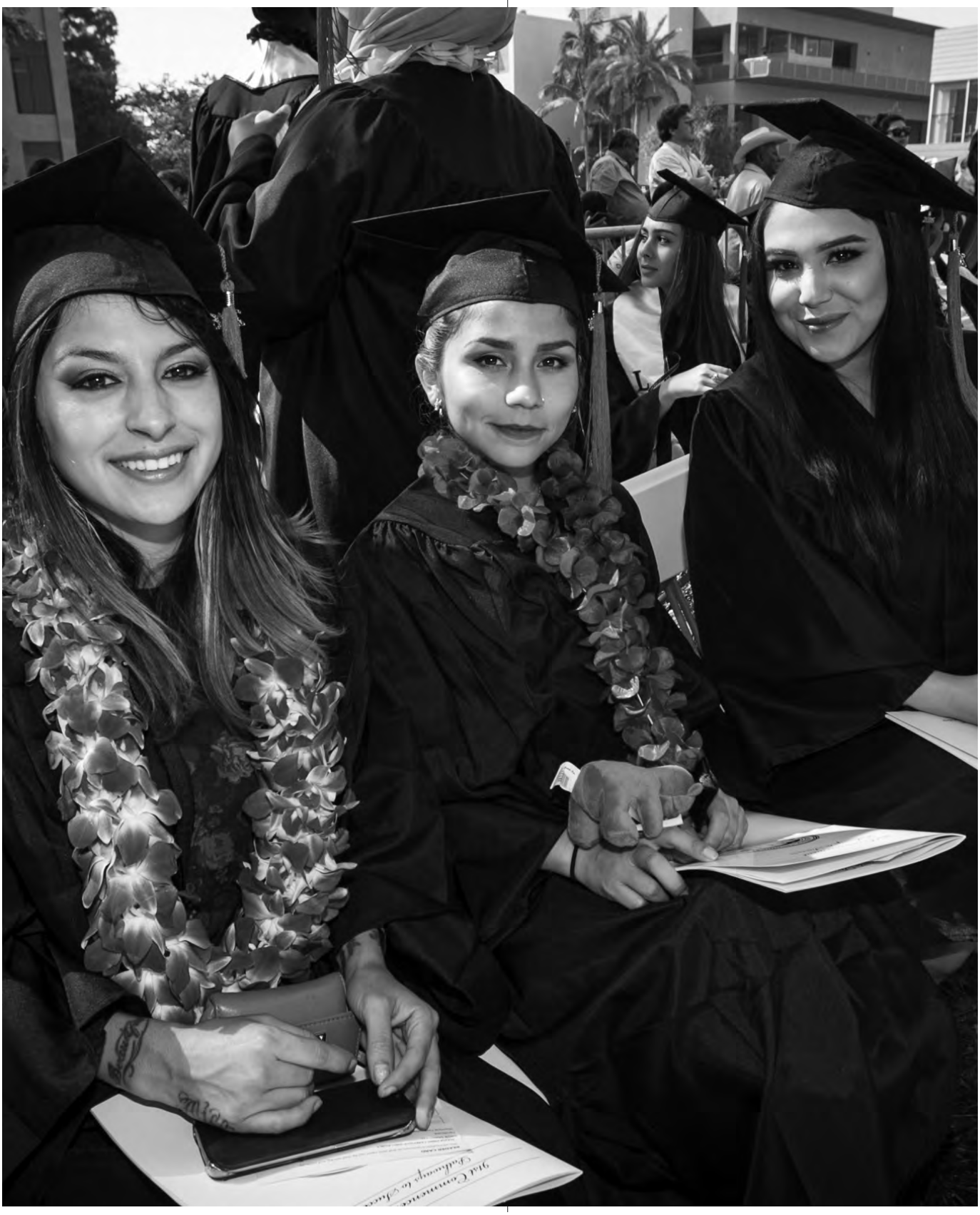
This area of emphasis examines the physical universe, its life forms, and its natural phenomena. Emphasis is place on students using the methodologies of science as an investigative tool. The Natural Sciences area of emphasis allows the students to take courses that MAY satisfy lower-division requirements with the fields of science including Biology, Chemistry, Allied Health fields, Nursing preparation, Health Science and related fields, Kinesiology, Pre-Med, Dental Hygiene and more.

Students planning for transfer are cautioned that this curriculum may not provide for the completion of lower division requirements for transfer. Students should consult with a counselor for specific information regarding an intended major if transferring to a four-year university is a goal.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Apply scientific principles, theories, and/or models to explain or predict the behavior of natural physical phenomena.
- Apply scientific knowledge and reasoning to evaluate the human interaction with the natural world and identify major issues impacting society.



Business & Civic Engagement Pathway (BCE)

ABOUT THE PATHWAY

The Business & Civic Engagement (BCE) pathway offers programs that intersect and overlap, demonstrating the interdependent nature inherent in working toward the collective good of communities and local economies. They prepare students to enter the workforce in Business & Corporate Social Responsibility, Business Technology, Early Childhood Education and Social Justice, Community Organizing and Activism. The programs of study in this pathway aim to enhance communities through civic engagement, service learning and project-based learning options that result in measurable community impact and provide solutions to real-world problems.

PATHWAY TEAM:

Dean: Cynthia Morley Mower ~ Email: MorleyCN@lattc.edu

Office Location: C4, Room 203D

Chair: Dr. Rose Maina ~ Email: mainarg@lattc.edu

CONTACT US:

Phone number: (213) 763-7252

Office Staff: Nicole Flores ~ Email: FLORESN3@LATTC.EDU

Hours of Operation: Monday - Thursday 9:00 AM to 4:30 PM; Friday 9:00 AM to 1:00 PM

Email: BCE@lattc.edu

Pathway Website: http://pathways.lattc.edu/catalogv-programs/bps/

Business & Civic Engagement Pathway (BCE)

PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Accounting	AA	Computer App & Office Tech: Administrative Assistant	AA/C
Accounting Clerk	C	Computer App & Office Tech: Information Processing Specialist	AA/C
Administration of Justice	AS-T	Computer App & Office Tech: Office Assistant-Clerical	AA/C
Business Administration	AS	Community Planning & Economic Development	AA/C
Business Administration	AS-T	Economics for Transfer	AA-T
Child Development Degrees & Certificates		Computer Information Systems	AS/C
Child and Adolescent Development	AA-T	Correctional Science	AS/C
Child Development	AS	Labor Studies	AA/C
Early Childhood Education	AS-T	Management/Supervision	AA/C
Associate Preschool Teaching	C	Marketing and Public Relations	AA/C
Program Administration	C	Medical Office Assistant	C
Specializing in Children with Special Needs Formerly: Infant Toddler Teacher	C	Paralegal Studies	AA/C
Specializing in Infant and Toddler Teaching Formerly: Infant Toddler Teacher	C	Real Estate	AA/C
Specializing in Preschool Teaching Formerly: Preschool Teaching	C	Retail Management	AA/C
Specializing in School Age Programs Formerly: School Age Program Teacher	C	Small Business Entrepreneurship	AA/C

ACCOUNTING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Accounting	T002891C	A.A.	21*	47	-	47
Accounting Clerk	T021826D	C		30	-	30

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Accounting program offers occupational training to students who plan to work in general and corporate accounting. Instruction is provided in financial and managerial accounting theory and in various practical aspects of the accounting field. General accountants record transactions involving receivables, payables, payroll, and property into a general ledger and examine the financial records for compliance with accounting standards and applicable laws. Corporate accountants record financial transactions, analyze and evaluate financial records, apply tax law and finance techniques, and may design and implement accounting/ bookkeeping systems and procedures.

By fulfilling the program requirements, students are proficient in the application of basic financial and managerial accounting principles and techniques. Students will be adept at analyzing and recording economic transactions using Generally Accepted Accounting Principles (GAAP) and relevant computer applications. Students will understand the application of accounting principles and techniques to service, merchandising, and manufacturing businesses.

Typical positions are bookkeeper, accounting clerk, junior accountant and tax preparer. Courses required for the Accounting Clerk Certificate are designed to prepare students for entry level positions in specialized occupational areas after 2 to 3 semesters of study.

ACCOUNTING

Associate in Arts Degree

Major Units: 47

Requirements for the Associate in Arts degree in Accounting may be met by completing 47 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Analyze and apply accounting theory to service and merchandising.
- Employ managerial and cost accounting principles.
- Apply business laws to the business environment.
- Utilize specialized ledgers and software to record and process expenditures.
- Prepare and process payroll records and reports in compliance with state and federal requirements.
- Analyze and prepare financial statements in accordance with accounting principles.
- Use the Internal Revenue Code as it relates to individual, partnership, and corporation income taxes.
- Demonstrate effective business communication skills.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 001	Introduction to Business	3
BUS 032	Business Communications	3
-or- BUS 033	*Technical Report Writing (3)*	
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
SUPV 011	Oral Communications	3

SEMESTER II		UNITS
ACCTG 001	Introductory Accounting I	5
ACCTG 025	Computerized Accounting Methods and Procedures (Spring only)	3
ECON 002	Principle of Economics II	3
OFF MCH 002	Adding and Calculating Machines	1

SEMESTER III		UNITS
ACCTG 002	Introductory Accounting II	5
BUS 005	Business Law I	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3

SEMESTER IV		UNITS
ACCTG 003	Intermediate Accounting I	3
ACCTG 011	Cost Accounting	3
ACCTG 015	Tax Accounting I	3
-or- ACCTG 018	*Computerized Payroll Accounting (3)*	

ACCOUNTING CLERK

Certificate of Achievement

Major Units: 30

A Certificate of Achievement in Accounting Clerk may be earned by completing 30 units of Required Courses with a "C" or better in each course.

Courses required for the Accounting Clerk Certificate are designed to prepare students for entry level positions in specialized occupational areas. Students will understand the application of the accounting principles and techniques to service, merchandising, and manufacturing businesses. Typical positions are bookkeeper, accounting clerk, junior accountant and tax preparer.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Apply math knowledge, attention to detail, and familiarity with basic accounting procedures to provide clerical and accounting support for an accounting department.
- Demonstrate effective business communication skills.
- Utilize specialized ledgers and software, such as Quickbooks, to record and process expenditures, receipts, payroll, and other financial transactions for a business or organization.

REQUIRED COURSES

SEMESTER I		UNITS
ACCTG 001	Introductory Accounting I	5
BUS 001	Introduction to Business	3
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
OFF MCH 002	Adding and Calculating Machines	1
SEMESTER II		**UNITS**
ACCTG 015	Tax Accounting I	3
-or- ACCTG 018	*Computerized Payroll Accounting (3)*	
ACCTG 025	Computerized Accounting Methods and Procedures	3
ECON 002	Principles of Economics II	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
SUPV 011	Oral Communications	3

ADMINISTRATION OF JUSTICE

Award Title	Academic Plan	Award Type	Grad. Plan	Required Course Units	Major Elective Units	Major Units
Administration of Justice	T032910H	AS-T	CSU/ IGETC	18	-	18
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Science in Administration of Justice for Transfer (AS-T) prepares students for entry-level positions as police officers, police reserve officers, police assistants, and community service officers in police and sheriff's departments and for positions in private security as well as preparation for careers in probation, parole, and federal law enforcement agencies.

Emphasis is on critical thinking, oral communication skills, and writing skills essential to today's law enforcement employees. Students are kept informed of changes in law enforcement such as community policing, laws of arrest, search and seizure, and updates to the state penal code. Role playing and Moot court presentation are included to enhance oral communication skills and preparation of written reports. Training is also provided in the area of crime analysis and use of computer technology in law enforcement.

Full completion of one of the following General education patterns:

- The Intersegmental General Education Transfer Curriculum (IGETC), with "C"s or better in all coursework AND completion of Area 1C Oral communication (CSU admission requirement)
- California State University General Education – Breadth Requirements (CSU GE). Areas A1, A2, A3, & B4 must be completed with a grade of "C" or better (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063).

The Associate in Science in Administration of Justice for Transfer (AS-T) degree will be awarded upon completion of the following:

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Identify and describe the sturcture and functions of the main components of the criminal justice system: Law Enforcement, Courts, Corrections and Juvenile justice.
- Recognize the importance of, and practice of ethical behavior in the criminal justice work environment, both in the agency and the community.

ADMINISTRATION OF JUSTICE (AS-T)

Associate in Science for Transfer

Major Units: 18

Requirements for the Associate in Science Transfer degree in Administration of Justice may be met by completing 18 units of Required Courses with a "C"or better along with general education courses meeting IGETC or CSU Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ADM JUS 001	Introduction to Administration of Justice	3
ADM JUS 002	Concepts of Criminal Law	3

LIST A: SELECT 2 COURSES FROM BELOW (6 UNITS)

ADM JUS 003	Legal Aspects of Evidence	3
ADM JUS 005	Criminal Investigation	3
ADM JUS 067	Community Relations I	3
ADM JUS 004	Principals & Procedures of the Justice System	3
ADM JUS 008	Juvenile Procedures	3
ADM JUS 075	Introduction to Corrections	3

LIST B: SELECT 2 COURSES FROM BELOW (6 UNITS)

Any course NOT used in List A or:

MATH 225	Introductory Statistics	3
PSYCH 001	General Psychology I	3
SOC 001	Introduction to Sociology	3

MAJOR REQUIRED SUBTOTAL	18 units
CSU or IGETC for CSU GE Pattern	37-39 units
CSU Transferable Elective units	(as needed to reach 60 units)
TOTAL CSU transferrable units	60 units

TRANSFER—Students interested in transferring to a four-year college or university should visit the University Transfer Center or meet with a counselor to select appropriate transferable courses.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

BUSINESS ADMINISTRATION

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Business Administration for Transfer	T038910H	AS-T	CSU/ IGETC	19	10-11	29-30
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Science in Business Administration for Transfer is designed to prepare students to transfer as an upper division student to a four-year college or university. For those students considering a career in business, a baccalaureate degree is necessary. However, the attainment of an Associate in Science in Business Administration for Transfer will demonstrate commitment to the field and the student's ability to complete an educational goal. An Associate in Science in Business Administration for Transfer is awarded for satisfactory performance in major courses, as well as completion of general education and graduation requirements

In doing so, students will acquire the knowledge and skills necessary to transfer to an upper division Business program at a California State University. Given the uniqueness of each CSU campus, completion of the Associate in Science in Business Administration for Transfer will also prepare students for the various options under business administration such as; Business Law, Management, Accounting, Finance, and Marketing to name a few.

Business Administration for Transfer degree requirements:

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 29 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES(PLO's)

- Demonstrate a productive working knowledge of the basic functions of a business enterprise, including accounting, entrepreneurship, economics, business law, finance, human resource management, ethics and marketing.
- Demonstrate an understanding of the communication process in a business and professional setting, including written, oral, non-verbal, electronic, and active listening.

BUSINESS ADMINISTRATION

Associate in Science for Transfer

Major Units: 29-30

REQUIRED CORE		19 UNITS
ACCTG 001	Introductory Accounting I	5
ACCTG 002	Introductory Accounting II	5
BUS 005	Business Law	3
ECON 001	Principles of Economics I	3
ECON 002	Principles of Economics II	3

MATHEMATICS: SELECT 1 COURSE		4 UNITS MIN.
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	4
MATH 235	Finite Mathematics	5
MATH 236	Calculus for Business and Social Sciences	5

RESTRICTED ELECTIVES		
Select 2 courses below or any Math course not used above		6 units min.
BUS 001	Introduction to Business	3
OR		
BUS 032	Business Communications	3
CAOT 035	Computer Information Systems	3

CHILD AND ADOLESCENT DEVELOPMENT

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Child and Adolescent Development	T038461G	AA-T	CSU/ IGETC	10	9-10	19-20

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Child Development Program's mission is to prepare students with the knowledge, theory, and practical experience necessary to plan, implement and evaluate developmentally appropriate experiences for young children and their families.

The Child and Adolescent Development AA-T program offers courses that prepare students for transfer to upper-division status at four-year educational institutions, as well as prepares them to work in the field of child development immediately. This program will prepare students to transfer and pursue careers as early childhood educators, administrators of early childhood programs, and development specialists and could partially prepare them for careers in elementary education, social work, advocacy, special education, therapy, etc.

This degree is separate from the Associate of Science for Transfer in Early Childhood Education, which prepares students to transfer to CSU campuses that offer bachelor's degrees in Child Development and Early Childhood Education. The degree is ideal for students who plan to transfer for further theoretical, psychological, and developmental study in child and adolescent development, offering lower-division major preparation for baccalaureate degrees.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLO'S)

Upon successful completion of this program, students will be able to:

- Analyze the psychological, physical and cognitive influences on child development.
- Evaluate different perspectives that affect the growth and socialization experiences of children and adolescents.
- Assess how socialization and culture impact the lives of children and families.
- Apply observation and assessments to create appropriate environments.

CHILD AND ADOLESCENT DEVELOPMENT

Associate in Arts for Transfer

Major Units: 19

REQUIRED CORE — **10 UNITS**

CH DEV 001	Child Growth and Development	3
PSYCH 001	General Psychology I	3
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	(4)

RESTRICTED ELECTIVES — **9 UNITS**

Group 1: Select 1 course from below		**3 units**
ANTHRO 102	Ways of Life: Cultural Anthropology	3
CH DEV 011	Child, Family and Community	3
PSYCH 041	Life Span Psychology: From Infancy	3
SOC 001	Introduction to Sociology	3
SOC 028	The Family: A Sociological Approach	3
Group 2:	**Select 2 course from below or** any course not used from group 1.	**6 units**
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 007	Introduction to Curriculum	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 022	Practicum in Child Development I	4
CH DEV 030	Infant & Toddler Studies I	3
CH DEV 034	Observation and Assessment	3
CH DEV 042	Teaching in a Diverse Society	3

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

CHILD DEVELOPMENT DEGREES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Child Development *(formerly Child Development: Plan B)*	T010403C	A.S.	21*	38	9	47
Early Childhood Education (Transfer)	T031018H	AS-T	IGETC/ CSU	25	5	25

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The LATTC Child Development Program is designed to meet the needs of those students who wish to prepare themselves for employment or who are currently employed in the Early Childhood Education (ECE) or Elementary Education field. This curriculum prepares student to teach in programs for children including: private facilities, parent cooperatives, Head Start programs, Children's centers and infant/toddler or school age programs. In addition, this program also prepares students to transfer to four year universities in either Child Development or Teacher Education majors.

Completion of each program leads to a certificate, transfer option and/or an Associate in Arts degree. With additional general education units and required experience, students will be eligible for the Child Development Permit as defined under Title 5. Meeting this requirement will enable the student to teach in Federal and State preschool programs.

The Child Development courses provide training in infant and toddler care; working with school age children; supervising and administering childcare programs, as well as working with special needs children. Students who complete this degree program will be proficient in the methodology of working with young children through the extensive overview of theories and application of child development, the development of curriculum and lesson planning techniques, ways to observe and record child behavior, and classroom management techniques.

PLANNING AHEAD

MANTOUX TEST (TB TEST): Some Child Development courses may require you to obtain a Mantoux test for Tuberculosis. The college Health Center provides this service. Please call ahead for days and times the Health Center provides this service.

VACCINATION LAW: As of September 1, 2016 under SB 792, day care centers, family day care homes and preschools as part of their licensure requirements, will have to maintain vaccination records for their employees and volunteers for influenza, pertussis, and measles. Obtaining verification of vaccination records is required for all school and center observations, volunteering and practicum experience in child development courses.

CRIMINAL CLEARANCE: In order to fulfill State licensing requirements for employment in private and public programs you must receive a Criminal Clearance to work with young children. Consult with faculty for additional information.

CPR CLASS: Your employer may require you to take a 15-hour Cardiopulmonary Resuscitation class. This class covers training on basic first aid for infants and children, CPR techniques as well as information on basic health and sanitation procedures.

CHILD DEVELOPMENT

(formerly Child Development: Plan B)

Associate in Science Degree

Major Units: 47

Requirements for the Associate in Science degree in Child Development may be met by completing 38 units of Required Courses and 9 units of Major Electives with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Successfully manage an Early Childhood Education (ECE) classroom; and provide children with responsive care, developmentally appropriate and anti-bias curriculum.
- Operate a high-quality ECE program that complies with licensing and Title V regulations.
- Demonstrate professionalism while working with children, parents, staff, and community.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3
SEMESTER II		**UNITS**
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 042	Teaching in a Diverse Society	3
SEMESTER III		**UNITS**
CH DEV 007	Introduction to Curriculum in Early Childhood Education	3
CH DEV 038	Administration of Early Childhood Programs I	3
CH DEV 045	Programs for Children with Special Needs	3
SEMESTER IV		**UNITS**
CH DEV 008	Curriculum in early Childhood Education	3
CH DEV 022	Practicum in Child Development I	4
SEMESTER V		**UNITS**
CH DEV 023	Practicum in Child Development II	4

MAJOR ELECTIVES

Select at least 9 units from the courses below		UNITS
CH DEV 030	Infant and Toddler Development	3
CH DEV 031	Infant and Toddler Care and Education	3
CH DEV 036	Literature for Early Childhood	1
CH DEV 037	Literature for School Age Children	2
CH DEV 039	Administration of Early Childhood Programs II	3
CH DEV 044	Early Intervention for Children with Special Needs	3
CH DEV 046	School Age Programs I	3
CH DEV 047	School Age Programs II	3
CH DEV 048	Positive Guidance in Early Childhood Settings	3
CH DEV 055	Home Visitation Programs	3
CH DEV 036	Literature for Early Childhood	1
CH DEV 037	Literature for School Age Children	2

EARLY CHILDHOOD EDUCATION

PROGRAM OVERVIEW

The Associate in Science in Early Childhood Education for Transfer (AS-T) degree prepares students with the academic coursework necessary for a variety of child development permits issued by the State of California for students who wish to work while completing their education. Early Childhood Education introduces the theories of child development and principles of education focusing on children ages 0-5 years. The AS-T in Early Childhood Education for Transfer degree is intended for students who plan to complete a baccalaureate degree in a similar program or major at a California State University campus. Students who complete this degree will gain priority admission to the CSU system, but not to a particular campus or major.

The Associate in Science in Early Childhood Education for Transfer (AS-T) degree will be awarded upon completion of the following

1. Completion of 60 transferable semester units to the California State University
2. Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
3. Full completion of one the following General education patterns
   - The Intersegmental General Education Transfer Curriculum (IGETC), with "C"s or better in all coursework AND completion of Area 1C Oral communication (CSU admission requirement)
   - California State University General Education – Breadth Requirements (CSU GE). Areas A1, A2, A3, & B4 must be completed with a grade of "C" or better (CSU admission requirement)
4. A minimum of 24 semester units required for the major
5. All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Students will be able to synthesize child development research with principles and practices for early childhood teaching to create early learning environments that are respectful, supportive, and challenging for all children, from infancy through adolescence.
- Students will be able to recommend developmentally appropriate and culturally relevant approaches to teaching and learning that include respectful, supportive relationships with children, and families.
- Students will be able to apply developmentally appropriate practice and diverse philosophical approaches in early childhood settings.

EARLY CHILDHOOD EDUCATION

Associate in Science Transfer Degree

Major Units: 25

Requirements for the Associate in Science Transfer degree in Early Childhood Education may be met by completing 25 units of Required Courses with a "C"or better along with IGETC or CSU General Education Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3
SEMESTER II		**UNITS**
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 042	Teaching in a Diverse Society	3
SEMESTER III		**UNITS**
CH DEV 007	Introduction to Curriculum in Early Childhood Education	3
SEMESTER IV		**UNITS**
CH DEV 022	Practicum in Child Development I	4

MAJOR REQUIRED SUBTOTAL	25 units
CSU or IGETC for CSU GE Pattern	37-39 units
CSU Transferable Elective units	(as needed to reach 60 units)
TOTAL CSU transferrable units	60 units

TRANSFER—Students interested in transferring to a four-year college or university should visit the University Transfer Center or meet with a counselor to select appropriate transferable courses.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

ECONOMICS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Economics for Transfer.	T039453G	AS-T	CSU/ IGETC	15	6-10	21-25
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

The Economics program is intended for students who are planning to transfer to a four-year college or for a business occupational area. Transfer students may earn an Associate degree in Economics for Transfer. Economics is a social science discipline focusing on the development of critical thinking and logical analysis, mathematical concepts and quantitative reasoning through communication and composition, problem-based learning, and the study of economic literature. These skills provide the fundamental foundation for academic and career path success. The economics curriculum is designed to equip students with the skills and knowledge of macroeconomics, microeconomics, and environmental economics; as related to politics and history, business and markets, governments and global economies, as well as social and cultural institutions.

Economic majors may pursue diverse career paths. Popular undergraduate majors related to the field of Economics include: Accounting, Banking and Financial Services, Business Administration, Business Economics, Business Law, Entrepreneurship, Environmental Economics, Environmental Studies, International Business, Management, Marketing, Public Administration, along with an array of career opportunities, both in government, private, and international sectors. For

individuals currently working within these fields, there may be potential for salary and/or career advancement.

Program Learning Outcomes (PLOs)

Upon completion of this program, students will be able to:

- Analyze, apply, and communicate economic principles and polices.
- Identify, evaluate, and solve economic problems.
- Assess benefits and costs of economic decision-making

Degree Requirements:

- Students who wish to earn the Associate in Arts in Economics for Transfer (AAT) must
- Complete 60 CSU transferable units with at least a 2.0 grade point average.
- Complete the CSU General Education or the IGETC (Intersegmental General Education Transfer Curriculum) for CSU
- Complete a minimum of at least 21 units of major requirements.
- Each course in the major must be completed with a grade of "C" or better.

This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

ECONOMICS

ASSOCIATE IN SCIENCE FOR TRANSFER

MAJOR Units: 21

REQUIRED CORE: 15 UNITS

ECON 001	Principles of Economics I	3
ECON 002	Principles of Economics II	3
MATH 227	Statistics	4
MATH 236	Calculus for Business and Social Sciences	5
OR		
MATH 265	Calculus with Analytic Geometry Geometry I	(5)

LIST A: 1 COURSE 3-5 UNITS

ACCTG 001	Introductory Accounting I	5
ACCTG 002	Introductory Accounting II	5
CO INFO 701	Introduction to Computers and Their Uses	3
BUS 032	Business Communications	3
MATH 235	Finite Mathematics	5
MATH 266	Calculus with Analytic Geometry II	5

LIST B: 1 COURSE 3-5 UNITS

Any course not used in List A or

MATH 267	Calculus with Analytic Geometry III	5
MATH 270	Linear Algebra	3

Major units	21-25
CSU General Education or IGETC Pattern	37-39
Transferable Electives as needed to reach	60 CSU units
Total Units for A.A.-T Degree	60 units

CHILD DEVELOPMENT CERTIFICATES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Associate Preschool Teaching *(Formerly Preschool Associate Teacher)*	T031060D	C		15		15
Specializing in Infant and Toddler Teaching *(Formerly: Infant Toddler Teacher)*	T031061D	C		27		27
Specializing in Preschool Teaching *(Formerly Preschool Teacher)*	T010404D	C		39		39
Program Administration *(Formerly Site Supervisor)*	T031063D	C		43		43
Specializing in School Age Programs *(Formerly: School Age Program Teacher)*	T031062D	C		32		32
Specializing in Children with Special Needs (*Formerly: Special Needs)*	T031059D	C		36		36
All programs are Financial Aid Eligible, except Associate Preschool Teaching.						

PROGRAM OVERVIEW

The Child Development Program offers various educational options. Completion of each program leads to a certificate, transfer option and/or an Associate in Arts degree. With additional general education units and required experience, the student will be eligible for the Child Development Permit as defined under Title 5. Meeting this requirement will enable the student to teach in both Federal and State preschool programs.

The Child Development courses provide training in infant and toddler care; working with school age children; supervising and administering childcare programs, as well as working with special needs children. Students who complete this degree program will be proficient in the methodology of working with young children through the extensive overview of theories and application of child development, the development of curriculum and lesson planning techniques, ways to observe and record child behavior, and classroom management techniques. This curriculum prepares student to teach in programs for children including: private facilities, parent cooperative, Head Start programs, Children's Centers and infant/toddler or school age programs. In addition, this program also prepares students to transfer to four year universities in either Child Development or Teacher Education majors.

Planning Ahead:

MANTOUX TEST (TB TEST): Some Child Development courses may require you to obtain a Mantoux test for Tuberculosis. The college Health Center provides this service. Please call ahead for days and times the Health Center provides this service.

VACCINATION LAW: As of September 1, 2016 under SB 792, day care centers, family day care homes and preschools as part of their licensure requirements, will have to maintain vaccination records for their employees and volunteers for influenza, pertussis, and measles. Obtaining verification of vaccination records is required for all school and center observations, volunteering and practicum experience in child development courses.

CRIMINAL CLEARANCE: In order to fulfill State licensing requirements for employment in private and public programs you must receive a Criminal Clearance to work with young children. Consult with faculty for additional information.

CPR CLASS: Your employer may require you to take a 15-hour Cardiopulmonary Resuscitation class. This class covers training on basic first aid for infants and children, CPR techniques as well as information on basic health and sanitation procedures.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** programs, students are able to:

- Students will be able to employ appropriate responsive care techniques when providing care for children from infancy to school age in diverse populations, including special needs children, in adherence with Title 22 Regulations for licensed childhood programs.
- Students will be able to administrer appropriate supervision practices for children from infancy to school age in diverse populations, including special needs children, in adherence with Title 5 and Title 22 Regulations for licensed childhood programs.
- Students will be able to demonstrate the use of systematic child assessment strategies to plan learning activities and guide decisions about curriculum and teaching strategies.

ASSOCIATE PRESCHOOL TEACHING

(formerly Preschool Associate Teacher)

Certificate of Achievement

Major Units: 15

A Certificate of Achievement in Associate Preschool Teaching may be earned by completing 15 units of Required Courses listed above, with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 011	Child, Family and Community	3
SEMESTER II		**UNITS**
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 034	Observing and Recording Children's Behavior	3
SEMESTER III		**UNITS**
CH DEV 007	Introduction to Curriculum in Early Childhood Education	3

SPECIALIZING IN INFANT AND TODDLER TEACHING

(formerly Infant Toddler Teacher)

Certificate of Achievement

Major Units: 27

A Certificate of Achievement in Specializing in Infant and Toddler Teaching may be earned by completing 27 units of Required Courses with "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3
SEMESTER II		**UNITS**
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 030	Infant/Toddler Development	3
CH DEV 042	Teaching in a Diverse Society	3
SEMESTER III		**UNITS**
CH DEV 031	Infant/Toddler Care and Education	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 044	Early Intervention for Children with Special Needs	3

SPECIALIZING IN PRESCHOOL TEACHING

(formerly Preschool Teaching)

Certificate of Achievement

Major Units: 39

A Certificate of Achievement in Specializing in Preschool Teaching may be earned by completing 39 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3
SEMESTER II		**UNITS**
CH DEV 002	Principles & Practices in Early Childhood Education	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 042	Teaching in a Diverse Society	3

† Course currently unavailable

SEMESTER III		UNITS
CH DEV 007	Introduction to Curriculum in Early Childhood Education	3
CH DEV 048	Literature for Early Childhood	3

SEMESTER IV		UNITS
CH DEV 022	Practicum in Child Development I	4
CH DEV 048	Positive Guidance in Early Childhood Settings	3
CH DEV 008	Curriculum in early Childhood Education	3

SEMESTER V		UNITS
CH DEV 045	Programs for Children with Special Needs	3
CH DEV 023	Practicum in Child Development II	4

PROGRAM ADMINISTRATION

(formerly Site Supervisor)

Certificate of Achievement

Major Units: 43

A Certificate of Achievement in Program Administration may be earned by completing 43 units of Required Courses with "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3

SEMESTER II		UNITS
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 042	Teaching in a Diverse Society	3

SEMESTER III		UNITS
CH DEV 007	Introduction to Curriculum in Early Childhood Education	3
CH DEV 038	Administration and Supervision of Early Childhood Programs I	3
CH DEV 045	Programs for Children with Special Needs	3

SEMESTER IV		UNITS
CH DEV 008	Curriculum in Early Childhood Education	3
CH DEV 022	Practicum in Child Development I	4
CH DEV 039	Administration II: Personnel and Leadership in Early Childhood Education	3

SEMESTER V		UNITS
CH DEV 023	Practicum in Child Development II	4
CH DEV 065	Adult Supervision/Early Childhood Mentoring	2

SPECIALIZING IN SCHOOL AGE PROGRAMS

(formerly School Age Program Teacher)

Certificate of Achievement

Major Units: 32

A Certificate of Achievement in Specializing in School Age Programs may be earned by completing 32 units of Required Courses with "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3

SEMESTER II		UNITS
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 034	Observing and Recording Children's Behavior	3
CH DEV 042	Teaching in a Diverse Society	3

SEMESTER III		UNITS
CH DEV 046	School Age Programs I	3
CH DEV 037	Literature for School Age Children	2
CH DEV 048	Positive Guidance in Early Childhood Settings	3

SEMESTER IV		UNITS
CH DEV 045	Programs for Children with Special Needs	3
CH DEV 047	School Age Programs II	3

SPECIALIZING IN CHILDREN WITH SPECIAL NEEDS

(formerly Special Needs)

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Special Needs may be earned by completing 36 units of Required Courses, with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CH DEV 001	Child Growth and Development	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3

SEMESTER II		UNITS
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 030	Infant/Toddler Development	3
CH DEV 034	Observing and Recording Children's Behavior	3

SEMESTER III		UNITS
CH DEV 042	Teaching in a Diverse Society	3
CH DEV 044	Early Intervention for Children with Special Needs	3
CH DEV 048	Positive Guidance in Early Childhood Settings	3

SEMESTER IV		UNITS
CH DEV 031	Infant/Toddler Care and Education	3
CH DEV 045	Programs for Children with Special Needs	3
CH DEV 055	Home Visitation Programs	3

COMMUNITY PLANNING & ECONOMIC DEVELOPMENT

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Total Major Units
Community Planning & Economic Development	T009266C	AA	21*	9	27	36
Community Planning and Economic Development	T021871D	C		21	-	21

At least 60 degree applicable units are required to earn an Associate degree

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Community Planning program at LATTC is the only program offered at an accredited community college in the United States. Our unique program provides students the knowledge and training needed for successful employment in the field of community and economic development. The community and economic development industry focuses on revitalizing low and moderate income communities. Rebuilding the economic, physical and social infrastructure of urban communities represents a new, growing and exciting career opportunity. Students can learn basic planning knowledge, development strategies, technical skills and networks needed to enter the industry, earning a Certificate of Achievement

The Community Planning curriculum and courses are regularly reviewed to ensure that they are relevant, industry appropriate and cutting edge. Industry experts (academic and practitioners) develop, design and teach our courses. Our industry partnerships provide critical resources for our students, providing them with invaluable employment, volunteer, internship and networking opportunities. Our courses are structured to be laboratories (classroom and field work) that combine lecture, project driven learning and hands on application of knowledge to contemporary issues affecting communities. Community planning courses are taught during the evening/weekends on campus and in the community to provide students with the greatest range of educational opportunities.

Successful students will be able to apply a community organizing set of skills and tools that address multiple community and economic development issues. Students who complete the program become viable and competitive for employment opportunities. They will have developed their knowledge and skill base, practiced their learning through field work, internships or paid experience and have created networks and/or participated in collaborations that have maximized their knowledge with capacity to understand urgent issues and trends.

COMMUNITY PLANNING & ECONOMIC DEVELOPMENT

Associate in Arts Degree

Major Units: 36

Requirements for the Associate in Arts degree in Community Planning and Economic Development may be met by completing 9 units of Required Courses and 27 units of Major Electives with a "C"or better along with the General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Analyze and assess low-income community needs, assets and issues from a community planning and economic development industry lens.
- Develop various types of industry approved project proposals to address community planning and economic development issues with solutions that include data analysis, identified targets, goals, objectives, timelines, expected outcomes and community stakeholder engagement.
- Articulate multiple approaches to development as possible solutions to social and economic justice problems.

REQUIRED COURSES

		UNITS
COMPLAN 001	Introduction to Community Economic Development	3
COMPLAN 002	Introduction to Community Organizing	3
COMPLAN 011	Professional Development Skills/Issues in Community Dev	3

MAJOR ELECTIVES

Select 27 units from the following courses		UNITS
COMPLAN 003	Affordable Housing Development	3
COMPLAN 005	Sector Development and Employment Strategies	3
COMPLAN 006	Managing Non-Profit and Public Organizations	3
COMPLAN 007	Contemporary Issues and Strategies in Popular Education and Organizing	3
COMPLAN 009	Commercial Real Estate Development	3
COMPLAN 010	Comprehensive Community Violence Prevention	3
COMPLAN 012	Fundraising Basics for Nonprofit Organizations	1
COMPLAN 015	Introduction to the Community Development Industry & Careers	1
COMPLAN 017	Leadership Development and Skill Building	3

COMPLAN 022	Social Media for Organizing and Civic Engagement	2
COMPLAN 030	Market Research Tools for the Economic Development Process	3
COMPLAN 032	Community Building Principles and Strategies	1
COMPLAN 033	Community Engagement Principles and Strategies	1
COMPLAN 035	Health Leadership and Community Development	3
COMPLAN 036	Introduction to Community Based Research and Organizing Methods	3
COMPLAN 038	Developing Social Networks for Community Building	1
COMPLAN 040	Non-Profit Program Design and Development	2
COMPLAN 042	Sustaining Social Justice Campaign Victories and Organization	1
COMPLAN 065	Community-Based Health Policy Advocacy	3
COMPLAN 100	History of Community Development in Los Angeles	2
COMPLAN 101	History of Social Justice Movement Theory, Ideology and Practice in America	2
COMPLAN 102	Cultivating Consciousness: Reflection of the Self in Community as an Organizer	1
COMPLAN 105	International Models of Community Organizing	1
COMPLAN 106	Elections, Community, Power and Systems Reform in Community Development	1
COMPLAN 200	Strategic Planning & Management Training for Economic Development	3
COMPLAN 201	Financial Management Assistance for Small Business for Economic Development Professional	3
COMPLAN 202	Effective Human Resources Management for Small Business Assistance	3
COMPLAN 203	Marketing and Communications Planning for Community Organizations	3

COMMUNITY PLANNING & ECONOMIC DEVELOPMENT

Certificate of Achievement

Major Units: 21

A Certificate of Achievement in Community Planning and Economic Development may be earned by completing 21 units of Required Courses with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students will analyze and assess low-income community needs, assets and issues from a community planning and economic development industry lens.
- Students will develop various types of industry approved project proposals to address community planning and economic development issues with solutions that include data analysis, identified targets, goals, objectives, timelines, expected outcomes and community stakeholder engagement.

REQUIRED COURSES

DEVELOPMENT:
Select 18 units — **UNITS**

COMPLAN 001	Introduction to Community Economic Development	3
COMPLAN 002	Introduction to Community Organizing	3
COMPLAN 003	Affordable Housing Development	3
COMPLAN 004 †	School Based Community Development Approaches	3
COMPLAN 006	Managing Non-Profit and Public Organizations	3
COMPLAN 007	Contemporary Issues and Strategies in Popular Education and Organizing	3
COMPLAN 009	Commercial Real Estate Development	3
COMPLAN 010	Comprehensive Community Violence Prevention	3
COMPLAN 011	Professional Development Skills/Issues in Community Dev	3
COMPLAN 032	Community Building Principles and Strategies	1
COMPLAN 033	Community Engagement Principles and Strategies	1
COMPLAN 035	Health Leadership and Community Development	3
COMPLAN 036	Introduction to Community Based Research and Organizing Methods	3

PROFESSIONAL DEVELOPMENT:
Select 3 units — **UNITS**

CAOT 082	Microcomputer Software Survey in the Office	3
CO INFO 701	Introduction to Computers and Their Uses	3
BUS 005	Business Law I	3
BUS 033	Technical Report Writing	3
-or- ENGLISH 028	*Intermediate Reading and Composition (3)*	
-or- ENGLISH 101	*College Reading and Composition I (3)*	

COMPUTER APPLICATIONS & OFFICE TECHNOLOGIES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Computer App & Office Tech: Administrative Assistant	T002897C	A.A.	21*	31	12	43
Computer App & Office Tech: Administrative Assistant	T021835D	C		22	9	31
Computer App & Office Tech: Information Processing Specialist	T008470C	A.A.	21*	41	3	44
Computer App & Office Tech: Information Processing Specialist	T021833D	C		33		33
Computer App & Office Tech: Office Assistant-Clerical	T008471C	A.A.	21*	32	7	39
Computer App & Office Tech: Office Assistant-Clerical	T021834D	C		32		32

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Computer Applications and Office Technologies (CAOT) degree and certificate programs are designed to provide students with administrative and clerical competency skills required for employment in a variety of areas, such as business and industry, government agencies, schools, and hospitals. The degree and certificate options are designed to meet the varying needs of a wide spectrum of students, including those seeking:

- Associate in Arts degree(s)
- Certificate(s) that are specific to a discipline or area
- Entry into the job market
- Advanced training and/or retraining
- Lifelong learning

By fulfilling the program requirements, students are prepared for entry level positions, promotion, and career advancement in a variety of office occupations. Students will be proficient in the use of software application programs such as Microsoft Word, Excel, PowerPoint, Access, and Internet research.

COMPUTER APP & OFFICE TECH: ADMINISTRATIVE ASSISTANT

Associate in Arts Degree

Major Units: 43

Requirements for the Associate in Arts degree in CAOT: Administrative Assistant may be met by completing 31 units of Required Courses and 12 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Utilize various computer software to process, organize, and present data/information in business formats in office settings where proficiency with technology is necessary.

REQUIRED COURSES

The following suggested sequence of Required Courses can be taken in any order provided prerequisites are met.

SEMESTER I		UNITS
CAOT 002	Computer Keyboarding and Document Applications II	3
CAOT 033	Records Management and Filing	2
CAOT 034	Business Terminology	2
CAOT 082	Microcomputer Software Survey in the Office	3

SEMESTER II		UNITS
CAOT 031	Business English	3
CAOT 084	Microcomputer Office Applications: Word Processing	3

SEMESTER III		UNITS
BUS 032	Business Communications	3
BUS 038	Business Computations	3

SEMESTER IV		UNITS
CAOT 007	Machine Transcription	3
CAOT 030	Office Procedures	3
CAOT 098	Microcomputer Office Applications: Discovering Computers: Digital Literacy	3

MAJOR ELECTIVES

The following courses may be used as Electives provided that the course is NOT a requirement in the major.

Select at least 12 units from the courses below		UNITS
BUS 001	Introduction to Business	3
BUS 005	Business Law I	3
BUS 040	Business Project Management	3
CAOT 007	Machine Transcription	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
CAOT 086	Microcomputer Office Applications: Database	3
CAOT 088	Microcomputer Office Applications: Desktop Publishing	3
CAOT 098	Microcomputer Office Applications: Discovering Computers: Digital Literacy	3
CAOT 101	Hands-on Internet	1
OFF MCH 002	Adding and Calculating Machines	1
SUPV 001	Elements of Supervision	3
SUPV 011	Oral Communications	3

COMPUTER APP & OFFICE TECH: ADMINISTRATIVE ASSISTANT

Certificate of Achievement

Major Units: 31

A Certificate of Achievement in CAOT: Administrative Assistant may be earned by completing 22 units of Required Courses listed below and 9 units of Major Electives listed under the Associate degree in CAOT: Administrative Assistant with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CAOT 002	Computer Keyboarding and Document Applications II	3
CAOT 033	Records Management and Filing	2
CAOT 034	Business Terminology	2
CAOT 082	Microcomputer Software Survey in the Office	3

SEMESTER II		UNITS
CAOT 007	Machine Transcription	3
CAOT 030	Office Procedures	3
CAOT 031	Business English	3
BUS 032	Business Communications	3

MAJOR ELECTIVES

9 units of Major Electives listed under the Associate degree must be completed.

COMPUTER APP & OFFICE TECH: INFORMATION PROCESSING SPECIALIST

Associate in Arts Degree

Major Units: 44

PROGRAM OVERVIEW

The Information Processing Specialist provides support to assigned administrative personnel; coordinate office activities; monitor assigned activities, and provide meaningful informational recommendations to administrators and directors.

By fulfilling the program requirements, students are prepared for entry level positions. Some duties include:

- Communicating with clients
- Compiling data from various sources
- Coordinating relevant information for special programs
- Maintaining the organizations website
- Monitoring assigned departmental activities
- Ordering software and equipment for the organization
- Responding to a wide range of correspondence

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Utilize the computer to process, organize, and present data and information to advance format with no errors.
- Demonstrate the ability to critically analyze and interpret data in various materials effectively trouble-shoot, problem-solve with limited resouces, and plan strategically.
- Write reports by collecting, analyzing, and summarizing information for private, public and governmental organizations.

Requirements for the Associate in Arts degree in CAOT: Information Processing Specialist may be met by completing 41 units of Required Courses and 3 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 022	The Business of Electronic Commerce	3
CAOT 002	Computer Keyboarding and Document Applications II	3
CAOT 082	Microcomputer Software Survey in the Office	3
CAOT 101	Hands-on Internet	1

SEMESTER II		UNITS
CAOT 030	Office Procedures	3
CAOT 031	Business English	3
CAOT 084	Microcomputer Office Applications: Word Processing	3
BUS 038	Business Computations	3

SEMESTER III		UNITS
CAOT 007	Machine Transcription	3
BUS 032	Business Communications	3
CAOT 033	Records Management and Filing	2
CAOT 085	Microcomputer Office Applications: Spreadsheet	3

SEMESTER IV		UNITS
CAOT 086	Microcomputer Office Applications: Database	3
CAOT 088	Microcomputer Office Applications: Desktop Publishing	3
CAOT 098	Microcomputer Office Applications: Discovering Computers: Digital Literacy	3

MAJOR ELECTIVES

The following courses may be used as Electives provided that the course is NOT a requirement in the major.

Select at least 3 units from the courses below		UNITS
BUS 001	Introduction to Business	3
BUS 005	Business Law I	3
BUS 040	Business Project Management	3
CAOT 007	Machine Transcription	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
CAOT 086	Microcomputer Office Applications: Database	3
CAOT 088	Microcomputer Office Applications: Desktop Publishing	3
CAOT 098	Microcomputer Office Applications: Discovering Computers: Digital Literacy	3
CAOT 101	Hands-on Internet	1
OFF MCH 002	Adding and Calculating Machines	1
SUPV 001	Elements of Supervision	3
SUPV 011	Oral Communications	3

COMPUTER APP & OFFICE TECH: INFORMATION PROCESSING SPECIALIST

Certificate of Achievement
Major Units: 33

A Certificate of Achievement in CAOT: Information Processing Specialist may be earned by completing 33 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 022	The Business of Electronic Commerce	3
CAOT 002	Computer Keyboarding and Document Applications II	3
CAOT 031	Business English	3
CAOT 082	Microcomputer Software Survey in the Office	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
CAOT 101	Hands-on Internet	1

SEMESTER II		UNITS
CAOT 030	Office Procedures	3
BUS 032	Business Communications	3
CAOT 034	Business Terminology	2
CAOT 084	Microcomputer Office Applications: Word Processing	3
CAOT 086	Microcomputer Office Applications: Database	3
CAOT 098	Microcomputer Office Applications: Discovering Computers: Digital Literacy	3

COMPUTER APP & OFFICE TECH: OFFICE ASSISTANT-CLERICAL

Associate in Science Degree
Major Units: 39

By fulfilling the program requirements, student will have the knowledge of becoming a skilled and responsible office worker. Officer workers are responsible for a variety of administrative and clerical duties necessary to run and maintain an organization efficiently. Students will use variety of software packages to produce correspondence, maintain databases, manage projects, as well as organize meetings, manage records, and schedule appointments. Office workers find employment in a variety of settings, such as corporations, government agencies, schools, and hospitals. Some related job titles include office assistant, administrative assistant, executive assistant, and data entry/clerical.

Computer application careers open the doors to those seeking employment in some of these fields:

- Entrepreneurship
- Government
- Health Industry
- Education
- Technology Industry
- Aerospace

PROGRAM OVERVIEW

The Computer Applications and Office Technologies (CAOT) degree and certificate programs are designed to provide students with administrative and clerical competency skills required for employment in a variety of areas, such as business and industry, government agencies, schools, and hospitals. The degree and certificate options are designed to meet the varying needs of a wide spectrum of students, including those seeking:

- Associate in Arts degree(s)
- Certificate(s) that are specific to a discipline or area
- Entry into the job market
- Advanced training and/or retraining
- Lifelong learning

By fulfilling the program requirements, students are prepared for entry level positions, promotion, and career advancement in a variety of office occupations. Students will be proficient in the use of software application programs such as Microsoft Word, Excel, PowerPoint, Access, and Internet research.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Utilize the computer to process, organize, and present data and information to advance formats with no errors.
- Demonstrate the ability to critically analyze and interpret data in various materials effectively trouble-shoot, problem solve with limited resources, and plan strategically.

REQUIRED COURSES

SEMESTER I		UNITS
CAOT 001	Computer Keyboarding I	3
CAOT 033	Records Management and Filing	3
CAOT 034	Business Terminology	2
CAOT 082	Microcomputer Software Survey in the Office	3

SEMESTER II		UNITS
CAOT 031	Business English	3
BUS 038	Business Computations	3

SEMESTER III		UNITS
CAOT 030	Office Procedures	3
CAOT 084	Microsoft Word	3
BUS 032	Business Communication	3

SEMESTER IV		UNITS
CAOT 002	Computer Keyboarding II	3
CAOT 037	Introduction to Bookkeeping	3

MAJOR ELECTIVES

The following courses may be used as Electives provided that the course is NOT a requirement in the major.

SELECT AT LEAST 7 UNITS FROM THE COURSES BELOW

BUS 001	Introduction to Business	3
CAOT 085	Spreadsheet Analysis	3
CAOT 086	Microsoft Access	3
CAOT 088	Desktop Publishing	3
CAOT 098	Introduction to Windows	3
CAOT 101	Hands-on-Internet	1
SUPV 001	Elements of Supervision	3

COMPUTER APP & OFFICE TECH: OFFICE ASSISTANT-CLERICAL

Certificate of Achievement

Major Units: 32

A Certificate of Achievement in Computer Application and Office Technology – Office Assistant Clerical may be earned by completing 32 units of Required Courses with a "C" or better in each course.

SEMESTER I		UNITS
BUS 038	Business Computations	3
CAOT 002	Computer Keyboarding and Document Applications II	3
CAOT 033	Records Management and Filing	2
CAOT 034	Business Terminology	2
CAOT 082	Microcomputer Software Survey in the Office	3
CAOT 084	Microcomputer Office Applications: Word Processing	3

SEMESTER II		UNITS
ACCTG 001	Introductory Accounting I	5
BUS 032	Business Communications	3
CAOT 007	Machine Transcription	3
CAOT 030	Office Procedures	3
CAOT 031	Business English	3
OFF MCH 002	Adding and Calculating Machines	1

COMPUTER INFORMATION SYSTEMS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Computer Information Systems	T002900C	A.S.	21*	24	21	45
Computer Information Systems	T021839D	C		24	21	45

At least 60 degree applicable units are required to earn an Associate degree.
*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.
These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Computer Information Systems program is designed to prepare students for careers in the exciting Information Technology fields such as programming, software engineering, database administration, computer networking, multimedia programming, and web programming technologies. Microcomputer usage continues to grow at an ever increasing pace as does the demand for workers with solid technical skills and knowledge of programming, networking, and website development and management. The primary goal of the program is to prepare students for entry-level employment as well as providing marketable career advancement knowledge and skills.

The Computer Information Systems Degree and Certificate are designed to prepare students for employment in many industries such as network engineering, software development, user support, web development, and database administration. These educational programs include transferable coursework.

Career opportunities for students completing these programs of study include, but are not limited to:

- Computer Programmers
- Web Developers
- Computer Network Support Specialists
- Computer User Support Specialists

By fulfilling the program requirements, students will have the necessary knowledge and skills for software development, web design, database development, business computer services, and computer networking.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Create, debug, and comment computer programming codes in order to integrate multiple language constructs in a single project.
- Create business applications using advanced computer software.
- Identify and describe computer hardware, networking concepts, and computer software.

COMPUTER INFORMATION SYSTEMS

Associate in Science Degree

Major Units: 45

Requirements for the Associate in Science degree in Computer Information Systems may be met by completing 24 units of Required Courses and 21 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

Students planning to continue studies at a four-year institution should consult with a counselor concerning a transfer curriculum.

REQUIRED COURSES

SEMESTER I		UNITS
CIS 102	Computer Concepts	3
CIS 104	Microcomputer Application Software	3
CIS 120	Introduction to Databases	3
CIS 148	Introduction to Web Development Using HTML and CSS	3

SEMESTER II		UNITS
CIS 210	Introduction to Computer Networking	3
CS 116	Programming in C++	3
CS 115	Programming in C#	3
CS 112	Programming in JavaScript	3

SEMESTER III	UNITS
Four elective courses	

SEMESTER IV	UNITS
Four elective courses	

MAJOR ELECTIVES

Select at least 21 units from the courses below		UNITS
CIS 101	Introduction to Computers and their Uses	3
CIS 112	Introduction to Linux	3
CIS 126	Adobe Dreamweaver	3
CIS 146	Multimedia Presentation for the Internet	3
CIS 149	Web Development Using PHP- MYSQL	3
CIS 165	Principles of Information Security	3
CIS 192	Introduction to Cloud Computing	3
CIS 215	Network Security Fundamentals	3
CS 111	Programming in Visual Basic	3
CS 143	Mobile Application Development – Android	3
CS 170	Introduction to Computer Games Programming	3
CS 171	Video Game Programming	3
CS 216	Object Oriented Programmingin C++	3
CS 113	Programming in Java	3

COMPUTER INFORMATION SYSTEMS

Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Computer Information Systems may be earned by completing 24 units of Required Courses and 21 units of Major Electives listed under the Associate degree in Computer Information Systems with a grade of "C" or better in each course.

CORRECTIONAL SCIENCE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Correctional Science	T030002C	A.S.	21*	30	6	36
Correctional Science	T030001D	C		30	6	36

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Correctional Science program will prepare you to enter the rapidly growing field of corrections. The correctional field has an enormous range of career options, and with the proper training, a future filled with job opportunity and flexibility will be opened. Substantial and growing employment opportunities exist in corrections, public and private detention facilities, law enforcement, private security, immigration and customs, secret service, Federal Bureau of Investigation (FBI), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Homeland Security are just some of the areas open to you. Students will also have the opportunity to gain experience in the field participating in ride a longs and internships with local agencies.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Demonstrate an understanding of the workings of the correctional system by applying definitions, concepts, and principles to courts and correctional settings.
- Apply critical thinking to research, evaluate, and analyze and synthesize the appropriate procedures for the collection of evidence and data in criminal case preparation pertaining to correctional institutions.
- Develop, organize and write an objective report that meets the legal and detailed requirements of correctional institutions.

CORRECTIONAL SCIENCE

Associate in Science

Major Units: 36

Requirements for the Associate in Science degree in Correctional Science may be met by completing 30 units of Required Courses and 6 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ADM JUS 501	An A to Z Guide to Criminal Justice Careers	3
SEMESTER II		**UNITS**
ADM JUS 002	Concepts of Criminal Law	3
ADM JUS 003	Legal Aspects of Evidence	3
ADM JUS 014	Report Writing for Peace Officers	3
ADM JUS 062	Finger Print Classification	3
SEMESTER III		**UNITS**
ADM JUS 073	Law and Minority Groups	3
SEMESTER IV		**UNITS**
ADM JUS 075	Introduction to Corrections	3
ADM JUS 502	Introduction to Forensic Psychology	3
ADM JUS 750	Ethics and the Criminal Justice System	3
PSYCH 014	Abnormal Psychology	3

MAJOR ELECTIVES

Select at least 6 units from the courses below		UNITS
ADM JUS 001	Introduction to Administration of Justice	3
ADM JUS 004	Principles and Procedures of the Justice System	3
ADM JUS 005	Criminal Investigation	3
ADM JUS 008	Juvenile Procedures	3
ADM JUS 041	Officer Safety	3
ADM JUS 067	Community Relations I	3

CORRECTIONAL SCIENCE

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Correctional Science may be earned by completing 30 units of Required Courses and 6 units of Major Electives listed under the Associate degree in Correctional Science with a "C" or better in each course.

LABOR STUDIES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Labor Studies	T002898C	A.A.	21*	18	18	36
Labor Studies	T021836D	C		15	9	24

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

The Labor Center

The Labor Center, located in MA-005, offers Labor Studies classes leading to an Associate in Arts Degree or Certificate of Achievement in Labor Studies. Classes and programs are held both on campus and off site at union halls and community organizations. Students can register online, on site in class or at the Labor Center Office.

The Labor Center maintains strong relationships with leaders of organized labor and the community, including a broad based Advisory Board. These leaders help promote participation in the Labor Studies program, and assure evaluation and feedback from the labor movement to help shape future programs. The Labor Center staff also advise Labor Studies students and prospective students, and the Center maintains a collection of labor DVDs available for free loan.

PROGRAM OVERVIEW

Labor Studies is designed to train students, union leaders, human relations professionals, and workers in the practical, applied skills and up-to-date knowledge of labor relations and for positions in union leadership. Employees in labor and human relations can develop career skills and prepare for positions or advancement in labor unions, labor relations, human relations and government. The instructors are all experts who are active in the field.

The Labor Studies Program offers the following alternative patterns of learning:

- courses may be completed as desired to develop specific skills to meet the needs of the individual student;
- courses may be completed to meet the requirements of the Associate Degree;
- Courses may be completed to meet the 24 units required to earn the Certificate of Achievement in Labor Studies.

By fulfilling the program requirements, students will have a greater understanding of the contributions of labor and the skills necessary for union leadership. This is particularly relevant in Los Angeles, with some 250 local unions with a combined membership of more than half a million union members. Students who complete the requirements for the Associate Degree in Labor Studies will have a working knowledge of labor organizations, their structure, philosophy and day to day operations.

LABOR STUDIES

Associate in Arts Degree

Major Units: 36

Requirements for the Associate in Arts degree in Labor Studies may be met by completing 18 units of Required Courses and 18 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Apply collective bargaining skills and strategies needed to bargain and enforce a contract through grievance and arbitration.
- Identify and apply employment and labor relations laws to protect workers' rights.
- Develop and apply internal and external organizing strategies, such as effective communication, member mobilization, and leadership skills, utilized to build and strengthen unions.

REQUIRED COURSES

A.A. DEGREE: May select up to 18 units from the courses below
CERTIFICATE: May select up to 15 units from the courses below

		UNITS
LABR ST 001	U.S. Labor History	3
LABR ST 002	Collective Bargaining	3
LABR ST 003	Labor Relations Law	3
OR		
LABR ST 011	Labor in the Public Sector	3
LABR ST 004	Labor in America	3
LABR ST 005	Grievance and Arbitration Procedures	5
LABR ST 006	6 Labor and Community Services	3
LABR ST 007	Labor and Political Action	3
LABR ST 008	Labor in the Global Economy	3
LABR ST 009	Organizing Strategies and Techniques	3
LABR ST 010	Identity and Diversity in Labor	3
LABR ST 012	Union Leadership	3
LABR ST 013	Building Strong Unions	3
LABR ST 020	Workers' Rights	3
LABR ST 021	The Working Class in Cinema	3
LABR ST 024	Enforcing Workers' Rights	3

NOTE: Additional Labor Studies courses may be used to fulfill Required Courses; for additional information, contact the Labor Center.

MAJOR ELECTIVES

A.A. DEGREE: May select up to 18 units from the courses below
CERTIFICATE: May select up to 9 units from the courses below

		UNITS
LABR ST 101	Introduction to Unions	1
LABR ST 102	Contract Negotiations Skills	1
LABR ST 103	Labor Law Update	1
LABR ST 104	Current Issues for Labor	1
LABR ST 105	Grievance Handling Skills	1
LABR ST 106	Labor and Disaster Relief	1
LABR ST 107	Organizing for Political Action	1
LABR ST 108	Labor and Globalization	1
LABR ST 109	Union Building Strategies	1
LABR ST 113	Union Leadership Skills	1
LABR ST 114	Workers' Legal Rights	1
LABR ST 115	Workplace Health and Safety	1
LABR ST 118	Employee Benefit Plans	1
LABR ST 121	Labor Communications	1
LABR ST 122	Framing the Message for Labor	1
LABR ST 123	Steward Training	1
LABR ST 125	Labor Arbitration	1
LABR ST 126	Issues in Labor Arbitration	1
LABR ST 127	Worker's Compensation	1
LABR ST 128	Sexual Harassment and Discrimination	1
LABR ST 132	Strategic Bargaining	1
LABR ST 134	California Workers' Rights	1
LABR ST 136	When the Paycheck Stops	1

NOTE: A maximum of 3 units of COOP ED may be applied to meet the 36 units AA Degree requirement in Labor Studies.

LABOR STUDIES

Certificate of Achievement

Major Units: 24

A Certificate of Achievement in Labor Studies may be earned by completing 15 units of Required Courses and 9 units in Major Electives listed under the Associate Degree in Labor Studies with a "C" or better in each course.

Students who complete the requirements for the Certificate of Achievement in Labor Studies will have developed practical skills in representation, negotiations, advocacy, and problem solving at the workplace.

Students who earn a Certificate will be qualified for entry level positions in labor, industry, and government.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Apply collective gaining skills and strategies needed to bargain and enforce a contract through grievance and arbitration.
- Identify and apply employment and labor relations laws to protect workers' rights.

NOTE: A maximum of 3 units of COOP ED may be applied to meet the 24 units Certificate requirement in Labor Studies.
Additional Labor Studies courses may be used to fulfill Major Units; for additional information, contact the Labor Center.

MANAGEMENT/ SUPERVISION

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Management/Supervision	T002892C	A.A.	21*	47	-	47
Management/Supervision	T021829D	C		33	-	33

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Management/Supervision program is designed to prepare students for managerial responsibilities in business by studying both fundamentals of business operations and human relations. This program will add basic management/ supervisory skills to their current occupation or technical skills they may already possess. Course work will cover the basic business management skills with emphasis on human relations, leadership, written and oral communications that relates to managerial/supervisory positions. Graduates of this program should be able to improve one's promotability and will be eligible for jobs as assistant managers, management trainees, supervisors, team leaders, first line managers and a wide range of other entry level positions. Non managers/supervisors will also increase their knowledge of basic business functions and enhance their current job performance.

By fulfilling the program requirements, students will increase their abilities to negotiate successfully, build and manage teams, manage projects, resolve conflicts, communicate and motivate teams to achieving departmental and organizational success. Students will also understand and will be able to apply management/supervision concepts in real world situations whether they are in business for themselves or working within government, private or non profit industries.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Apply project management skills through the use of appropriate technology to implement, track and manage data reporting.
- Implement organizational policies and procedures for recruiting, interviewing, orienting, training and assessing performance.
- Apply leadership theories and skills to create a supportive and ethical work environment.
- Facilitate the management of change, conflict, and diversity in an organization.
- Demonstrate effective facilitation skills to systematically solve problems while building a team environment.
- Ensure compliance with federal, state and local laws that pertain to businesses and organizations.
- Apply continuous improvement strategies to processes and systems to maximize productivity and quality.
- Employ effective speaking, listening coaching, assertiveness, and time and stress management skills.
- Utilize critical thinking to bridge conceptual ideas into practice.

MANAGEMENT/SUPERVISION

Associate in Arts Degree

Major Units: 47 units

Requirements for the Associate in Arts degree in Management/Supervision may be met by completing 47 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 001	Introduction to Business	3
BUS 032	Business Communications	3
-or- *BUS 033*	*Technical Report Writing (3)*	
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
SUPV 011	Oral Communications	3

SEMESTER II		UNITS
ACCTG 001	Introductory Accounting I	5
ECON 002	Principle of Economics II	3
SUPV 001	Elements of Supervision	3
MARKET 021	Principles of Marketing	3

SEMESTER III		UNITS
BUS 005	Business Law I	3
MGMT 002	Organization and Management Theory	3
BUS 040	Business Project Management	3
SUPV 003	Human Relations (Developing Supervisory Leadership)	3

SEMESTER IV		UNITS
MGMT 013	Small Business Entrepreneurship	3
MGMT 033	Personnel Management	3

MANAGEMENT/SUPERVISION

Certificate of Achievement

Major Units: 33

A Certificate of Achievement in Management/Supervision may be earned by completing 33 units of Required Courses listed below with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 001	Introduction to Business	3
BUS 005	Business Law I	3
BUS 032	Business Communications	3
-or- BUS 033	*Technical Report Writing (3)*	
CAOT 082	Microcomputer Software Survey in the Office	3
MGMT 002	Organization and Management Theory	3

SEMESTER II		UNITS
ACCTG 021	Bookkeeping and Accounting I	3
MGMT 033	Personnel Management	3
MARKET 021	Principles of Marketing	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
SUPV 003	Human Relations (Developing Supervisory Leadership)	3
SUPV 011	Oral Communications	3

MARKETING AND PUBLIC RELATIONS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Marketing and Public Relations	T002894C	A.A.	21*	44	-	44
Marketing and Public Relations	T021831D	C		33	-	33

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

The program is designed to insure all students master all aspects of marketing and public relations, which include advertising, branding, and corporate communications. Students will study and evaluate the effectiveness and appropriateness of marketing and public relations messages while engaging in problem analysis, strategic planning, message development, and tactical solutions. Using both traditional and digital media students will be able to implement compelling marketing campaigns that reach customers and consumers in new and innovative ways, grow market share, and increase bottom line results.

By fulfilling the program requirements, students will have a background in the principles and practices involved in the promotion and distribution of products and services from producers through middleman to the ultimate consumer. This program leads to entry level positions in public relations and marketing careers in business, industry, agency, government, and nonprofit sectors of society. Typical jobs includes, marketing director, public relations representative, corporate consultant, political campaign advisor, small business owner, marketing and non profit communications consultants.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Understand and communicate the stakeholder point of view in order to develop long range company strategies.
- Analyse consumer trends and development tactical marketing solutions.

MARKETING AND PUBLIC RELATIONS

Associate in Arts Degree

Major Units: 44

Requirements for the Associate in Arts degree in Marketing and Public Relations may be earned by completing 44 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

The following is a suggested sequence of Required Courses to be taken:

SEMESTER I		UNITS
BUS 001	Introduction to Business	3
BUS 032	Business Communications	3
-or- BUS 033	*Technical Report Writing (3)*	
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
SUPV 011	Oral Communications	3

SEMESTER II		UNITS
ACCTG 001	Introductory Accounting I	5
ECON 002	Principle of Economics II	3
MARKET 001	Principles of Selling	3
PUB REL 001	Principles of Public Relations	3

SEMESTER III		UNITS
BUS 005	Business Law I	3
MARKET 021	Principles of Marketing	3
PUB REL 002	Public Relations Techniques	3

SEMESTER IV		UNITS
MARKET 011	Fundamentals of Advertising	3
PUB REL 003	Writing for Public Relations	3

MARKETING AND PUBLIC RELATIONS

Certificate of Achievement

Major Units: 33

A Certificate of Achievement in Marketing and Public Relations may be earned by completing 33 units of Required Courses listed below with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 001	Introduction Business	3
BUS 005	Business Law I	3
BUS 032	Business Communications	3
-or- BUS 033	*Technical Report Writing (3)*	
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
SUPV 011	Oral Communications	3

SEMESTER II		UNITS
MARKET 001	Principles of Selling	3
MARKET 011	Fundamentals of Advertising	3
MARKET 021	Principles of Marketing	3
PUB REL 001	Principles of Public Relations	3
PUB REL 002	Public Relations Techniques	3

MEDICAL ADMINISTRATIVE ASSISTANT

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Medical Administrative Assistant (Formerly Medical Office Assistant)	T010750D	C		32	-	32
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Medical Office Assistant Certificate of Achievement prepares students for entry-level employment in a medical/dental/hospital front office. In addition to working in the front office, the assistant will acquire entry level skills in medical billing and coding when working with small or large insurance companies. Also, upon completion of the certificate program, students are prepared to assume entry-level medical/dental duties and responsibilities. The program will also prepare students for career advancement and retraining in the use of current computer and medical office software programs. Most medical office assistant programs will prepare students with skills that promote success in the workplace. Typical positions include the following:

- Medical Administrative Assistant
- Medical Administrative Assistant Manager
- Medical Biller
- Medical Coder
- Medical Transcriber

By fulfilling the program requirements, student will have the knowledge of becoming a skilled and responsible medical office worker. Medical officer workers are responsible for a variety of administrative and clerical duties necessary to run and maintain a medical office efficiently. Students will use variety of software packages to produce correspondence, maintain databases, manage projects, as well as organize meetings, manage records, and schedule appointments. Medical office workers will compile, process, and maintain medical records of hospital and clinic patients in manner consistent with medical, administrative, ethical, legal, and regulatory systems.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Successfully use medical office software to organize and present information in medical business format.
- Successfully prepare billing and coding documents for medical organizations and insurance companies.
- Communicate effectively in a medical office setting.

MEDICAL ADMINISTRATIVE ASSISTANT

(Formerly Medical Office Assistant)

Certificate of Achievement

Major Units: 29

A Certificate of Achievement in Medical Office Assistant may be earned by completing 29 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
CAOT 002	Computer Keyboarding II	3
CAOT 033	Records Management and Filing	2
CAOT 044	Medical Billing and Coding I	3
CAOT 082	Microcomputer Software Survey in the Office	3

SEMESTER II		UNITS
BUS 032	Business Communication	3
CAOT 046	Medical Transcription	3
CAOT 035	Concepts in Information Systems	3
OR		
CAOT 084	Microsoft Word	3
CAOT 037	Introduction to Bookkeeping	3

SEMESTER III		UNITS
CAOT 020	Medical Office Procedures	5

PARALEGAL STUDIES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Paralegal Studies	T031262C	A.A.	21*	39	3	42
Paralegal Studies	T031182D	C		39	3	42

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Paralegal Studies program at LATTC will prepare students for employment as paralegals or legal assistants in both the private and public sectors. Students who complete the program will be able to work with lawyers in law offices, corporations, governmental agencies or other entities. Upon completion of the program students will be able to prepare cases for court, calendar, draft various legal documents, fill out Judicial Council Forms, interview clients, brief cases and conduct traditional and computer assisted legal research using Lexis Nexis and/or West Law. The program will also provide hands on experience through internships within private law firms, government agencies, courts and legal aid clinics.

The graduate possessing the Certificate of Achievement or the AA Degree will be able to work closely with attorneys and be responsible for researching, analyzing, and managing tasks associated with legal cases. The Paralegal Studies program at LATTC is driven by its business relationships and partnerships with practicing lawyers, paralegals from the public and private sectors, legal clinics, paralegal consortium's and other community colleges' paralegal faculty members. The mission of the program is to provide an environment of excellence in knowledge and the latest practices of the legal field.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Understand the legal system, both civil and criminal, and how to navicate the levels of the system.
- Understand how to identify and analyze relevant laws and previous judiciary decisions in common legal areas such as contracts, familynd torts.
- Demonstrate proficiency in legal research and writing as well as proficient understanding of various legislative and court documents.

PARALEGAL STUDIES

Associate in Arts Degree

Major Units: 42

Requirements for the Associate in Arts degree in Paralegal Studies may be met by completing 39 units of Required Courses and 3 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

NOTE: Students seeking the Certificate of Achievement may choose either Paralegal 4 or Paralegal 14. Students seeking the Associate of Arts must satisfy Paralegal 4. Certificate is awarded to students who already possess an Associate's degree in Paralegal Studies or higher.

REQUIRED COURSES

SEMESTER I		UNITS
CAOT 084	Microcomputer Office Applications: Word Processing	3
COMM 101	Public Speaking	3
PALEGAL 010	Introduction to Law and Legal Profession	3
LIB SCI 101	Library Research Methods	1

SEMESTER II		UNITS
*BUS 005 *-or- BUS 006*	Business Law I *Business Law II (3)*	3
PALEGAL 011	Introduction to Civil Litigation II	3
PALEGAL 012	Tort Law	3
PALEGAL 019	Property and Creditor Rights	3

SEMESTER III		UNITS
PALEGAL 017	Legal Writing	3
CAOT 093	Legal Document Production	2
*PALEGAL 016 *-or- Law 038*	Civil and Criminal Evidence *Criminal Law & Procedure (3)*	3

SEMESTER IV		UNITS
ENGLISH 103	Composition and Critical Thinking	3
PALEGAL 004	Legal Internship	3
PALEGAL 051	Legal Research	3

ELECTIVES		UNITS
*PALEGAL 016 *-or- Law 038*	Civil and Criminal Evidence *Criminal Law & Procedure (3)*	3
*BUS 005 *-or- BUS 006*	Business Law I *Business Law II (3)*	3
PALEGAL 014	Law Office Management and Procedures	3
PALEGAL 003	Civil Rights and the Law	3
PALEGAL 013	Wills, Trusts and Probate Administration	3
LAW 018	Marriage and Family Law	3

* Where one or the other course has been previously credited, the other course can serve as elective.

PARALEGAL STUDIES

Certificate of Achievement

Major Units: 42

A Certificate of Achievement in Paralegal Studies may be earned by completing 39 units of Required Courses and 3 units of Major Electives listed under the Associate degree in Paralegal Studies with a "C" or better in each course.

NOTE: Students seeking the Certificate of Achievement may choose either Paralegal 4 or Paralegal 14. Students seeking the Associate of Arts must satisfy Paralegal 4. Certificate is awarded to students who already possess an Associate's degree in Paralegal Studies or higher.

REAL ESTATE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Real Estate	T002896C	A.A.	21*	45	-	45
Real Estate	T021832D	C		30	-	30

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Real Estate Program offers several options, which prepare students for increasing levels of responsibility and career choices within the field of real estate.

The Associate of Arts in Real Estate degree is designed for transfer to an upper division public college or university in the State of California. The designed curriculum prepares students for the real estate salesperson's license, the real estate broker's license and the practice of real estate.

By fulfilling the program requirements, students are prepared for a variety of entry level and advanced career opportunities in the real estate profession. Typical positions include: real estate agent, broker, real estate assistant, processor, appraiser, property manager, escrow officer, title officer, real estate office manager, consumer protection representative, land developer, urban planner, construction, business sales agent, community advocate, property inspector, investor, and owner of income producing properties.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Demonstrate knowledge of real estate principles and practices in fulfillment of Department of Real Estate Licensure requirements.

REAL ESTATE

Associate in Arts Degree

Major Units: 45

Requirements for the Associate in Arts degree in Real Estate may be met by completing 45 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
REAL ES 001	Real Estate Principles	3
BUS 005	Business Law I	3
BUS 001	Introduction to Business	3
BUS 032	Business Communications	3
SEMESTER II		**UNITS**
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
REAL ES 009	Real Estate Appraisal I	3
SEMESTER III		**UNITS**
ACCTG 001	Introductory Accounting I	5
REAL ES 007	Real Estate Finance I	3
REAL ES 003	Real Estate Practices	3
CAOT 101	Hands-on Internet	1
SEMESTER IV		**UNITS**
REAL ES 014	Property Management	3
SUPV 011	Oral Communications	3
REAL ES 005	Legal Aspects of Real Estate I	3
ECON 002	Principles of Economics II	3

NOTE: Students should verify the broker's and salesperson's licensing requirements with the California Department of Real Estate.

REAL ESTATE

Certificate of Achievement

Major Units: 30

A Certificate of Achievement in Real Estate may be earned by completing 30 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
REAL ES 001	Real Estate Principles	3
REAL ES 003	Real Estate Practices	3
BUS 005	Business Law I	3
CAOT 082	Microcomputer Software Survey in the Office	3
REAL ES 007	Real Estate Finance I	3

SEMESTER II		UNITS
REAL ES 009	Real Estate Appraisal I	3
ACCTG 001	Introductory Accounting I	5
MARKET 001	Principles of Selling	3
BUS 001	Introduction to Business	3
CAOT 101	Hands-on Internet	1

RETAIL MANAGEMENT

Award Title	Academic Plan	Award Type	Grad. Plan	Required Course Units	Major Elective Units	Major Units
Retail Management	T002895C	A.A.	21*	41	6	47
Retail Management	T035286D	C		24		24

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Retail Management AA is a comprehensive college program designed to prepare current and future retail employees for a fast-paced and competitive retail environment. This program-designed in collaboration with retail industry leaders-will provide the student with the competencies required to succeed at the management level within the dynamic retail industry.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Identify and understand basic theories, principles, practices, and terminology related to business and management.
- Demonstrate effective leadership, teamwork, and communication skills, while possessing proficient oral, written, and non-verbal techniques to gather and present information.
- Utilize technology, theoretical concepts, and analytical skills to assist with business management related problem-solving and decision making.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

RETAIL MANAGEMENT

Associate in Arts Degree

Major Units: 47

Requirements for the Associate in Arts degree in Retail Management may be met by completing 41 units of Required Courses and 6 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CAOT 082	Microcomputer Software Survey in the Office	3
MARKET 040	Retail Management	3
MARKET 001	Principles of Selling	3
BUS 001	Introduction to Business	3

SEMESTER II		UNITS
MARKET 021	Principles of Marketing	3
BUS 033	Technical Report Writing	3
-or- ENGLISH 101	*College Reading and Composition I (3)*	
ACCTG 001	Introductory Accounting I	5

SEMESTER III		UNITS
BUS 005	Business Law I	3
SUPV 011	Oral Communications	3
-or- BUS 032	*Business Communications (3)*	
-or- COMM 101	*Public Speaking (3)*	
ECON 002	Principle of Economics II	3
BUS 038	Business Computations	3

SEMESTER IV		
SUPV 003	Human Relations (Developing Supervisory Leadership)	3
MGMT 033	Personnel Management	3

MAJOR ELECTIVES

Select at least 6 units from the courses below		UNITS
ACCTG 018	Computerized Payroll Accounting	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
MARKET 011	Fundamentals of Advertising	3
MGMT 002	Organization and Management Theory	3
MGMT 013	Small Business Entrepreneurship	3
SUPV 001	Elements of Supervision	3

NOTE: TRANSFER—Students interested in transferring to a four-year college or university should visit the University Transfer Center or meet with a counselor to select appropriate transferable courses.

RETAIL MANAGEMENT

Certificate of Achievement

Major Units: 24

A Certificate of Achievement in Retail Management may be earned by completing 24 units of Required Courses listed below with a "C" or better in each course.

REQUIRED COURSES		UNITS
BUS 032	Business Communications	3
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
MARKET 021	Principles of Marketing	3
MARKET 040	Retail Management	3
MGMT 002	Organization and Management Theory	3
MGMT 033	Personnel Mangement	3
SUPV 003	Human Relations (Developing Supervisory Leadership)	3

SMALL BUSINESS ENTREPRENEURSHIP

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Small Business Entrepreneurship	T033813C	A.A.	21*	41	-	41
Small Business Entrepreneurship	T008469D	C		32	-	32

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Small Business Entrepreneurship AA Degree Program at Los Angeles Trade-Technical College will prepare students to understand the process of creating, launching and managing a small business. Through academic coursework and experiential learning students will leave prepared to pursue the entrepreneurial lifestyle and be ready to maximize their entrepreneurial potential. Students who complete the program will be proficient in the process and procedures needed to transform an initial entrepreneurial idea into a viable business operation.

Through business simulations, mentorships and internships within local small businesses in the surrounding community this program will also provide students with practical knowledge, hands-on experience and the skills to be a successful entrepreneur.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Understand the fundamentals of management, marketing, finance, and organizational skills required to operate a small business.
- Identify accounting and other finance concepts that will enable the student to interpret financial data and use it to make informed decisions about the operating performance and financial position of a company.
- Apply leadership and workplace relationship skills that will enable them to deal with customer, employee, and supplies needs, while understanding the legal issues of operating a business.

SMALL BUSINESS ENTREPRENEURSHIP

Associate of Arts Degree

Major Units: 41

Requirements for the Associate in Arts degree in Small Business Entrepreneurship may be met by completing 41 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
BUS 005	Business Law I	3
BUS 038	Business Computations	3
CAOT 082	Microcomputer Software Survey in the Office	3
MGMT 013	Small Business Entrepreneurship	3
SEMESTER II		**UNITS**
ACCTG 001	Introductory Accounting I	5
BUS 032	Business Communications	3
or BUS 014	*Oral Communications for Customer Service (3)*	
MARKET 021	Principles of Marketing	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
SEMESTER III		**UNITS**
FINANCE 008	Personal Finance and Investments	3
SUPV 001	Elements of Supervision	3
or MGMT 033	*Personnel Management (3)*	
MARKET 001	Principles of Selling	3
or MARKET 011	*Fundamentals of Advertising (3)*	
BUS 22	The Business of Electronic Commerce	3
SEMESTER IV		**UNITS**
MARKET 025	Small Business Marketing	3

SMALL BUSINESS ENTREPRENEURSHIP

Certificate of Achievement

Major Units: 32

A Certificate of Achievement in Small Business Entrepreneurship may be earned by completing 32 units of Required Courses listed below with a "C" or better in each course.

PROGRAM OVERVIEW

The Small Business Entrepreneurship Certificate of Achievement is designed to provide prospective small business owners/entrepreneurs with the principals involved in planning and operating a small business. Students will acquire the tools skills, and knowledge necessary for successful start up and the fundamentals for sustainable success. Particular interest is placed on evaluating potential business opportunities, the development of dynamic business plans, small business problem recognition and solutions, record-keeping, effective marketing strategies, human relations and personnel management and efficient/ effective operating principles.

Students will also gain technical and business expertise through classroom and hands on field experiences with a strong emphasis on entrepreneurship and lifelong learning. By fulfilling the program requirements, students will be proficient in startup strategies and practices needed to transform an initial entrepreneurial idea into a viable business operation, which will enable them to prosper in the ever changing small business environment..

REQUIRED COURSES

SEMESTER I		UNITS
BUS 038	Business Computations	3
BUS 005	Business Law I	3
MGMT 013	Small Business Entrepreneurship	3
MARKET 001	Principles of Selling	3
CAOT 082	Microcomputer Software Survey in the Office	3

SEMESTER II		UNITS
SUPV 001	Elements of Supervision	3
-or- MGMT 033	*Personnel Management (3)*	
ACCTG 001	Introductory Accounting I	5
MARKET 021	Principles of Marketing	3
SUPV 011	Oral Communications	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3



Construction, Maintenance & Utilities Pathway (CMU)

ABOUT THE PATHWAY

The Construction Maintenance & Utilities Pathway (CMU) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce in the Construction, Maintenance, Operation and Utilities sectors. LATTC CMU programs host external accreditation from the Environmental Protection Agency (EPA), Occupational Safety & Heath Association (OSHA), LA/OC Building Trades Council, Los Angeles Building & Safety, Los Angeles Department of Water & Power, and others.

PATHWAY TEAM:

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Phone Number: (213) 763-3700

Hours of Operation: Mon – Fri: 8:30am to 6:00pm

Pathway Website:http://pathways.lattc.edu/catalog-programs/cmu/

PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Architectural Technology *(Architectural Technology HVACR Technician - AS/C)*	AA/C	Powerline Mechanic *(Renewable Energy Generation Transmission & Distribution)*	AS
Carpentry	AS/C	-Powerline Worker: Pole Climbing *(Formerly Powerline Mechanic)*	C
Carpentry - Construction Technologies	AA/C	-Utility Industry Fundamentals)	C
Electrical Construction & Maintenance: Electrician	AS/C	Photo Voltaic (PV) Solar Installation & Maintenance *(Formerly Renewable Energy Technician: Solar PV Installation and Maintenance)*	AS
Electrical Construction & Maintenance: Construction Technician	AA/C	-Solar PV Installation and Maintenance Technician	C
Operation & Maintenance Engineering: Steam Plant	C	- Solar Thermal Installation and Maintenance *(Formerly Renewable Energy Technician: Solar)*	AS
Plumbing	AS/C	-Solar Thermal Installation & Maintenance Technician	C
Plumbing: Construction Tech	AA/C	Solid Waste Management Technology	C
Heating, Ventilating, Air Conditioning & Refrigeration (HVACR) *(formerly Refrigeration & Air Conditioning Mechanics)*	AS/C	Street Maintenance Technology	AA/C
Energy Efficiency Technician *(Formerly Renewable Energy: Energy Efficiency Emphasis)*	AS	Supply Water Systems Technology	C
-Weatherization and Energy Auditor *(Formerly Weatherization and Energy)*	C	Water Systems Technology- Wastewater Technology	AS
-Energy Systems Fundamentals *(Formerly Energy Systems Technology)*	C	Water Systems Technology- Wastewater	AS
Operating Engineer	AS/C	Welding, Gas and Electric	AS/C

ARCHITECTURE TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Architectural Technology and Environmental Design	T008467C	A.A.	21*	42	6	48
Architectural Technology and Environmental Design	T021825D	C		42	6	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

In keeping with the LATTC and Construction, Design, and manufacturing mission, we offer transfer courses and provide assistance with job placement in various venues, including architectural, urban planning and engineering offices; construction management firms; the construction manufacturing industry; and government agencies. We meet Leadership in Energy and Environmental Design (LEED) standards and use sustainable design strategies and current computer tools (including Global Positioning System—GPS, CFM, Computer-aided design—CAD, Geographic Information System—GIS, Building Information Modeling—BIM, 3-D modeling and others) to record, organize, design and maintain the life cycle of the built environment.

Our courses are integrated and comprehensive, covering four clusters of study: 1) design/space-planning/programming; 2) construction documents/BIM; 3) building systems/materials/historical context; and 4) sustainable tools, such as BIM, GPS, CAD, GIS, 3-D modeling, and simulation. Every class includes training in organizational skills, time management, teamwork, communication and digital file management, and the equipment used in the classroom is the same found in professional offices.

In the architecture design program, students learn additional skills, such as prototyping, visualization, conceptualization, 3-D composition, lighting, proportion, sketching and modeling.

This critical foundational knowledge can be applied to the fields of industrial design, toy design, furniture design, interior design, landscape architecture, set design and virtual reality spaces.

By fulfilling the program requirements, students will have the skills needed to enter the field as an Architectural Technician who is both a problem solver and an integral part of the design process. Students will master the skills necessary to work in the construction, drafting, estimating, building inspection, civil, electrical, mechanical and structural engineering, construction computer rendering, and computer-aided drawing arenas. General education classes provide a well rounded education, imparting the knowledge and skills needed to successfully participate in all aspects of society.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Visualize and translate drawing information to actual physical objects and completed construction components.
- Apply building codes and standards as they pertain to the life, health, and safety of the public.
- Demonstrate skill and proficiency in computer-aided drafting and design by showing technical mastery in the use of industry-relevant computer technology and software.
- Explain the role, duties, and responsibilities of the members of the design team, including the working relationship between technicians and professionals.

ARCHITECTURAL TECHNOLOGY AND ENVIRONMENTAL DESIGN

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Architectural Technology may be met by completing 42 units of Required Courses and 6 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
INT 200	Residential Planning	3
ARC 130	History of Architecture	2
ARC 172	Architectural Drawing I	3
DRAFT 062	C.A.D.D for Architects	3
Elective		1

SEMESTER II		UNITS
ENV 101	Foundations of Design I	3
ARC 151	Materials of Construction	3
ARC 173	Architectural Drawing II	3
ARC 261	Computer-Aided Design for Architecture I	3
Elective		1

SEMESTER III		UNITS
ARC 131	History of Architecture II	2
ARC 201	Architectural Design I	3
ARC 271	Architectural Design III	3
DRAFT 063	C.A.D for Building	3
Electives		1

SEMESTER IV		UNITS
ARC 152	Equipment of Buildings	3
ARC 202	Architectural Design II	3
ARC 341	GIS Metropolitan Access Planning Systems I	3
Electives		3

MAJOR ELECTIVES

MAJOR ELECTIVE COURSES		UNITS
DRAFT 010	CADD for sustainable Landscape Design	3
ARC 160	Computers for Designer	3
ARC 385	Directed Study	3
ARC 941	Cooperative Education	4

ARCHITECTURAL TECHNOLOGY

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Architectural Technology and Environmental Design may be earned by completing 42 units of Required Courses and 6 units of Major Electives listed under the Associate degree in Architectural Technology and Environmental Design with a "C" or better in each course.

CARPENTRY/BUILDING AND CONSTRUCTION TECHNOLOGIES

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Carpentry —(day only)	T002909C	A.S.	21*	45	3	48
Carpentry —(day only)	T021848D	C		45	3	48
Carpentry Construction Technologies —(evening only)	T008479C	A.A.	21*	40	8	48
Carpentry Construction Technologies —(evening only)	T021849D	C		40	8	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Carpentry Degree and Certificate is designed to prepare students for employment in the Construction industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Carpenters
- Helpers-Carpenters
- Cement Masons

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career as a Carpenter in the Construction or Maintenance arena. The construction, installation, and repair of structures and fixtures made from wood and other materials, working from blueprints, layout, measuring, marking, and arranging materials in accordance with local building codes, cutting and shaping wood, plastic, fiberglass, or drywall using hand and power tools, joining materials with nails, screws, staples, or adhesives are some of the skills that will be mastered during this program

CARPENTRY

Associate in Science Degree

Major Units: 48

Requirements for the Associate in Science degree in Carpentry may be met by completing 45 units of Required Courses and 3 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Use hand and power tools, testing equipment, and P.P.E required for performing work in the building construction industry in accordance with industry standards.
- Perform calculations and measurements required for work in the building construction industry.
- Construct and install interior/exterior walls, stairs, doors, windows, roof components, flooring, and exterior finish for various residential and commercial constructions that meet customer specifications and industry standards.

REQUIRED COURSES

SEMESTER I		UNITS
CRPNTRY 105	Calculations and Measurement for Woodworking Students I	3
CRPNTRY 114	Hand and Power Tool Application	4
CRPNTRY 115	Basic Blueprint Reading and Core Construction Skills	3
CRPNTRY 117	Construction Materials	2
SEMESTER II		**UNITS**
CRPNTRY 123	Basic House Construction	6
CRPNTRY 124	Blueprint Reading and Estimating I	3
CRPNTRY 130	Calculations and Measurement for Woodworking Students II	3
SEMESTER III		**UNITS**
CRPNTRY 132	Applied Blueprint Reading	3
CRPNTRY 133	Advanced Residential Estimating	3
CRPNTRY 134	Advanced Residential Construction	4
CRPNTRY 135	Concrete Construction	2
SEMESTER IV		**UNITS**
CRPNTRY 144	Residential Exterior Finish	4
CRPNTRY 145	Residential Interior Finish	5
Elective		*3*

MAJOR ELECTIVES

Select at least 3 units from the courses below		UNITS
BLDGCTQ 002	Pre-Employment-Applied Trades Calculations and Measurements	3
BLDGCTQ 007	Weatherization - Practical Energy Efficiency Techniques	3
BLDGCTQ 008	Weatherization - Energy Efficiency Practices	1
BLDGCTQ 009	Energy Auditor – Residential	3
BLDGCTQ 012	Energy Auditor – Residential Practices	1
BLDGCTQ 014	Carpentry and Construction for Renewable Energy Installers	4
BLDGCTQ 102	O.S.H.A. Based Safety Standards:Construction & Industry	2
BLDGCTQ 921	Cooperative Education-Building Construction Techniques	2
BLDGCTQ 931	Cooperative Education-Building Construction Techniques	3
BLDGCTQ 941	Cooperative Education-Building Construction Techniques	4
CRPNTRY 111	Construction I	7
CRPNTRY 126	Construction II	6
CRPNTRY 148	Computer Assisted Estimating I	3
CRPNTRY 149	Computer Assisted Estimating II	3
CRPNTRY 170	Introduction to CNC Woodworking Machining and Programming	3
CRPNTRY 243	Building Estimating I	3
CRPNTRY 247	Building Estimating II	3
CRPNTRY 941	Cooperative Education-Carpentry	4
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2

CARPENTRY

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Carpentry may be earned by completing 45 units of Required Courses and 3 units of Major Electives listed under the Associate degree in Carpentry with a "C" or better in each course.

CARPENTRY - CONSTRUCTION TECHNOLOGIES

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Carpentry - Construction Technologies may be met by completing 40 units of Required Courses and 8 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Use drawings and other related documents and graphics to communicate information effectively.
- Use hand and power tools, testing equipment, and P.P.E required for performing work in the building construction industry in accordance with industry standards.

REQUIRED COURSES

SEMESTER I		UNITS
CRPNTRY 105	Calculations and Measurements for Woodworking Students I	3
CRPNTRY 111A	Construction IA	3
CRPNTRY 111B	Construction IB	2
CRPNTRY 111C	Construction IC	2
Elective		*2*

SEMESTER II		UNITS
CRPNTRY 130	Calculations and Measurements for Woodworking Students II	3
CRPNTRY 148	Computer Assisted Estimating I	3
CRPNTRY 241	Blueprint Reading and Estimating	3
CRPNTRY 243	Building Estimating I	3

SEMESTER III		UNITS
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
CRPNTRY 149	Computer Assisted Estimating II	3
CRPNTRY 240	Building Construction Specialties	4
CRPNTRY 251	Building Codes I: International Residential Code (IRC)	3

SEMESTER IV		UNITS
CRPNTRY 247	Building Estimating II	3
CRPNTRY 252	Building Codes II: International Residential Code (IRC)	3
Elective		*6*

MAJOR ELECTIVES

Select at least 8 units from the courses below		UNITS
BLDGCTQ 002	Pre-Employment-Applied Trades Calculations and Measurements	3
BLDGCTQ 007	Weatherization - Practical Energy Efficiency Techniques	3
BLDGCTQ 008	Weatherization - Energy Efficiency Practices	1
BLDGCTQ 009	Energy Auditor – Residential	3
BLDGCTQ 012	Energy Auditor – Residential Practices	1
BLDGCTQ 014	Carpentry and Construction for Renewable Energy Installers	4
BLDGCTQ 102	O.S.H.A. Based Safety Standards:Construction & Industry	2
BLDGCTQ 921	Cooperative Education-Building Construction Techniques	2
BLDGCTQ 931	Cooperative Education-Building Construction Techniques	3
BLDGCTQ 941	Cooperative Education-Building Construction Techniques	4
CRPNTRY 114	Hand and Power Tool Application	4
CRPNTRY 115	Basic Blueprint Reading and Core Construction Skills	3
CRPNTRY 117	Construction Materials	2
CRPNTRY 126	Construction II	6
CRPNTRY 170	Introduction to CNC Woodworking Machining and Programming	3
CRPNTRY 941	Cooperative Education-Carpentry	4

CARPENTRY - CONSTRUCTION TECHNOLOGIES

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Carpentry - Construction Technologies may be earned by completing 40 units of Required Courses and 8 units of Major Electives listed under the Associate degree in Carpentry Construction Technologies with a "C" or better in each course.

ELECTRICAL CONSTRUCTION & MAINTENANCE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Electrical Construction and Maintenance: Electrician —(day only)	T002910C	A.S.	21*	42	6	48
Electrical Construction and Maintenance: Electrician —(day only)	T021853D	C		42	6	48
Electrical Construction and Maintenance: Construction Technician —(evening only)	T008481C	A.A.	21*	40	8	48
Electrical Construction and Maintenance: Construction Technician* —(evening only)	T021852D	C		40	8	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

To meet the training needs of persons interested in becoming an Electrician LATTC offers an Electrical Construction and Maintenance Associate of Science degree, and Electrical Construction and Maintenance Construction Technologies Associate of Arts degree, as well as Certificates of Achievement.

The Associate in Science degree is designed for individuals seeking entry level positions in the field. Students enrolling in this program should be able to commit to full time student status, which is approximately 24 hours per week in the classrooms and laboratories, plus at least 12 hours of homework every week. This time commitment is necessary to allow for hands on training in the laboratory applications used during the course of instruction.

The Associate in Arts degree is an evenings only course of study designed for individuals, currently working in the electrical field, who want to improve or expand their skills. Due to the limitations of the student's available evening hours, much of the hands on laboratory component is assumed to be provided at the student's place of employment. Depending on availability, the Associate in Arts degree may require more time to complete. See the Department Chair for details prior to enrolling.

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in Residential, Commercial, and Industrial Construction and Maintenance of Electrical Systems. Electrical theory, electrical controls, conduit installation, blueprints, low voltage systems, maintenance practices, equipment installation, etc. are just some of the skills that will be mastered during this program.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** programs, students are able to:

- Use electrical trade hand and power tools in accordance with industry and safety standards.
- Analyze and solve mathematical problems related to the electrical trade.
- Locate and interpret technical information from the National Electrical Code.

ELECTRICAL CONSTRUCTION AND MAINTENANCE: ELECTRICIAN

Associate in Science Degree

Major Units: 48

Requirements for the Associate in Science degree in Electrical Construction and Maintenance: Electrician may be met by completing 42 units of Required Courses and 6 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2
ECONMT 117	Elementary Circuit Practices	4
ELECTIVE		3
SEMESTER II		**UNITS**
ECONMT 120	Industrial Control Systems	3
ECONMT 128	Industrial Control Systems Practices	3
ECONMT 129	Fundamentals of Alternating Current	3
ECONMT 169	Alternating Current Practices	2
ELECTIVE		1
SEMESTER III		**UNITS**
ECONMT 130	Principles of Industrial Electric Power	3
ECONMT 136	Industrial Power Applications	3
ECONMT 137	Industrial Electronic Control Systems	3
ECONMT 138	Applications of Electrical and Electronic Devices	2
ELECTIVE		1

SEMESTER IV		UNITS
ECONMT 140	Construction Wiring Principles and Practices	3
ECONMT 150	Introduction to the Electrical Codes	3
ECONMT 167	Electrical Construction Wiring Techniques	3
ECONMT 168	Installation of Electrical Wiring	2
ELECTIVE		1

MAJOR ELECTIVES

Select at least 6 unit from the courses below		UNITS
ECONMT 001	Resistive Circuit Electrical Fundamentals	3
ECONMT 006	Security & Fire Alarm Technician Certification	3
ECONMT 007	Home Theater & Comm Audio Video Installation Theory	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
ECONMT 101	Electtrical Craft Helper	4
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 110	Renewable Energy Systems	3
ECONMT 119	Applied Calculations and Measurements	3
ECONMT 142	Basic Programmable Logic Controls (PLC	1
ECONMT 159	Programmable Logic Controls (PLC)	4
ECONMT 164	Sustainable Lighting Principles & Practices	3
ECONMT 171	Electrical Codes and Ordinances I	3
ECONMT 172	Electrical Codes and Ordinances II	3
ECONMT 173	Electrical Mathematics I	3
ECONMT 174	Electrical Mathematics II	3
ECONMT 177	Electric Motor Control I	3
ECONMT 178	Electric Motor Control II	3
ECONMT 181	Basic Wiring Practices	3
ECONMT 182	Basic Diagram and Circuit Practices	1
ECONMT 183	Residential Electric Wiring	3
ECONMT 184	Motor Control Principles and Practices	3
ECONMT 185	Directed Study - Electrical Construction and Maintenance	1
ECONMT 185L	Directed Study, Electrical Construction And Maintenance (Lab)	1
ECONMT 186	Industrial Electrical Principles and Practices	3
ECONMT 187	Advanced Programmable Controllers	4
ECONMT 190	Electrical Code Calculations	3
ECONMT 191	Commercial Wiring and Practices	2
ECONMT 192	Residential Wiring and Practices	2
ECONMT 193	Conduit Bending and Calculations	3
ECONMT 193A	Conduit Bending Laboratory	1
ECONMT 195	Grounding: Fundamentals, Applications and Practices	3
ECONMT 196	Infrastructure Wiring Practices	4
ECONMT 197	Low Voltage Electrical Practices	3
ECONMT 199	Journeyman Electrician Exam Preparation	3
ECONMT 205	Solar Energy Installation & Maintenance Principles & Practices	2
ECONMT 212	Significant Changes NEC - National Electrical Code	3
ECONMT 215	Small Wind Energy Systems Principles and Practices	3
ECONMT 285	Directed Study - Electrical Construction and Maintenance	2
ECONMT 285L	Directed Study, Electrical Construction and Maintenance (Lab)	2
ECONMT 385	Directed Study - Electrical Construction and Maintenance	3
ECONMT 385L	Directed Study, Electrical Construction and Maintenance (Lab)	3
ECONMT 941	Cooperative Education -Electrical Construction & Maintenance	4

ELECTRICAL CONSTRUCTION AND MAINTENANCE: ELECTRICIAN

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Electrical Construction and Maintenance: Electrician may be earned by completing 42 units of Required Courses and 6 units of Major Electives listed under the Associate degree in Electrical Construction and Maintenance: Electrician with a "C" or better in each course.

ELECTRICAL CONSTRUCTION & MAINTENANCE: CONSTRUCTION TECHNICIAN

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Electrical Construction and Maintenance: Construction Technician may be met by completing 40 units of Required Courses and 8 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2
ECONMT 119	Applied Calculations and Measurements	3
or - ECONMT 173	*Electrical Mathematics I (3)*	
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
or - BLDGCTQ 102	*OSHA Based Safety Standards: Construction & Industry (2)*	

SEMESTER II		UNITS
ECONMT 177	Electric Motor Control I	3
ECONMT 181	Basic Wiring Practices	3
ECONMT 182	Basic Diagrams and Circuit Practices	1
ECONMT 129	Fundamentals of Alternating Current	3

SEMESTER III		UNITS
ECONMT 120	Industrial Control Systems	3
ECONMT 178	Electric Motor Control II	3
ECONMT 128A	Industrial Control Systems Practices	1
ECONMT 128B	Industrial Control Systems Practices	1
ELECTIVE		2

SEMESTER IV		UNITS
ECONMT 171	Electrical Codes and Ordinances I	3
ECONMT 184	Motor Control Principles and Practices	3
ELECTIVE		3

SEMESTER V		UNITS
ECONMT 172	Electrical Code and Ordinances II	3
ECONMT 186	Industrial Electrical Principles & Practices	3
ELECTIVE		3

MAJOR ELECTIVES

Select at least 8 units from the courses below		UNITS
ECONMT 1	Resistive Circuit Electrical Fundamentals	3
ECONMT 6	Security And Fire Alarm Technician Certification	3
ECONMT 7	Home Theater & Commercial Audio, Video Installation Theory and Practices	3
ECONMT 101	Electrical Craft Helper	4
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 110	Renewable Energy Systems	3
ECONMT 117	Elementary Circuit Practices	4
ECONMT 128	Industrial Control Systems Practices	3
ECONMT 128C	Industrial Control Systems Practices C	1
ECONMT 129	Fundamentals of Alternating Current	3
ECONMT 130	Principles of Industrial Electric Power	3
ECONMT 136	Industrial Power Applications	3
ECONMT 137	Industrial Electronic Control Systems	3
ECONMT 138	Applications of Electrical and Electronics Devices	2
ECONMT 140	Construction Wiring Principles and Practices	3
ECONMT 142	Basic Programmable Logic Controls (PLC)	1
ECONMT 150	Introduction to the Electrical Codes	3
ECONMT 159	Programmable Logic Controls (PLC)	4
ECONMT 164	Sustainable Lighting Principles & Practices	3
ECONMT 167	Electrical Construction Wiring Techniques	3
ECONMT 168	Installation of Electrical Wiring	2
ECONMT 169	Alternating Current Practices	2
ECONMT 174	Electrical Mathematics II	3
ECONMT 183	Residential Electric Wiring	3
ECONMT 185	Directed Study - Electrical Construction and Maintenance	1
ECONMT 185L	Directed Study, Electrical Construction and Maintenance (Lab)	1
ECONMT 187	Advanced Programmable Controllers	4
ECONMT 190	Electrical Code Calculations	3
ECONMT 191	Commercial Wiring and Practices	2
ECONMT 192	Residential Wiring and Practices	2
ECONMT 193	Conduit Bending and Calculations	3
ECONMT 193A	Conduit Bending Laboratory	1
ECONMT 195	Grounding: Fundamentals, Applications and Practices	3
ECONMT 196	Infrastructure Wiring Practices	4
ECONMT 197	Low Voltage Electrical Practices	3
ECONMT 199	Journeyman Electrician Exam Preparation	3
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2
ECONMT 212	Significant Changes NEC - National Electrical Code	3
ECONMT 215	Small Wind Energy Systems Principles and Practices	3
ECONMT 285	Directed Study - Electrical Construction and Maintenance	2
ECONMT 285L	Directed Study, Electrical Construction and Maintenance (Lab)	2
ECONMT 385	Directed Study - Electrical Construction and Maintenance	3
ECONMT 385L	Directed Study, Electrical Construction and Maintenance (Lab)	3
ECONMT 941	Cooperative Education -Electrical Construction & Maintenance	4

ELECTRICAL CONSTRUCTION & MAINTENANCE: CONSTRUCTION TECHNICIAN

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Electrical Construction and Maintenance: Construction Technician may be earned by completing 40 units of Required Courses and 8 units of Electives listed under the Associate degree in Electrical Construction and Maintenance: Construction Technician with a "C" or better in each course.

HEATING & AIR CONDITIONING MECHANICS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration *(formerly Refrigeration & Air Conditioning Mechanics)*	T002904C	A.S.	21*	42	6	48
Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration *(formerly Refrigeration & Air Conditioning Mechanics)*	T021842D	C		42	6	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Cooling and heating devices help regulate the temperature, humidity, and air quality in residential homes, commercial locations, and industrial facilities. Critical items like food and medicine require refrigeration to keep them from spoiling. Technicians repair, maintain, and install heating, air-conditioning, and refrigeration systems. Our program trains these technicians.

The Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration Degree and Certificate are designed to prepare students for employment in the Maintenance & Operations industry.

Career opportunities for students completing this program of study include, but are not limited to:

- Heating, Air Conditioning, and Refrigeration Mechanics and Installers

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential, commercial, and Industrial service and repair of air conditioning, heating and refrigeration systems. Electrical controls, piping installation, compressor installation and repair are just some of the skills that would be mastered during this program.

Note: Optional North American Technician Excellence (NATE) and Environmental Protection Agency (EPA) Section 608 refrigerant testing and certification preparation are available.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Students will maintain and repair air conditioning and refrigeration systems using appropriate test instruments and tools effectively and safely.
- Students will analyze the proper operation of air conditioning and refrigeration systems by applying the principles of thermodynamics and electrical theory.
- Students will certify the proper and efficient operation of air conditioning and refrigeration systems by measuring temperatures, pressures, combustion gasses, and air flow.

HEATING, VENTILATING, AIR CONDITIONING & REFRIGERATION (HVACR)

(formerly Refrigeration & Air Conditioning Mechanics)

Associate in Science Degree

Major Units: 42
Elective Units: 6

The Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration Degree and Certificate are designed to prepare students for employment in the Maintenance & Operations industry.

Career opportunities for students completing this program of study include, but are not limited to: Heating, Air Conditioning, and Refrigeration Mechanics and Installers. By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential, commercial, and Industrial service and repair of air conditioning, heating and refrigeration systems. Electrical controls, piping installation, compressor installation and repair are just some of the skills that would be mastered during this program.

Note: Optional North American Technician Excellence (NATE) and Environmental Protection Agency (EPA) Section 608 refrigerant testing and certification preparation are available.

PROGRAM LEARNING OUTCOMES

- Students will maintain and repair air conditioning and refrigeration
- systems using appropriate test instruments and tools effectively and safely.
- Students will analyze the proper operation of air conditioning and
- refrigeration systems by applying the principles of thermodynamics and electrical theory.
- Students will certify the proper and efficient operation of air conditioning
- and refrigeration systems by measuring temperatures, pressures, combustion gasses, and air flow.

OPTION 1: DAY PROGRAM

REQUIRED COURSES

SEMESTER I		UNITS
REF A/C 101	Air Conditioning & Refrigeration Principles & Practices – First Semester	9
ECONMT 119	Applied Calculations and Measurement	3

SEMESTER II		UNITS
REF A/C 123	Pipe and Tube Joining Processes	1
REF A/C 124	Refrigeration Electrical Circuits and Controls	5
REF A/C 125	Refrigeration System Components	3
ECONMT 174	Electrical Mathematics II	3

SEMESTER III		UNITS
REF A/C 301	*Air Conditioning and Refrigeration Principles and Practices-Third Semester*	*9*
Elective		*3*

SEMESTER IV		UNITS
REF A/C 141	*Applied Refrigeration and Air Conditioning Principles*	*3*
REF A/C 143	*Refrigeration Servicing Procedures II*	*3*
REF A/C 145	*Air Conditioning and Refrigeration Mechanics*	*3*
Elective		*3*

OPTION 2: EVENING PROGRAM

REQUIRED COURSES

LEVEL I		UNITS
REF A/C 202	Refrigeration Fundamentals	3
REF A/C 250	Indoor Air Quality	3
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 173	Electrical Mathematics I	3

LEVEL II		UNITS
REF A/C 159	Principles and Practices of Electrical Circuits and Controls	4
REF A/C 203	Compression Systems of Refrigeration	3
REF A/C 204	Technical Aspects of Refrigeration System Components	3
ECONMT 129	Fundamentals of Alternating Current	3

LEVEL III		UNITS
REF A/C 187	Servicing I	3
REF A/C 188	Servicing II	3
REF A/C 208	Refrigerant Management-EPA Section 608 Certification	4

LEVEL IV		UNITS
REF A/C 160	Refrigeration System Principles and Practices	4
REF A/C 164	Gas Heating Systems	4

MAJOR ELECTIVES

DAY PROGRAM: **Select at least 6 units from the courses below**
EVENING PROGRAM: **Select at least 5 units from the courses below**

		UNITS
BLDGCTQ 101	Contract's License La	3
ECONMT 100	(O.S.H.A) Safety Standards: Construction and Industry	2
PHYSICS 012	Physics Fundamentals	3
REF A/C 100	Air Conditioning Project Management	3
REF A/C 161	Air Conditioning System Principles and Practices	4
REF A/C 162	Piping Principles and Practices	4
REF A/C 164	Gas Heating Systems	4
REF A/C 165	Ice Storage Air Conditionin	4
REF A/C 176	Heating and Air Conditioning I	3
REF A/C 177	Heating and Air Conditioning II	3
REF A/C 187	Servicing I	3
REF A/C 188	Servicing II	3
REF A/C 199	Mechanical Code I – HVACR	3
REF A/C 208	Refrigerant Management – EPA Section 608 Certification	4
REF A/C 209	North American Technician Excellence (Nate) Air Conditioning Specialist Certification Preparation	4
REF A/C 210	Refrigeration System Efficiency Factors	3
REF A/C 250	Indoor Air Quality	3
REF A/C 941	Cooperative Education-Refrigeration & Air Conditioning Mech	4

HEATING, VENTILATING, AIR CONDITIONING (HVAC) & REFRIGERATION

(formerly Refrigeration & Air Conditioning Mechanics)

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration may be earned by completing 42 units of Required Courses and 6 unit of Major Electives listed under the Associate degree in Heating, Ventilating, Air Conditioning (HVAC) & Refrigeration with a "C" or better in each course.

Courses from the day or evening programs should not be mixed in an attempt to meet the degree requirements.

OPERATION AND MAINTENANCE ENGINEERING: STEAM PLANT

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Operation & Maintenance Engineering: Steam Plant	T008474D	C		12	24	36
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

Most craft workers specialize in one kind of work, such as plumbing or carpentry. General maintenance and repair workers, however, have skills in many different crafts. They repair and maintain machines, mechanical equipment, and buildings. They also work on plumbing, electrical, and air conditioning and heating systems. They build partitions, make plaster or drywall repairs, and fix or paint roofs, windows, doors, floors, woodwork, and other parts of building structures. In addition, they maintain and repair specialized equipment and machinery found in cafeterias, laundries, hospitals, stores, offices, and factories.

A general maintenance worker's typical duties include troubleshooting and fixing faulty electrical switches, repairing air-conditioning motors, and unclogging drains. In addition, newer buildings sometimes have computer-controlled systems that allow maintenance workers to make adjustments in building settings and monitor for problems from a central location; for example, they can remotely control light sensors that turn off lights automatically after a set amount of time or identify a broken ventilation fan that needs to be replaced.

General maintenance and repair workers inspect and diagnose problems and determine the best way to correct them, frequently checking blueprints, repair manuals, and parts catalogs. They obtain supplies and repair parts from distributors or storerooms. Using common hand and power tools such as screwdrivers, saws, drills, wrenches, and hammers, as well as specialized equipment and electronic testing devices, these workers replace or fix worn or broken parts, where necessary, or make adjustments to correct malfunctioning equipment and machines.

General maintenance and repair workers also perform routine preventive maintenance tasks to ensure that machines continue to run smoothly, building systems operate efficiently, and the physical condition of buildings does not deteriorate. Following a checklist, they may inspect drives, motors, and belts, check fluid levels, replace filters, and perform other maintenance actions. Maintenance and repair workers keep records of their work.

The "Certified Steam Boiler License" is a specialized certification required for many maintenance workers. LATTC offers a Certificate of Achievement-Steam Plant to address this need. The core of the program is designed to prepare students to take the Boiler/Steam Plant certification exam, while the remainder is structured to create students who possess an array of skills which would be transferable to a variety of job settings, creating a highly capable general maintenance worker.

By fulfilling the program requirements, students will have the necessary skills for entry and mid level jobs in the general maintenance industry. This program prepares the student for basic electrical, heating and refrigeration, plumbing, and carpentry work, and to pass the "Certified Boiler/Steam Plant" License exam.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Identify and describe the function of all major components of a high and low pressure boiler system utilizing technical manuals.
- Perform calculations and measurements necessary in the operations and maintenance field in accordance with industry standards.
- Troubleshoot a high and low pressure boiler system in utilizing appropriate materials and equipment, in accordance with industry safety standards.

OPERATING ENGINEER – APPRENTICESHIP PROGRAM

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Operating Engineer – Apprenticeship Program		A.S.	21*	40	-	61
Operating Engineer – Apprenticeship Program		C		40		

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

LATTC's Apprenticeship Education program offers classes to students who are registered to learn a trade under agreement with the State of California Division of Apprenticeship Standards, and are required to attend college classes during their registered apprenticeship program. The LATTC Apprenticeship Education program is part of a state approved industrial plan for training skilled workers. It is enabled nationally by the Federal Apprenticeship Law (known as the Fitzgerald Act of 1937) and on the state level by the Shelley-Maloney Labor Standards Act of 1939. The program is authorized and supported by the California Apprenticeship Council under the supervision of the joint Apprenticeship Committee (equal employer and employee representation) for each trade under standards approved by the State of California.

Apprentices training under the cooperative direction of the college and Apprenticeship committees for their trade may petition to receive credit toward the Associate in Arts degree or the Associate in Science degree for all courses successfully completed. A Certificate of Achievement will be awarded when the proper application is made and the student has successfully completed all the apprenticeship assigned in their discipline. Additional courses may be substituted with the approval of the apprenticeship coordinator. Substitutions will be limited to 50%.

There are two primary parts to the training of an apprentice: (1) on-the-job training and instruction in the manipulative processes, and (2) in-school training which involves instruction in technical subjects related to the on-the-job training. On-the-job training is comprised of 40 hours per week of supervised work experience and instruction wherein an apprentice rotates through a series of sequential work experiences which are designed to develop the all-around skills of the trade.

State apprenticeship law requires that state and local boards responsible for vocational education administer related and supplemental instruction for apprentices. College offerings provide the apprentice with a study of technical subjects, subject to regular class attendance for the duration of the apprenticeship training period. An example of topics studied, which are generally applicable to a majority of trades, includes applied math and science, blueprint reading and drawing, materials, equipment, processes, and health and safety.

Los Angeles Trade Technical College plays no part in the apprenticeship selection process. For further information about apprenticeship programs operating in California and the possibility of becoming an registered apprentice in any trade, contact the California State Division of Apprenticeship Standards at 8th floor, Room 8000,320 West Fourth Street, Los Angeles, California 90012. Their phone number is (213) 576-7750

Prerequisites: Students enrolling in these classes must have been accepted into a California Registered Apprenticeship Program. An Associate of Science Degree may be awarded for completion of a combination of 40 units in this program and the required general education.

Student apprentices will be monitored and evaluated during this program by the joint apprenticeship committee for their trade and will gain the skills necessary to perform as a journeyman in their trade.

PROGRAM LEARNING OUTCOMES

- Identify and describe the function of all major components of a high and low pressure boiler system utilizing technical manuals.
- Perform calculations and measurements necessary in the operations and maintenance field in accordance with industry standards.
- Troubleshoot a high and low pressure boiler system in utilizing appropriate materials and equipment, in accordance with industry safety standards.

OPERATING ENGINEER – APPRENTICESHIP PROGRAM

Associate in Science Degree

Major Units: 61
Required Units: 40
LATTC General Education Units: 21

REQUIRED COURSES

SEMESTER I

OPMA AP 724	Fundamentals of Electricity	2
OPMA AP 704	Electric Motor Control I for Apprentices	2
GE Area B1	American Institutions Area: One course	3

SEMESTER II

OPMA AP 747	Electrical Troubleshooting	2
OPMA AP 100	O.S.H.A. Based Safety Standards & First Aid CPR & AID	2
GE Area A	Natural Sciences Area: one course	3

SEMESTER III

OPMA AP 720	HVACR I	2
OPMA AP 749	HVACR II	2
OPMA AP 748	Electrical Codes & Ordinances (NEC)	2

SEMESTER IV

OPMA AP 744	HVACR Control Systems	2
GE AREA C	Humanities Area: one course	3
GE AREA B2	Behavioral & Social Sciences one course	3

SEMESTER V

OPMA AP 753	Boilers for Apprentices	2
OPMA AP 745	Plumbing Code	2
GE AREA D1	English 101	3

SEMESTER VI

OPMA AP 746	Maintenance Plumbing Principles and Practices	2
OPMA AP 727	Industrial Mechanics for Apprentices	2

SEMESTER VII

OPMA AP 750	Indoor Air Quality	2
OPMA AP 703	Energy Management	2
GE AREA D2	MATH 137 or 125	5

SEMESTER VIII

OPMA AP 751	Print Reading	2
OPMA AP 740	Tenant Relations & Reports for Apprentices	2

SEMESTER IX

OPMA AP 760	Inspection, Testing & Maintenance of Water- Based Fire Protection Systems	2
OPMA AP 770	Building Owners & Managers Association (BOMA - Test Preparation)	2
GE AREA E	Health & Physical Education E1 & E2	3-4



SEMESTER X

OPMA AP 780	Gas Tungsten ARC & Shielded Metal ARC Welding	2
OPMA AP 739	Locksmithing & Security Systems for Apprenticeships	2

OPERATING ENGINEER – APPRENTICESHIP PROGRAM

Certification of Achievement

A Certificate of Operating Engineer may be earned by completing 40 units of Required Courses listed under the Associate degree in Operating Engineer with a "C" or better in each course PLUS other Apprenticeship requirements.

OPERATION & MAINTENANCE ENGINEERING: STEAM PLANT

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Operation & Maintenance Engineering: Steam Plant may be earned by completing 12 units of Required Courses and 24 units of Major Electives with a "C" or better in each course.

REQUIRED COURSES

		UNITS
OPMAINT 228	Steam Plant Operation I	6
OPMAINT 229	Steam Plant Operation II	6

MAJOR ELECTIVES

Select at least 24 units from the courses below		UNITS
CRPNTRY 111A	Construction IA	3
CRPNTRY 241	Blueprint Reading and Estimating	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 110	Renewable Energy Systems	3
ECONMT 171	Electrical Codes and Ordinances I	3
ECONMT 181	Basic Wiring Practices	3
ECONMT 182	Basic Diagram and Circuit Practices	1
PLUMBNG 028	Plumbing Code I	3
PLUMBNG 031	Backflow Prevention Devices	3
REF A/C 159	Principles and Practices of Electric Circuits and Controls	4
REF A/C 160	Refrigeration System Principles and Practices	4
REF A/C 161	Air Conditioning System Principles and Practices	4
REF A/C 162	Piping Principles and Practices	4
REF A/C 164	Gas Heating Systems	4
REF A/C 165	Ice Storage Air Conditioning	4
REF A/C 176	Heating and Air Conditioning I	3
REF A/C 177	Heating and Air Conditioning II	3
REF A/C 187	Servicing I	3
REF A/C 188	Servicing II	3
REF A/C 202	Refrigeration Fundamentals	3
REF A/C 203	Compression Systems of Refrigeration	3
REF A/C 204	Technical Aspects of Refrigeration System Components	3
REF A/C 208	Refrigerant Management – EPA Section 608 Certification	4
REF A/C 199	Mechanical Code I - HVACR	3

PLUMBING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Plumbing —(day only)	T002911C	A.S.	21*	45	3	48
Plumbing —(day only)	T021855D	C		45	3	48
Plumbing: Construction Tech —(evening only)	T008484C	A.A.	21*	37	8	45
Plumbing: Construction Tech —(evening only)	T021856D	C		37	8	45

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Plumbing and Plumbing: Construction Tech Degrees & Certificates are designed to prepare students for employment in the plumbing and related pipe industry.

Career opportunities for students completing this program of study include, but are not limited to:

- First-Line Sup/Mgrs of Construction Trades and Extraction Workers
- Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
- Pipelayers
- Plumbers, Pipefitters, and Steamfitters
- Septic Tank Servicers and Sewer Pipe Cleaners

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential, commercial, and industrial service and repair or construction plumbing. Reading of blueprints, layout, estimating, installation of piping systems and fixtures, repair of supply and waste water systems are just some of the skills that will be mastered during this program.

The coursework in this program meets the requirements for entry into the plumbing trade.

Note: Students enrolling in Plumbing program should be able to commit to full-time student status, which is approximately 24 hours per week. This time commitment is necessary to allow for hands-on training with the laboratory applications used during the course of instruction.

PLUMBING

Associate in Science Degree

Major Units: 48

Requirements for the Associate in Science degree in Plumbing may be met by completing 45 units of Required Courses and 3 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Demonstrate proper procedures and techniques required to construct a plumbing system, utilizing plumbing tools, in preparation for the Apprentice-level employment in the plumbing trade.
- Perform standard industry trade calculations and formulas including measurements to lay out to design a basic plumbing system..
- Recall, restate and apply current plumbing codes, industry rules, regulations, legal standards and procedures to the construction of an operable plumbing system following industry guidelines and restrictions according to the Uniform Plumbing Code for construction of commercial and residential.

REQUIRED COURSES

SEMESTER I		UNITS
PLUMBNG 111	Introduction to Plumbing	3
PLUMBNG 112	Fundamentals of Plumbing	3
PLUMBNG 113	Basic Plumbing Principles and Practices	6
SEMESTER II		**UNITS**
PLUMBNG 121	Working Drawings and Layout I	3
PLUMBNG 122	Plumbing Mathematics and Procedures II	3
PLUMBNG 123	Plumbing Practices and Installation	6
SEMESTER III		**UNITS**
PLUMBNG 131	Working Drawing II	3
PLUMBNG 132	Plumbing Calculations and Procedures II	3
PLUMBNG 133	Installation and Plumbing Fixtures	6
SEMESTER IV		**UNITS**
PLUMBNG 141	Advanced Layout and Procedures	3
PLUMBNG 142	Servicing of Plumbing Fixtures and Appliances	3
PLUMBNG 143	Plumbing Code I	3
ELECTIVE		3

MAJOR ELECTIVES

Select at least 3 units from the courses below		UNITS
BLDGCTQ 101	Contract's License Law	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
PLUMBNG 026	Plumbing Layout and Estimating I	3
PLUMBNG 027	Plumbing Layout and Estimating II	3
PLUMBNG 028	Plumbing Code I	3
PLUMBNG 029	Plumbing Code II	3
PLUMBNG 031	Backflow Prevention Devices	3
PLUMBNG 033	Plumbing Code III	3
PLUMBNG 144	Special Purposes Installation	3
PLUMBNG 941	Cooperative Education-Plumbing	4

PLUMBING

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Plumbing may be earned by completing 45 units of Required Courses and 3 units of Electives listed under the Associate degree in Plumbing with a "C" or better in each course.

PLUMBING: CONSTRUCTION TECH

Associate in Arts Degree

Major Units: 45

Requirements for the Associate in Arts degree in Plumbing: Construction Tech may be met by completing 37 units of Required Courses and 8 units of Major Electives with a "C" or better along along with General Education units.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Use hand and power tools, testing equipment, and P.P.E required for performing work in the plumbing construction industry in accordance with industry standards.
- Perform plumbing operations using hand and power tools in accordance with industry plumbing practices.
- Perform trade calculations related to plumbing practices.

REQUIRED COURSES

SEMESTER I		UNITS
PLUMBNG 028	Plumbing Code I	3
PLUMBNG 112	Fundamentals of Plumbing	3
WELDG/E 201A	Welding-Gas and Electric IA	1
Elective		*5*

SEMESTER II		UNITS
BLDGCTQ 101	Contracts License Law	3
PLUMBNG 026	Plumbing Layout and Estimating I	3
PLUMBNG 029	Plumbing Code II	3
Elective		*3*

SEMESTER III		UNITS
BLDGCTQ 102	O.S.H.A. Based Safety Standards:Construction & Industry	2
OPMAINT 228	Steam Plant Operation I	6
PLUMBNG 027	Plumbing Layout and Estimating II	3

SEMESTER IV		UNITS
PLUMBNG 031	Backflow Prevention Devices	3
PLUMBNG 033	Plumbing Code III	3
PLUMBNG 246	Principles and Practices of Plumbing Design	4

MAJOR ELECTIVES

Select at least 8 units from the courses below		UNITS
ECONMT 181	Basic Wiring Practices	3
LABR ST 115	Workplace Health and Safety	1
MARKET 021	Principles of Marketing	3
OPMAINT 229	Steam Plant Operation II	6
PLUMBNG 941	Cooperative Education- Plumbing	4

Note: up to 8 Units of PLUMBNG 941 may be applied towards the Plumbing: Construction Tech Degree

PLUMBING: CONSTRUCTION TECH

Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Plumbing: Construction Tech may be earned by completing 37 units of Required Courses and 8 units of Major Electives listed under the Associate degree in Plumbing: Construction Tech with a "C" or better in each course.

RENEWABLE ENERGY: ENERGY EFFICIENCY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Energy Efficiency Technician	T031090C	A.S.	21*	36-38	4	40-42
Energy Systems Technology Fundamentals	T030906D	C		16	-	16
Weatherization and Energy Auditor (Forrmerly, Weatherization and Energy Efficiency0	T030210D	C		14	-	14

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible, except Weatherization and Energy Efficiency.

PROGRAM OVERVIEW

LATTC offers a series of courses for individuals interested in working in the new, emerging renewable energy and energy efficiency industry. This degree program includes courses that enable individuals to: (1) have the requisite knowledge and skills to obtain employment in the energy/utility sector and (2) obtain skills and expertise to pursue other renewable energy and/or energy efficiency occupations.

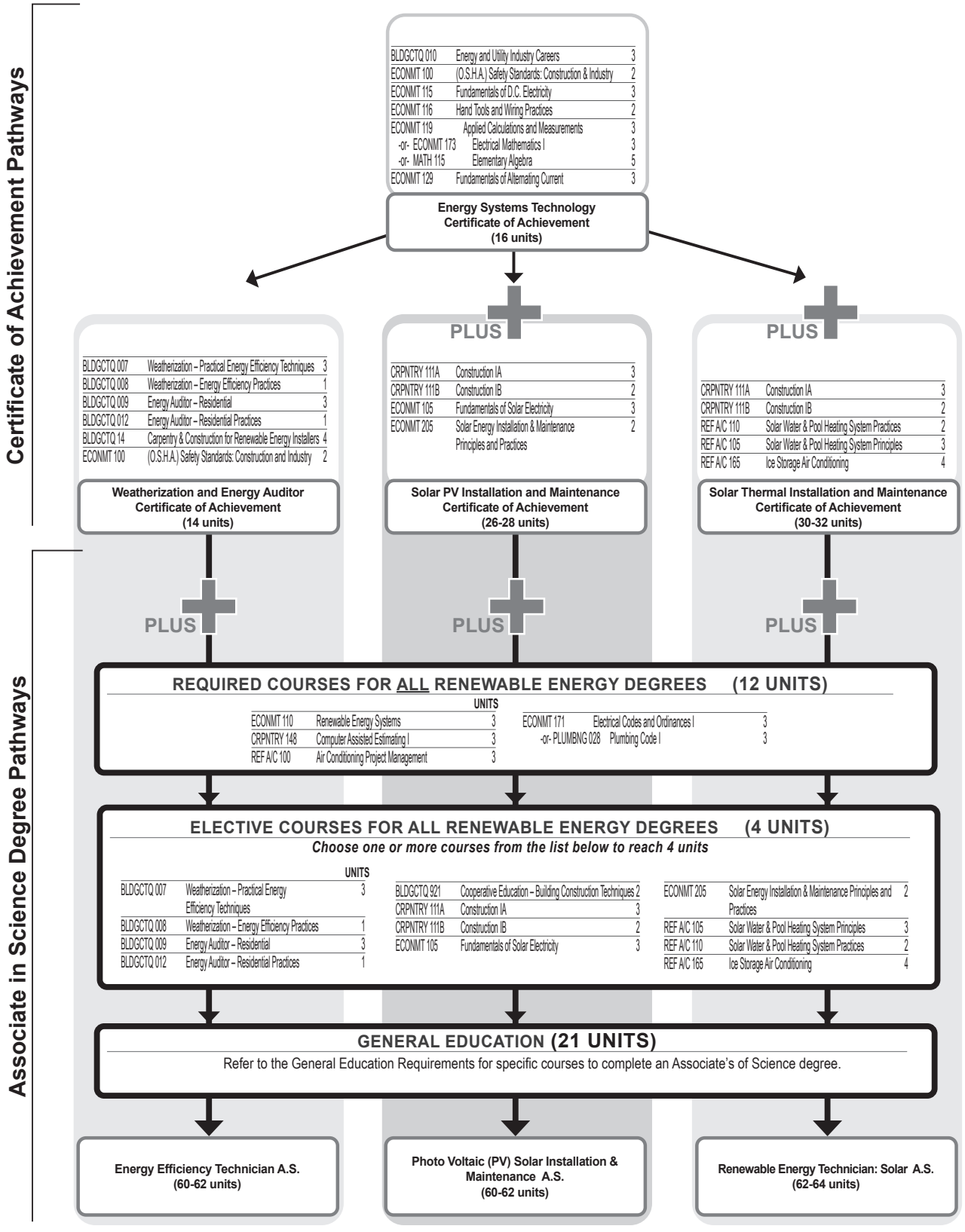
By fulfilling the program requirements, students will have the necessary knowledge and skills for a career in residential and commercial renewable energy-related occupations.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Use energy efficiency diagnostic tools such as door blowers and duct blasters to determine air infiltration into buildings.
- Calculate energy usage in terms of electrical, mechanical and heat energy units.
- Recommend alternative energy methods to reduce utility costs and provide green energy substitutes for fossil fuel energy forms.

RENEWABLE ENERGY CERTIFICATE AND DEGREE PATHWAYS



ENERGY EFFICIENCY TECHNICIAN

Associate in Science Degree

Major Units: 40-42
Required Units: 36-38
Elective Units: 4

Requirements for the Associate in Science degree in Renewable Energy Technician W/ Energy Efficiency Emphasis may be met by completing 36-38 units of Required Courses and 4 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 115	*Fundamentals of D.C. Electricity*	*3*
ECONMT 116	*Hand Tools and Wiring Practices*	*2*
BLDGCTQ 010	*Energy and Utility Industry Careers*	*3*
ECONMT 119	*Applied Calculations and Measurements*	*3*
OR		
ECONMT 173	*Electrical Mathematics I*	*3*
OR		
MATH 115 or higher Elementary Algebra		*3-5*

SEMESTER II		UNITS
ECONMT 129	Fundamentals of Alternating Current	3
ECONMT 100	(O.S.H.A.)Safety Standards: Construction and	2 Industry
CRPNTRY 148	Computer Assisted Estimating I	3
Elective(s)		2

SEMESTER III		UNITS
REF A/C 100	Air Conditioning Project Managemen	3
ECONMT 110	Renewable Energy Systems	3
BLDGCTQ 007	Weatherization – Practical Energy Efficiency Techniques	3
BLDGCTQ 008	Weatherization – Energy Efficiency Practices	1
Elective(s)		2

SEMESTER IV		UNITS
BLDGCTQ 009	Energy Auditor – Residential	3
BLDGCTQ 012	Energy Auditor – Residential Practices	1
ECONMT 171	Electrical Code and Ordinances I	3
OR		
PLUMBNG 028 Plumbing Code I		3
Elective(s)		2

MAJOR ELECTIVES

1 or more courses from the following list of courses		UNITS
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	ç
REF A/C 105	Solar Water & Pool Heating System Principles	3
REF A/C 110	Solar Water & Pool Heating System Practices	2
REF A/C 165	Ice Storage Air Conditioning	4
BLDGCTQ 921	Cooperative Education- Building ConstructionTechniques	4

ENERGY SYSTEM TECHNOLOGY

Certificate of Achievement

Major Units: 16

A Certificate of Achievement in Energy Systems Technology may be earned by completing 16 units of Required Courses listed below, with a "C" or better in each course.

The goal of the Energy Systems Technology Fundamentals Certificate of Achievement Program is to provide short-term industry-recognized training for entry-level professionals in the utility/energy sector; a significant industry sector in the Los Angeles region.

Skills gained from this program prepare a student for employment at the entry level in jobs such as; Los Angeles Department of Water and Power "Electrical Utility Helper" classification, Southern California Edison's "Utility Helper" position, City of Los Angeles "Electrical Craft Helper".

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Use electrical drawings and other related documents and graphics to communicate information effectively.
- Calibrate, use, and maintain tools, instrumentation and test equipment.

REQUIRED COURSES

		UNITS
BLDGCTQ 010	Energy and Utility Industry Careers	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
OR		
BLDGCTQ 102 (O.S.H.A.) Safety Standards		2
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2
ECONMT 119	Applied Calculations and Measurements	3
Or ECONMT 173 Electrical Mathematics I		3
ECONMT 129	Fundamentals of Alternating Current	3

WEATHERIZATION AND ENERGY AUDITOR

(Forrmerly, Weatherization and Energy Efficiency)

Certificate of Achievement

Major Units: 14

A Certificate of Achievement in Weatherization and Energy Auditor may be earned by completing 14 units of Required Courses listed, with a "C" or better in each course.

LATTC offers a series of courses for individuals interested in employment as weatherization and energy efficiency specialists. The courses are developed both for new building professionals and for professional builders/contractors already in the workforce in need of these skills. Homeowners may also find the introduction class helpful. Individuals will be prepared to be weatherization, energy efficiency, and retrofit technicians, home improvement retrofit trainees, residential air sealing technicians, insulation installers, energy conservation representatives or residential energy field auditors.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Perform new and retrofit weatherization and related energy efficiency operations using hand and power tools, testing equipment, and other P.P.E. in accordance to industry standards.
- Evaluate site and remediation strategies through building orientation, erosion, water management.

REQUIRED COURSES

		UNITS
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
BLDGCTQ 007	Weatherization – Practical Energy Efficiency Techniques	3
BLDGCTQ 008	Weatherization – Energy Efficiency Practices	1
BLDGCTQ 009	Energy Auditor – Residential	3
BLDGCTQ 012	Energy Auditor – Residential Practices	1
BLDGCTQ 014	Carpentry & Construction for Renewable Energy Installers	4

RENEWABLE ENERGY GENERATION, TRANSMISSION, AND DISTRIBUTION: POWERLINE MECHANIC

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Powerline Worker *(Formerly: Renewable Energy Generation, Transmission, and Distribution: Powerline Mechanic)*	T030963C	A.S.	21*	34-36	6-7	40-43
Powerline Worker: Pole Climbing *Formerly: Powerline Mechanic*	T030905D	C		18-20	-	18-20
Utility Industry Fundamentals	T030904D	C		19-21	-	19-21

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

LATTC offers Utility Industry Fundamentals and Powerline Mechanic Certificates of Achievement, as well as an Associate of Science degree in Renewable Energy Generation, Transmission, and Distribution with a Powerline Mechanic emphasis, for individuals interested in working in occupations in the utility industry sector—particularly transmission and distribution occupations. The courses comprising this program enable individuals to be prepared to obtain entry-level positions in the utility sector.

POWERLINE MECHANIC

Associate in Science Degree

Major Units: 40-43
Required Units: 34-36
Elective Units: 6-7

Requirements for the Associate in Science degree in Renewable Energy Generation, Transmission, & Distribution: Powerline Mechanic may be met by completing 34-36 units of Required Courses and 6-7 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Identify problems with overhead and underground powerline equipment and systems following established procedures and using a variety of troubleshooting techniques.
- Analyze and solve routine technical problems related to electrical technology and power distribution by applying the principles of mathematics and science.
- Install, maintain and remove power poles, transformers, structures and other utility equipment.

REQUIRED COURSES

SEMESTER I		UNITS
BLDGCTQ 010	*Energy and Utility Industry Careers*	*3*
ECONMT 100	*(O.S.H.A.) Safety Standards: Construction and Industry*	*2*
OR		
BLDGCTQ 102	*(O.S.H.A.) Safety Standards*	*2*
ECONMT 115	*Fundamentals of D.C. Electricity*	*3*
ECONMT 116	*Hand Tools and Wiring Practices*	*2*
ECONMT 119	*Applied Calculations and Measurements*	*3*
OR		
ECONMT 173	*Electrical Mathematics I*	*3*
ECONMT 129	*Fundamentals of Alternating Current*	*3*

SEMESTER II		UNITS
ECONMT 129	Fundamentals Alternating Current	3
ECONMT 130	Principles of Industrial Electric Power	3
BLDGCTQ 010	Energy and Utility Industry Careers	3

SEMESTER III		UNITS
ELECL 601	Power Line Mechanic – Trainee (600 Hours).	15

MAJOR ELECTIVES

Select 6-7 units from the courses below		UNITS
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 110	Renewable Energy Systems	3
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2
ECONMT 215	Small Wind Energy Systems Principles and Practices	3
REF A/C 105	Solar Water & Pool Heating System Principles	3
REF A/C 110	Solar Water & Pool Heating System Practices	2
REF A/C 165	Ice Storage Air Conditioning	4

POWERLINE MECHANIC

Certificate of Achievement

Major Units: 18-20

A Certificate of Achievement in Powerline Mechanic may be earned by completing 18-20 units of Required Courses with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

1. Practice appropriate procedures for self and others by safely utilizing equipment to complete industry procedures, including pole climbing, rigging and construction practices.

REQUIRED COURSES

		UNITS
ELECL 601	*Power Line Mechanic – Trainee (600 Hours)*	*15*
ECONMT 119	*Applied Calculation and Measurements*	*3*
OR		
ECONMT 173	*Electrical Mathematics I*	*3*
OR		
MATH 115	*Elementary Algebra*	*5*

UTILITY INDUSTRY FUNDAMENTALS

Certificate of Achievement

Major Units: 19-21

A Certificate of Achievement in Utility Industry Fundamentals may be earned by completing 19-21 units of Required Courses with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Use utility distribution and transmission drawings and other related documents and graphics to communicate information effectively.
- Calibrate, use, and maintain electrical utility tool, instrumentation and test equipment.

REQUIRED COURSES

		UNITS
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
ECONMT 130	Principles of Industrial Electric Power	3
BLDGCTQ 010	Energy and Utility Industry Careers	3
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2
ECONMT 129	Fundamentals of Alternating Current	3
ECONMT 119	Applied Calculations and Measurements	3
OR		
ECONMT 173	*Electrical Mathematics I (3)*	
OR		
MATH 115 or higher	*Elementary Algebra (3-5)*	

PHOTO VOLTAIC (PV) SOLAR INSTALLATION & MAINTENANCE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Photo Voltaic (PV) Solar Installation & Maintenance *(Formerly Renewable Energy with Emphasis in Solar PV Instillation and Maintenance)*	T031280C	A.S.	21*	34	8	42
Solar PV Installation and Maintenance Technician	T031081D	C		24-26	-	24-26

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

LATTC offers a series of courses for individuals interested in working in the new, emerging field of solar energy. The courses enable individuals to be prepared to become certified by North American Board of Certified Energy Practitioners (NABCEP). The solar courses have also obtained NABCEP approval. In addition, one of the courses--Fundamentals of Solar Electricity (ECONMT 105

—54 hours)--prepares individuals to be able to take the NABCEP Photovoltaic (PV) Entry Level Certificate of Knowledge test. This Certificate program also prepares individuals and is required to successfully complete other renewable energy or energy efficiency Certificate of Achievement and degree programs at the college. As such, it serves as one of the "stackable" certificates in the renewable energy/energy efficiency certificate and degree pathway.

PHOTO VOLTAIC (PV) SOLAR INSTALLATION & MAINTENANCE

Associate in Science Degree

Major Units: 42

Requirements for the Associate in Science degree in Photo Voltaic (PV) Solar Installation & Maintenance may be met by completing 34 units of Required Courses and 8 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Use hand and power tools, testing equipment, and P.P.E required for performing solar (PV) installation and maintenance work in accordance with industry standards.
- Perform solar (PV) installation and maintenance work utilizing hand and power tools, testing equipment, and other P.P.E. in accordance to industry standards.
- Function effectively individually and as a member of a technical team to execute energy efficiency operations.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 115	*Fundamentals of D.C. Electricity*	*3*
ECONMT 116	*Hand Tools and Wiring Practices*	*2*
ECONMT 119	*Applied Calculations and Measurements*	*3*
OR		
ECONMT 173	*Electrical Mathematics I*	*3*
OR		
MATH 115 or higher	*Elementary Algebra*	*3-5*
ECONMT 100	*(O.S.H.A.) Safety Standards: Construction and Industry*	*2*
OR		
BLDGCTQ 102	*(O.S.H.A.) Safety Standards: Construction and Industry*	*2*

SEMESTER II		UNITS
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 129	Fundamentals of Alternating Current	3
BLDGTCQ 014	Carpentry for Solar Installation	4

SEMESTER III		UNITS
ECONMT 110	Renewable Energy Systems	3
CRPNTRY 111B	Construction IB	2
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2
BLDGCTQ 010	Energy and Utility Industry Careers	3

SEMESTER IV		UNITS
ECONMT 171	Electrical Codes and Ordinances I	3
OR		
PLUMBNG 028	Plumbing Code I	3
CRPNTRY 148	Computer Assisted Estimating	3
Electives		6

MAJOR ELECTIVES

Select at least 4 units from the courses below		UNITS
REF A/C 100	Project Management	3
REF A/C 105	Solar Thermal Theory	3
REF A/C 110	Solar Water & Pool Heating System Practices	2

SOLAR PV INSTALLATION AND MAINTENANCE TECHNICIAN

Certificate of Achievement

Major Units: 24-26

A Certificate of Achievement in Solar PV Installation and Maintenance may be earned by successfully completing 24-26 units from the Required Courses listed below with a "C" or better grade in each course.

PROGRAM OVERVIEW

Program outcomes include; the use of hand and power tools to perform entry level laborer work within the utility energy sector, demonstration of sustainable industry principles and practices, perform calculations & measurements commiserate to entry level laborer work within the utility energy sector, and work independently & interdependently to safely accomplish shared professional outcomes. Skills gained from the program prepare a student for employment with contractors, individual facilities management companies, and other private or public agencies doing energy efficient building or performing energy upgrade retro-fitting on existing residential and commercial buildings.

Recommended sequence of courses for the Solar PV Installation and Maintenance Technician certificate of Achievement.

Upon successful completion of this program, a student will have the basic knowledge and skills for employment in the solar PV area of the energy industry at the entry level.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Use electrical drawings and other related documents and graphics to communicate information effectively.
- Perform basic solar (PV) installation and maintenance work utilizing hand and power tools, testing equipment, and other P.P.E. in accordance to industry standards.

REQUIRED COURSE

SEMESTER I		UNITS
ECONMT 119	Applied Calculations and Measurements	3
OR		
ECONMT 173	Electrical Mathematics I	3
OR		
MATH 115 or higher	Elementary Algebra	3-5
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2

SEMESTER II		UNITS
ECONMT 129	Fundamentals of Alternating Current	3
CRPNTRY 111A	Construction IA	3
CRPNTRY 111B	Construction IB	2
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2

SEMESTER III		UNITS
BLDGCTQ 010	Energy and Utility Industry Careers	3
ECONMT 105	Fundamentals of Solar Electricity	3
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2

SOLAR THERMAL INSTALLATION AND MAINTENANCE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Solar Thermal Installation and Maintenance *(Formerly Renewable Energy Technician: Solar)*	T031089C	A.S.	21*	38	4	42
Solar Thermal Installation and Maintenance *(Formerly Renewable Energy Technician: Solar)*	T031082D	C		30	-	30
At least 60 degree applicable units are required to earn an Associate degree. *GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details. These programs are Financial Aid Eligible.						

PROGRAM OVERVIEW

LATTC offers a series of courses for individuals interested in working in the new, emerging renewable energy and energy efficiency industry. This degree program includes courses that enable individuals to: (1) have the requisite knowledge and skills to obtain employment in the energy/utility sector, (2) be prepared to obtain solar thermal installation and maintenance entry-level occupations, and (3) obtain skills and expertise to pursue other renewable energy and/or energy efficiency occupations.

By fulfilling the program requirements, students have the necessary knowledge and skills for a career in residential and commercial solar thermal and renewable energy-related occupations.

SOLAR THERMAL INSTALLATION & MAINTENANCE

Associate in Science Degree

Major Units: 42
Required: 38
Electives 4

Requirements for the Associate in Science degree in Solar Thermal Installation and Maintenance may be met by completing 38 units of Required Courses and 4 unit of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students will be able to:

- Perform solar thermal installations and maintenance work utilizing hand and power tools.
- Certify the proper and safe operation of solar thermal systems utilizing proper test equipment.
- Calculate solar thermal system efficiency, performance, and installation costs.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 115	Fundamentals of D.C. Electricity	3
ECONMT 116	Hand Tools and Wiring Practices	2
ECONMT 119	Applied Calculations and Measurements	3
Or		
ECONMT 173	Electrical Mathematics I	3
Electives		2

SEMESTER II		UNITS
ECONMT 129	Fundamentals of Alternating Current	3
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
OR		
PLUMBNG 028	Plumbing Code I	3

SEMESTER III		UNITS
BLDGCTQ 010	Energy and Utility Industry Careers	3
CRPNTRY 111B	Construction IB	2
REF A/C 100	Air Conditioning Project Management	3
REF A/C 110	Solar Water & Pool Heating System Practices	2
REF A/C 165	Ice Storage Air Conditioning	4
Electives		2

SEMESTER IV		UNITS
REF A/C 110	Solar Thermal Practices	2
CRPNTRY 148	Computer Assisted Estimating	3
ECONMT 171	Electrical Codes and Ordinances	3
OR		
PLUMBNG 028	Plumbing Code I	3

ELECTIVE COURSES

REF A/C 100	Project Management	3
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2
BLDGTCQ 007	Weatherization – Practical Energy Efficiency Techniques	3
BLDGTCQ 008	Weatherization – Energy Efficiency Practices	1
BLDGTCQ 009	Energy Auditor – Residential	3
BLDGCTQ 012	Energy Auditor – Residential Practices	1
CRPNTRY 111A	Construction IA	3

SOLAR THERMAL INSTALLATION & MAINTENANCE

Certificate of Achievement

Units: 30

A Certificate of Achievement in Solar Thermal Installation & Maintenance may be earned by successfully completing 30 units from the Required Courses listed below with a "C" or better grade in each course.

PROGRAM OVERVIEW:

Program outcomes include; the use of hand and power tools to perform entry level laborer work within the solar thermal energy sector, demonstration of sustainable industry principles and practices, perform calculations & measurements commiserate to entry level laborer work within the utility energy sector, and work independently & interdependently to safely accomplish shared professional outcomes. Skills gained from the program prepare a student for employment with contractors, individual facilities management companies, and other private or public agencies doing energy efficient building or performing solar thermal energy upgrade retro-fitting on existing residential and commercial buildings.

Upon successful completion of this program a student will have the basic knowledge and skills for employment in the solar thermal area of the energy industry at the entry level.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students will be able to:

- Students will perform solar thermal installations and maintenance work utilizing hand and power tools.
- Students will certify the proper and safe operation of solar thermal systems utilizing proper test equipment.
- Students will analyze solar thermal problems and efficiency with the measurement of temperatures, pressures and flow rates.

REQUIRED COURSES

SEMESTER I		UNITS
ECONMT 119	Applied Calculations and Measurements	3
OR		
ECONMT 173	Electrical Mathematics I	(3)
OR		
MATH 115 or higher	Elementary Algebra	(3-5)
ECONMT 115	Fundamentals of D.C. Electricity	3

SEMESTER II		UNITS
CRPNTRY 111A	Construction IA	3
REF A/C 105	Solar Water & Pool Heating System Principles	3
REF A/C 110	Solar Water & Pool Heating System Practices	2
ECONMT 129	Fundamentals of Alternating Current	3

SEMESTER III		UNITS
CRPNTRY 111B	Construction IB	2
REF A/C 165	Ice Storage Air Conditioning	4
ECONMT 100	(O.S.H.A.) Safety Standards: Construction and Industry	2
BLDGCTQ 010	Energy and Utility Industry Careers	3
ECONMT 116	Hand Tools and Wiring Practices	2

SOLID WASTE MANAGEMENT TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Solid Waste Management Technology	T008489D	C		12	12	24
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The program is designed for any interested individuals seeking to learn the most updated information in recycling and solid waste management. The program addresses environmental, technological, political, legal, planning and economic aspects of recycling and solid waste management policies.

By fulfilling the program requirements, students are prepared and advance in the Solid Waste Management industry to work as a Solid Waste Operator, Solid Waste Technician, Solid Waste Supervisor, Hazardous Waste Operator, or Environmental Specialist.

Students completing the Certificate program will be proficient in performing the duties involved in landfill management including collection, transportation, storage and disposal.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Identify and discuss the sources of solid waste and its treatment technology.
- Describe the solid waste stream and the treatment processes and process control strategies.
- Use basic mathematical operations to solve entry level solid waste calculations and measurements.

SOLID WASTE MANAGEMENT TECHNOLOGY

Certificate of Achievement

Major Units: 24

A Certificate of Achievement in Solid Waste Management Technology may be earned by completing 12 units of Required Courses and 12 units of Major Electives listed with a "C" or better in each course.

REQUIRED COURSES

		UNITS
SWM TEK 101	Introduction to Solid Waste Management	3
SWM TEK 102	Collection Systems, Routing and Management	3
SWM TEK 107	Waste Reduction and Recycling	3
SWM TEK 108	Solid Waste Facilities	3

MAJOR ELECTIVES

Select at least 12 units from the courses below		UNITS
CHEM 051	Fundamentals of Chemistry I	5
GEOLOGY 001	Physical Geology	3
LABR ST 002	Collective Bargaining	3
LABR ST 003	Labor Relations Law	3
MGMT 002	Organization and Management Theory	3
MGMT 033	Personnel Management	3
MICRO 020	General Microbiology	4
WASTE 012	Wastewater Operations I	3

STREET MAINTENANCE TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Street Maintenance Technology	T008488C	AA	21*	30	6	36
Street Maintenance Technology	T021870D	C		30	6	36

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Street Maintenance Technology program is designed primarily for those involved in public works maintenance operations. Asphaltic and concrete pavement, construction, plan reading, calculation of materials, state and municipal codes, report writing, and heavy equipment operation and maintenance are some of the skills required in this field. To meet the training needs of persons interested in becoming a street maintenance worker, LATTC offers a Street Maintenance Associate degree and a Certificate of Achievement.

The street maintenance field has evolved into a broader category of workers. Workers in this arena are primarily employed by governmental agencies that perform maintenance operations on public highways and streets. Professionals in this field are involved at the ground level through upper level management.

By fulfilling the program requirements, students will have the necessary knowledge and skills for a career as a Street Services Worker. Knowledge and skills will be mastered in the area of installation and maintenance of various types of street construction and material including asphalt and concrete. Students will also gain the supervisory skills needed to be promoted into management.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Perform street services works utilizing hand and power tools.
- Perform calculations and measurements required for street services work in accordance to industry standards.
- Demonstrate various soft skills, such as the ability to work independently and interdependently to safely accomplish shared professional outcomes, needed for employment in the street maintenance technology industry.

STREET MAINTENANCE TECHNOLOGY

Associate in Arts Degree

Major Units: 36

Requirements for the Associate in Arts degree in Street Maintenance Technology may be met by completing 30 units of Required Courses and 6 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
ST MAIN 103	Street Maintenance (Applied Calculations in Public Works)	3
ST MAIN 200	Survey of Street Services	3
ST MAIN 201	Street Maintenance I	3

SEMESTER II		UNITS
ST MAIN 202	Street Maintenance II	3
ST MAIN 203	Street Maintenance III	3

SEMESTER III		UNITS
ST MAIN 204	Report Writing for Public Works	3
ST MAIN 205	Issues and Practices in Public Works	3

SEMESTER IV		UNITS
ST MAIN 206	Street Maintenance VI	3
ST MAIN 207	Street Maintenance VII - Hazardous Materials Emergency Management	3
ST MAIN 208	Street Maintenance Technology	3

MAJOR ELECTIVES

SELECT 6 UNITS FROM THE COURSES BELOW		UNITS
ST MAIN 209	Drivers License Preparation (Class "B")	2
ST MAIN 210	Motor Sweeper Operator	3
ST MAIN 240	Introduction to Management in Public Works	3
ST MAIN 242	Management in Public Works	3
ST MAIN 245	Leadership in Public Works	3
ST MAIN 252	Management in Public Works II	3

STREET MAINTENANCE TECHNOLOGY

Certificate of Achievement

Major Units: 36

A Certificate of Achievement in Street Maintenance Technology may be earned by completing 30 units of Required Courses and 6 units of Major Electives listed under the Associate degree in Street Maintenance Technology with a "C" or better in each course.

WATER SYSTEMS TECHNOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Water Systems Technology--Wastewater Technology	T010755C	A.S.	21*	21	9	30
Water Systems Technology-Supply Water Technology	T002917C	A.S.	21*	21	9	30
Supply Water Systems Technology	T010754D	C		21	9	30

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Projected retirements of existing operators and expansion of the industry will fuel the demand for occupations in Supply Water Distribution. The net result of these shifts will be increased openings for personnel in all areas: plant operations, distribution/collection field maintenance, administration, customer service, line supervision, meter readers, engineers, and plant maintenance. The Water Systems Technology program at LATTC offers students a choice of two concentrations within water systems industry:

The Water Systems Technology program at LATTC offers students a choice of two concentrations within water systems industry

- WASTEWATER OPTION offers courses focusing on preliminary, primary, secondary, and tertiary treatment systems as well as disinfection methods, solids treatment, and solids and effluent disposal practices.
- SUPPLY WATER OPTION offers courses focused on the operation and design of water systems, wells, pumps and meters; water treatment for potable water; and technical phases of automatic controls, including power and code considerations.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Discuss Regulations governing wastewater treatment and organizations involved.
- Describe the supply water treatment processes and process control strategies.
- Use advanced mathematical operations to solve applied wastewater calculations and measurements.

WATER SYSTEMS TECHNOLOGY--WASTEWATER TECHNOLOGY

Associate in Science Degree

Major Units: 30

Requirements for the Associate in Science degree in Water Systems Technology--Wastewater Technology may be met by completing 21 units of Required Courses and 9 units of Major Elective Courses with a "C" or better, along with general education courses meeting graduation requirements.

In the State of California, there are five operator grade levels of profession in operating and maintaining publicly owned wastewater treatment facilities. Each grade level requires passing an examination administered by the State of California, after meeting qualifying experience and educational requirements. An Associate degree and 6 years of performance of an Operator Duty while holding a certificate, qualifies a person to be promoted to grade five level.

REQUIRED COURSES

SEMESTER I		UNITS
WATER 101	Intro to water supply, water treatment & distribution	3
WATER 102	Basic Applied Calculations and Measurements	3
SEMESTER II		**UNITS**
WASTE 017	Wastewater Operations (Public Health, Environment & Management)	3
WASTE 012	Wastewater Operations I	3
SEMESTER III		**UNITS**
WASTE 013	Wastewater Operations II	3
WASTE 014	Wastewater Operations III	3

SEMESTER IV		UNITS
WASTE 018	Advanced Applied Calculations and Measurements	3

MAJOR ELECTIVES

Select 9 units from the courses below		UNITS
WASTE 016	Wastewater Operations V	3
BUS 032	Business Communications	3
BUS 033	Technical Report Writing	3
MATH 115	Elementary Algebra	5
MATH 125	Intermediate Algebra	5
WATER 001	Water Distribution I	3
WATER 004	Water Purification I (Potable)	3
SWM TEK 101	Introduction to Solid Waste Management	3
LABR ST 002	Collective Bargaining	3
LABR ST 003	Labor Relations Law	3

WATER SYSTEMS TECHNOLOGY-SUPPLY WATER TECHNOLOGY

Associate in Science Degree

Major Units: 30

Requirements for the Associate in Science degree in Water Systems Technology-Supply Water Technology may be met by completing 21 units of Required courses and 9 units of Major Elective courses with a "C" or better. Information on general education requirements may be found in the catalog under Graduation Requirements.

By fulfilling the program requirements, students are prepared for certification by the American Water Works Association (AWWA) as well as the State Department of Health. Students will also have the background to advance in the Supply Water Industry.

REQUIRED COURSES

		UNITS
WASTE 018	Water & Wastewater Mathematics	3
WATER 001	Water Distribution I	3
WATER 002	Water Distribution II	3
WATER 004	Water Purification I (Potable)	3
WATER 005	Water Treatment II (Potable)	3
WATER 101	Introduction to Supply Water Technology	3
WATER 102	Calculations and Measurement for Water Technology Programs	3

MAJOR ELECTIVES

Select 9 units from the courses below		UNITS
BUS 032	Business Communications	3
BUS 033	Technical Report Writing	3
LABR ST 002	Collective Bargaining	3
LABR ST 003	Labor Relations Law	3
MATH 115	Elementary Algebra	5
MATH 125	Intermediate Algebra	5
SWM TEK 101	Introduction to Solid Waste Management	3
WASTE 012	Wastewater Operations I	3
WASTE 016	Wastewater Operations V (Mechanics, Fluids, Electricity Management)	3
WASTE 017	Wastewater Operations VI (Public Health, Env. & Mgt.)	3

SUPPLY WATER SYSTEMS TECHNOLOGY

Certificate of Achievement

Major Units: 30

A Certificate of Achievement in Supply Water Systems Technology may be earned by completing 21 units of Required Courses and 9 units of Major Elective Courses listed under for the Associate degree in Water System Technology-Supply Water Technology with a "C" or better in each course.

WELDING, GAS AND ELECTRIC

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Welding, Gas and Electric*	T002916C	A.S.	21*	44	4	48
Welding, Gas and Electric	T021861D	C		44	4	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Associate in Science degree and Certificate of Achievement in Welding Gas and Electric is a full-time program designed for individuals seeking entry level positions in the field. Students enrolling in this program should be able to commit to full-time student status, which is approximately 21 hours per week. This time commitment is necessary to allow for hands-on training with the lab applications used during the course of instruction.

LATTC's welding program is a Certified Welding Test Center. Individuals seeking certification as a welder can take the required certification exams on site.

By fulfilling the program requirements, students will have the necessary skills for all positions that are related to welding on plate. This program prepares the student for fabrication work, construction work, job shops and other entry-to-mid level related jobs.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Name and select the appropriate hand and power tools in order to set up a portable oxyacetylene welding outfit and a 1" Vee Groove test Plate.
- Use welding equipment and jigs to set up and weld a Vee Groove in a vertical position using AWS Standards and safely procedures.
- Apply the proper procedures for calculation and measurements by sketching oblique, isometric and pictorial views to designated sizes.

WELDING, GAS AND ELECTRIC

Associate in Science Degree

Major Units: 48

Requirements for the Associate in Science degree in Welding, Gas and Electric may be met by completing 44 units of Required Courses and 4 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
WELDG/E 111	Acetylene Welding, Cutting and Brazing	5
WELDG/E 112	Welding Related Technical Instructions I	3
WELDG/E 113	Applied Mathematics I	3
ELECTIVE		1

SEMESTER II		UNITS
WELDG/E 121	Electric Welding I	5
WELDG/E 124	Blueprint Reading I	3
WELDG/E 125	Applied Mathematics II	3
ELECTIVE		1

SEMESTER III		UNITS
WELDG/E 131	Electric Welding II	5
WELDG/E 132	Blueprint Reading II	3
WELDG/E 133	Welding Related Technical Instruction III	3
ELECTIVE		1

SEMESTER IV		UNITS
WELDG/E 141	Electric Welding III	5
WELDG/E 142	Inert Gas Welding (TIG and MIG)	3
WELDG/E 143	Welding Related Technical Instruction IV	3
ELECTIVE		1

MAJOR ELECTIVES

Select at least 4 units from the courses below		UNITS
WELDG/E 020	Welding Laboratory - Gas & Electric	1
WELDG/E 030	Welding Laboratory - Electric I	1
WELDG/E 040	Welding Laboratory - Electric II	1
WELDG/E 050	Welding Laboratory - Electric III	1
WELDG/E 100	Metal Sculpture I	3
WELDG/E 101	Flux Cored Arc Welding	3
WELDG/E 200	Metal Sculpture II	3
WELDG/E 210	Metal Sculpting Laboratory	2

WELDING, GAS AND ELECTRIC

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Welding, Gas and Electric may be earned by completing 44 units of Required Courses and 4 units of Major Electives listed under the Associate degree in Welding, Gas and Electric with a "C" or better in each course.



Cosmetology (COS)*

ABOUT THE PATHWAY

The Cosmetology Pathway (COS) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce in Barbering, Cosmetology, and Skin Care fields. LATTC Cosmetology programs host external accreditation from the California State Board of Barbering and Cosmetology.

PATHWAY TEAM:

Dean: Vacant

Chair: Lidia Ley ~ Email: LEYLG@LATTC.EDU

CONTACT US:

Office Location: B2, Room 129

Email: Cosmetology@lattc.edu

Phone number: (213) 763-7133

Hours of operation: Monday - Friday 9:00am to 5:00pm

Website: http://pathways.lattc.edu/catalog-programs/cos/

PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Barbering	C	Skin Therapy	C
Cosmetology	AA/C		

*Pathway name under review.

BARBERING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Barbering	T032703D	C		48	-	48
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

Barbering is the study and practice of professional care of the hair, skin and nails. The LATTC Barbering program offers training in hair styling and cutting; chemical treatments, waving, shaving techniques, hair cutting with clippers, razor, shears; skin care, manicures. The Barbering occupation is governed by stringent state laws which stipulate that all who enter the field must complete 1500 hours of instruction. The LATTC Barbering program is carefully designed to prepare students to pass the California State Board of Barbering and Cosmetology examination. This program integrates a mock state board exam to help familiarize the students with the examination procedures. By fulfilling the program requirements, students will have the knowledge and skills needed to successfully compete in the Barbering industry as barber stylists, barber salon managers, educators, make-up artists (both conventional and theatrical), product sales, manicurists and business owners.

Important Notes: All hours and operations on time cards are kept for five years per state requirements.

Please note regarding transfer hours: Transfer students with more than 300 hours from another Barbering program who have not received college level units from an accredited institution may not transfer into Los Angeles Trade Technical College. However, students who cannot transfer hours can start the LATTC Barbering program at the freshman level.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Execute barbering skills in compliance with safety and sanitation rules set forth by the California Board of Barbering and Cosmetology using appropriate industry equipment and tools.
- Apply fundamental barbering techniques established by the California Board of Barbering and Cosmetology.
- Implement a variety of business practices, such as customer service and marketing skills, applicable to the barbering industry.

BARBERING

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Barbering may be earned by completing 48 units of Required Courses with a grade of "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
BAR 113	Freshman Barbering I	6
BAR 114	Freshman Barbering II	6
SEMESTER II		**UNITS**
BAR 123	Barbering Jr. Salon I	6
BAR 124	Barbering Jr. Salon II	6
SEMESTER III		**UNITS**
BAR 133	Barbering Jr. Salon III	6
BAR 134	Barbering Jr. Salon IV	6
SEMESTER IV		**UNITS**
BAR 143	Barbering Sr. Salon I	6
BAR 144	Barbering Sr. Salon II	6

Note: Completion of 1500 hours of instruction as required by the State Board of Cosmetology regulations.



COSMETOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Cosmetology	T002940C	A.A.	21*	48		48
Cosmetology	T021873D	C		48		48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Cosmetology is the study and practice of professional care of the hair, skin and nails. The LATTC Cosmetology program offers training in hair styling and cutting; chemical treatments, including hair coloring and lightening, permanent waving, hair straightening, hair cutting with clippers, razor, shears; skin care, and nail care. The Cosmetology occupation is governed by stringent state laws which stipulate that all who enter the field must complete 1600 hours of instruction. The LATTC Cosmetology program is carefully designed to prepare students to pass the California State Board of Barbering and Cosmetology examination. This program integrates a mock state board exam to help familiarize the students with the examination procedures. By fulfilling the program requirements, students will have the knowledge and skills needed to successfully compete in the Beauty industry as stylists, salon managers, educators, make-up artists (both conventional and theatrical), product sales, manicurists, and business owners.

Important Notes: All hours and operations on time cards are kept for five years per state requirements.

Please note regarding transfer hours: Transfer students with more than 300 hours from another Cosmetology program who have not received college level units from an accredited institution may not transfer into Los Angeles Trade Technical College. However, students who cannot transfer hours can start the LATTC Cosmetology program at the freshman level.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Perform Cosmetology skills set forth by the California Board of barbering and Cosmetology in accordance with industry safety and sanitation regulations.
- Demonstrate skills necessary to build and maintain an ongoing clientele in the cosmetology salon environment and industry.
- Demonstrate knowledge of cosmetology industry requirements regarding good work ethic, resumes and employment guidelines, track and maintain business transactions.

COSMETOLOGY

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Cosmetology may be met by completing 48 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CSMTLGY 111	Freshman Cosmetology	6
CSMTLGY 112	Junior Salon I	6
SEMESTER II		**UNITS**
CSMTLGY 121	Junior Salon II	6
CSMTLGY 122	Junior Salon III	6
SEMESTER III		**UNITS**
CSMTLGY 131	Tinting I	6
CSMTLGY 132	Tinting II	6
SEMESTER IV		**UNITS**
CSMTLGY 141	Senior Salon I	6
CSMTLGY 142	Senior Salon II	6

Note: Completion of 1500 hours of instruction as required by the State Board of Cosmetology regulations.

SUPPLEMENTARY ELECTIVES

		UNITS
CSMTLGY 101	Introduction to Cosmetology	3
CSMTLGY 210	Introduction to Hair Coloring and Styling	3
CSMTLGY 211	Intermediate Hair Coloring and Styling	3
CSMTLGY 214	Advanced Hair Coloring and Styling	3
CSMTLGY 215	Contemporary Styling Techniques	3
CSMTLGY 217	Multi-Texture Design (Level 1 to 2)	3
CSMTLGY 221	Advanced Makeup Techniques	3

COSMETOLOGY

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Cosmetology may be earned by completing 48 units of Required Courses listed under the Associate degree in Cosmetology with a grade of "C" or better in each course.

SKIN THERAPY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Skin Therapy	T031396D	C		24	-	24
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Trade Tech Skin Therapy Program offers training and technical instruction of; manual, electrical and chemical facials, temporary hair removal, makeup, chemistry, health, safety, electricity, spa ecology, anatomy and physiology. The LATTC Skin Therapy program prepares student to pass the State Board examination and integrates a mock State Board written and practical exam to further familiarize students with the process.

The Skin Therapy program prepares students for entry level positions that include but are not limited to; skin therapists, spa managers, educators, makeup artist, holistic skin care professionals, business owners, product & equipment sales representatives or managers.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students will be able to perform a variety of skin care techniques, while observing the safety and sanitation rules set forth by the California Board of Barbering and Cosmetology.
- Students will be able to apply skin therapy theory and clinical practice to effectively interact with and service guests in a real-world setting.

SKIN THERAPY

Certificate of Achievement

Major Units: 24

A Certificate of Achievement in Skin Therapy may be earned by completing 24 units of Required Courses listed with a grade of "C" or better in each course.

REQUIRED COURSES

		UNITS
CSMTLGY 035	Skin Therapy I	6
CSMTLGY 036	Skin Therapy II	6
CSMTLGY 037	Skin Therapy III	6
CSMTLGY 038	Skin Therapy IV	6



Culinary Arts (CA)*

ABOUT THE PATHWAY

The Culinary Arts Pathway (CA) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce in Food Service Industry. LATTC Culinary Arts programs host external accreditation from the American Culinary Federation Educational Foundation Accrediting Commission (ACFEFAC), at graduation with your AA degree you may apply for you first level of industry certification with the ACF.

PATHWAY TEAM

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PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Baking Professional	AA/C	Restaurant Management	AA
Culinary Arts	AA/C		

*Pathway name under review.

BAKING PROFESSIONAL

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Baking Professional	T008503C	A.A.	21*	48	-	48
Baking Professional	T021868D	C		48	-	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Professional Baking program is accredited by the American Culinary Federation Educational Foundation (ACFEF). This two year program prepares students for successful careers within the hospitality community. Baking program students, under the direct supervision of their chef instructor, will discuss, prepare, and analyze various baked goods including quick breads, yeast breads, laminated dough, specialty and wedding cakes, cookies, batters, and restaurant-style plated desserts. Baking formulas, cost controls, ingredient identification and usage is practiced throughout the program. Students prepare baked goods on a daily basis for a retail bakery located on the LATTC campus, the college cafeteria and faculty dining room as well as catering for special events and holiday functions.

The Professional Baking program will prepare students for employment in areas of baking and pastry arts. Students will demonstrate the ability to prepare and formulate baking/pastry recipes, assess food costs and sales prices, and organize daily tasks for successful completion of baked goods. The National Restaurant Association Serve Safe Exam is administered during the first semester.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Recognize industry standards for entry, supervisory, and management level employment.
- Demonstrate professional baking techniques according to industry standards and competencies.
- Evaluate proper practices in various industry segments.

BAKING PROFESSIONAL

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Baking Professional may be met by completing 48 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CLN ART 111	Culinary Arts Orientation I	4
CLN ART 112	Sanitation and Safety	2
CLN ART 170	Culinary Nutrition	2
PROFBKG 112	Baking Processes and Theory of Ingredients	4
SEMESTER II		**UNITS**
PROFBKG 121	Beginning Yeast Breads & Quickbreads	6
PROFBKG 122	Artesian Breads, Specialty Breads	6
SEMESTER III		**UNITS**
PROFBKG 131	Plated Restaurant Style Desserts	6
PROFBKG 132	Multi Component Desserts and Pastries	6
SEMESTER IV		**UNITS**
CLN ART 235	Menu Planning and Purchasing	4
CLN ART 240	Restaurant Supervision and Training	2
PROFBKG 141	Advanced Baking Centerpiece and Decorating Techniques	6

NOTE: Most Baking/Culinary Arts courses have prerequisites and/or co-requisites. Refer to the Course Descriptions section of the catalog for additional details.

BAKING PROFESSIONAL

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Baking Professional may be earned by completing 48 units of Required Courses listed under the Associate degree in Baking Professional with a grade of "C" or better in each course.

CULINARY ARTS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Culinary Arts*	T002938C	A.A.	21*	48	-	48
Culinary Arts	T021869D	C		48	-	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Culinary Arts department at LATTC has the proud history of being one of the oldest cooking schools in the nation. The program offers an extensive "hands on" and theory based culinary arts education that prepares students to enter the highly competitive hospitality industry. The department hosts professional industry-seasoned chefs as faculty, bringing their experiences from around the world. In addition to rigorous classroom instruction, students are trained in a working foodservice facility while attending classes. The Culinary Arts Associate in Arts degree and Certificate of Achievement are recognized and accredited by the American Culinary Federation Educational Foundation (ACFEF). On graduating from the LATTC Culinary Arts program, students are qualified to work as cooks, line cooks, caterers, private chefs, chef assistants, and sous chefs.

The Culinary Arts program has successfully prepared students for the hospitality industry for many years. By fulfilling the program requirements, students will possess a working foundation of skills necessary to work in a professional industry kitchen. Within the program, students will illustrate a working foundation of a professional industry kitchen. Students are proficient in cooking techniques and terminology including meat fabrication and cookery, hot and cold sauce preparation, vegetable identification and production, task organizing and time management. Successful students will graduate with a working knowledge of culinary nutrition and fundamental management skills, as well as National Restaurant Association Serve Safe Certification.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Recognize industry standards for entry, supervisory, and management level employment.
- Demonstrate professional culinary techniques according to industry standards.
- Evaluate proper practices in various industry segments.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

CULINARY ARTS

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Culinary Arts may be met by completing 48 units of Required Courses with a grade of "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CLN ART 120	Front of House/Dining Services	4
CLN ART 111	Culinary Arts Orientation I	4
CLN ART 112	Sanitation and Safety	2
CLN ART 170	Culinary Nutrition	2
SEMESTER II		**UNITS**
CLN ART 121	Garde Manger I—Baking	6
CLN ART 122	Garde Manger II - Charcuterie	6
SEMESTER III		**UNITS**
CLN ART 131	Culinary Arts - Breakfast I	6
CLN ART 132	Culinary Arts - Entremetier/Saucier	6
SEMESTER IV		**UNITS**
CLN ART 141	Butchery/Center of the Plate and Quantity Food Cookery	6
CLN ART 235	Menu Planning and Purchasing	4
CLN ART 240	Restaurant Supervision and Training	2

NOTE: Most Baking/Culinary Arts courses have prerequisites and/or co-requisites. Refer to the Course Descriptions section of the catalog for additional details.

CULINARY ARTS

Certificate of Achievement

Major Units: 48

Requirements for the Certificate of Achievement in Culinary Arts may be met by completing 48 units of Required Courses listed under the Associate degree in Culinary Arts with a "C" or better in each course.



RESTAURANT MANAGEMENT

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Restaurant Management*	T002939C	A.A.	21*	42	-	42

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

This program is Financial Aid Eligible.

PROGRAM OVERVIEW

The Greater Los Angeles area needs qualified individuals who can lead the numerous hotel, restaurant, and catering kitchens in our region. The Restaurant Management program at LATTC offers a foundation in management theory, cooking fundamentals, sanitation, safety and restaurant supervision. Students practice and demonstrate culinary and management skills in a working foodservice facility located on the college campus.

The Restaurant Management program provides a foundation in kitchen fundamentals including preparation of hot and cold sauces, vegetable and meat cookery, identifying accounting procedures and reports, operating kitchen equipment, and knowledge of management theory and supervision techniques.

By fulfilling the program requirements, students are prepared to find positions as restaurant managers, assistant managers, kitchen managers, dining room managers, or kitchen supervisors.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Demonstrate food service management skills in the hospitality industry.
- Demonstrate kitchen fundamentals as prescribed by industry standards.
- Employ management and supervision techniques in a hospitality setting.

RESTAURANT MANAGEMENT

Associate in Arts Degree

Major Units: 42

Requirements for the Associate in Arts degree in Restaurant Management may be met by completing 42 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
CLN ART 111	Culinary Arts Orientation I	4
CLN ART 112	Sanitation and Safety	2
CLN ART 120	Front of House/Dining Services	4
CLN ART 170	Culinary Nutrition	2

SEMESTER II		UNITS
ACCTG 021	Bookkeeping and Accounting I	3
RESTMGT 100	Restaurant Management	3

SEMESTER III		UNITS
CLN ART 121	Garde Manger I - Baking	6
CLN ART 122	Garde Manger II - Charcuterie	6

SEMESTER IV		UNITS
CLN ART 131	Culinary Arts - Breakfast I	6
CLN ART 235	Menu Planning and Purchasing	4
CLN ART 240	Restaurant Supervision and Training	2

NOTE: Most Baking/Culinary Arts courses have prerequisites and/or co-requisites. Refer to the Course Descriptions section of the catalog for additional details.



Design & Media Arts Pathway (DMA)

ABOUT THE PATHWAY

The Design & Media Arts Pathway (DMA) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce in creative and technology related fields.

PATHWAY TEAM

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PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Costume Technology	C	Fashion Merchandising	AS/C
Digital Media	AS/C	Fashion Technology	AA/C
Digital Media: Digital Video and Audio	AS/C	Sign Graphics	AA/C
Digital Media Mobile Application and Web Design	AS/C	Taloring	C
Fashion Design	AA/C	Visual Communications	AA/C

COSTUME TECHNOLOGY

Certification of Achievement

Certificate Units: 36
Required Units: 24
Elective Units: 12

PROGRAM OVERVIEW

The Costume Technology program in the Design and Media Arts Department provides instruction in the production of garments for theater, film, television and the entertainment industry. The program uses industry recognized tools and techniques to promote best practices in the innovative design of costumes. Students who complete this program will be prepared to enter careers in costume houses, theaters, as well as film and television studios. Upon completion of the program, students will be able to demonstrate proficiency in the use of a variety of costuming tools and techniques for the production of creative work.

PROGRAM LEARNING OUTCOMES

Upon completion of the program, students will be able to demonstrate proficiency in the use of a variety of costuming tools and techniques for the production of creative work.

REQUIRED COURSES

Semester I		UNITS
FASHDSN 207	Shoe and Accessories Design and Construction Level I	3
FASHDSN 210	Accessories for Costumes	3
FASHDSN 211	Corset Constructions for Costume	3
OR		
FASHDSN 137	Bustier Creation	(3)

Semester II		UNITS
FASHDSN 213	Women's Period Costumes	3
FASHDSN 215	Couture Sewing	3
FASHDSN 216	Costume Crafts	3
FASHDSN 217	Fabrication	3

ELECTIVE COURSES		UNITS
FASHDSN 208	Shoe and Accessories Design and Construction Level II	3
FASHDSN 212	Costume Illustration	3
FASHDSN 214	Men's Period Costumes	3
FASHDSN 218	Millinery	3
Total Certificate units		36*

Prerequisite Course units*

In order to take some of these courses, students must complete certain elective courses from the Fashion Design, Fashion Technology and English courses. Several of the courses share pre-requisites and the total number of prerequisites varies.

DIGITAL MEDIA

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Digital Media	T035215C	A.S.	21*	18	10	28
Digital Media	T035202D	C	-	18	-	18

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Digital Media program in the Design and Media Arts Pathway provides instruction using industry recognized software and cutting edge digital tools to promote best practices in the innovative design of digital media across a variety of delivery platforms. Students who complete this program will be prepared to enter careers as mobile and interactive application developers, web designers, audio and video producers as well as other technology-driven, creative fields.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree**, students will be able to:

- Use technology-related applications to produce creative work in a variety of emerging, multimedia fields.
- Create original images for a variety of digital media applications that reflect industry standards.

DIGITAL MEDIA

Associate in Science Degree

Major Units: 28

Requirements for the Associate in Science degree in Digital Media may be met by completing 18 units of Required Courses and 10 units of Elective courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements

REQUIRED COURSES

		UNITS
DIGLMD 100	Introduction to Digital Video	3
DIGLMD 101	Fundamentals of Digital Media	3
DIGLMD 103	Fundamentals of Digital Audio	3
DIGLMD 104	Digital Media Entrepreneurship	3
DIGLMD 105	Visual Design for Digital Media	3
DIGLMD 152	Digital Art	3

MAJOR ELECTIVES

		UNITS
VISCOM 103	Basic Computer Systems	2
VISCOM 118	Digital Drawing	2
VISCOM 129	Digital Photo Manipulation	2
VISCOM 135	Web Graphics - Preproduction for Websites	2
VISCOM 133	Digital Portfolio Preparation	2

DIGITAL MEDIA

Certificate of Achievement

Major Units: 18

Requirements for the Certificate of Achievement in Digital Media may be met by completing 18 units of Required Courses listed under the Associate degree in Digital Media with a "C" or better in each course.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate**, students will be able to:

- Students will be able to use technology-related applications to produce creative work in a variety of emerging, multimedia fields.

DIGITAL MEDIA: DIGITAL VIDEO AND AUDIO

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Digital Media: Digital Video and Audio	T035296C	A.S.	21*	30	-	30
Digital Media: Digital Video and Audio	T035292D	C		30	-	30

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Digital Media: Digital Video and Audio program in the Design and Media Arts Pathway uses industry recognized software and cutting edge digital tools to promote best practices in the innovative design of digital video and audio across a variety of delivery platforms. Students who complete this program will be prepared to enter careers in film, television, music and other media related industries.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Create professional quality video and audio productions using a variety of digital tools and technologies.

DIGITAL MEDIA: DIGITAL VIDEO AND AUDIO

Associate in Science Degree

Major Units: 30

Requirements for the Associate in Science degree in Digital Media: Digital Video and Audio may be met by completing 30 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
DIGLMD 100	Introduction to Digital Video	3
DIGLMD 101	Fundamentals of Digital Media	3
DIGLMD 103	Fundamentals of Digital Audio	3
SEMESTER II		**UNITS**
DIGLMD 104	Digital Media Entrepreneurship	3
DIGLMD 105	Visual Design for Digital Media	3
DIGLMD 152	Digital Art	3

SEMESTER III		UNITS
DIGLMD 106	Essentials for Live Audio	3
DIGLMD 107	Digital Audio Studio Recording	3
DIGLMD 110	Visual Effects and Motion Graphics	3
SEMESTER IV		**UNITS**
DIGLMD 115	Video Editing	3

DIGITAL MEDIA: DIGITAL VIDEO AND AUDIO

Certificate of Achievement

Major Units: 30

A Certificate of Achievement in Digital Media: Digital Video and Audio may be earned by completing 30 units of Required Courses listed under the Associate degree in Digital Media: Digital Video and Audio with a "C" or better in each course.

DIGITAL MEDIA: MOBILE APPLICATION AND WEB DESIGN

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Digital Media Mobile Application and Web Design	T035275C	A.S.	21*	45	-	45
Digital Media Mobile Application and Web Design	T035278D	C	-	45	-	45

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Digital Media: Mobile Application and Web Design program in the Design and Media Arts Pathway uses industry recognized tools and technologies to promote best practices in the design, development, testing and delivery of a variety of applications. Students who complete this program will be prepared to enter careers as mobile and interactive application developers, web designers and other technology related careers in this rapidly evolving industry.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Students will be able to develop a variety of mobile and web application at a level commensurate with industry standards.

DIGITAL MEDIA MOBILE APPLICATION AND WEB DESIGN

Associate in Science Degree

Major Units: 45

Requirements for the Associate in Science degree in Digital Media Mobile Application and Web Design may be met by completing 45 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
DIGLMD 100	Introduction to Digital Video	3
DIGLMD 101	Fundamentals of Digital Media	3
DIGLMD 103	Fundamentals of Digital Audio	3
DIGLMD 104	Digital Media Entrepreneurship	3
SEMESTER II		**UNITS**
DIGLMD 105	Visual Design for Digital Media	3
DIGLMD 152	Digital Art	3
DIGLMD 116	Introduction to Web Page Design	3
DIGLMD 117	Intermediate Web Page Design	3
SEMESTER III		**UNITS**
DIGLMD 118	Image Manipulation for Multimedia	3
DIGLMD 150	Introduction to Mobile Applications	3
DIGLMD 151	Introduction to Interface Design	3
DIGLMD 153	2D Animation	3
SEMESTER IV		**UNITS**
DIGLMD 155	Mobile Application Production	3
COINFO 042	Video Game Programming	3
COINFO 742	Web Development Using PHP MySQL	3

DIGITAL MEDIA MOBILE APPLICATION AND WEB DESIGN

Certificate of Achievement

Major Units: 45

A Certificate of Achievement in Digital Media Mobile Application and Web Design may be earned by completing 45 units of Required Courses listed under the Associate degree in Digital Media Mobile Application and Web Design with a "C" or better in each course.

FASHION

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Fashion Design — (day only)	T002925C	AA	21*	46	2	48
Fashion Design — (day only)	T021865D	C		46	2	48
Fashion Technology —(evening only)	T008501C	A.A.	21*	36	6	42
Fashion Technology —(evening only)	T021866D	C		28	-	28

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Los Angeles Trade Technical College Fashion Design and Fashion Technology programs prepare students for careers in all areas of apparel manufacturing from assistant designers to production management.

The Fashion Design and Fashion Technology programs provide specialized training in current methods of garment construction, illustration, draping, pattern making, and grading. Instruction includes the most widely used apparel software programs. In addition to foundational principles, students are encouraged to experiment with creative design problems throughout the two year program. The Fashion Design program is staffed by professional instructors who have spent many years in the fashion industry as designers, pattern makers, production managers and manufacturers in all categories of apparel. The Fashion Design classrooms are equipped like design rooms complete with industrial sewing machines, pressing equipment, grading machines, dress forms and industrial cutting tables. In addition, the college has state of the art computer lab classrooms where instruction is offered in Gerber Technology, Lectra Inc.,Tukatech and PAD Systems, which allows students to master technology along with traditional skills. The newest computer lab was developed to answer industry demand for training in fashion and technical illustration using Adobe Photoshop and Illustrator.

The fashion community contributes to the program through student scholarships donated by professional groups, companies and individuals. Fashion professionals are invited to work with and critique student designs and prominent speakers visit the campus on a regular basis to lecture on current fashion industry trends. Foreign and domestic fashion publications are available for student reference as well as an extensive collection of historical fashion magazines. The Sharon Tate Costume Collection houses a vast collection of apparel from noted designers and historical costumes, used to inspire students and offer creative solutions to design problems. In addition, the apparel community provides internship opportunities for department students through the Cooperative Education courses. These internships offer students real life experiences and potential for permanent employment.

By fulfilling the program requirements, students are proficient in construction and assembly, patternmaking and grading, technical and fashion illustration, and draping techniques used to manufacture soft goods. In addition, they will understand and be able to apply computer technology to industry related tasks. The comprehensive two year program stresses industrial problem solving using professional techniques.

Los Angeles is the leading center for apparel manufacturing in the United States. These firms require personnel trained in the design and technical aspects of clothing production. Many local apparel manufacturing firms employ LATTC graduates as designers, assistant designers, grader/marker makers, pattern makers, technical designers, specification writers, and production managers. The program equips graduates with the skills necessary to work in the local industry as well as the global market.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Design and construct apparel, from conception to finished garment, using industry standard tools.
- Develop industry recognized documents and technical specifications for production and product development of apparel.

FASHION DESIGN

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Fashion Design may be met by completing 46 units of Required Courses and 2 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements

The daytime fashion design classes are part of a structured program, which each student are strongly advised take in sequential order. Each semester is divided into two segments, and classes meet five days per week.

REQUIRED COURSES

SEMESTER I		UNITS
FASHDSN 111	Clothing Construction	5
FASHDSN 112	Basic Fashion Art and Design	5
FASHDSN 119A	History of Costume I	1.5
SEMESTER II		**UNITS**
FASHDSN 120	Basic Pattern Making & Design	5
FASHDSN 122	Grading and Marker Making	5
FASHDSN 125A	Textiles	1.5
SEMESTER III		**UNITS**
FASHDSN 130	Draping & Design	5
FASHDSN 132	Advanced Patterns and Design	5
FASHDSN 264	Apparel Computer Analysis	1

SEMESTER IV		UNITS
FASHDSN 139	Coordinated Sportswear	2
FASHDSN 141	Advanced Design	5
FASHDSN 142	Manufacturing Production	5

MAJOR ELECTIVES

Select at least 2 units from the courses below		UNITS
FASHDSN 118	Advanced Clothing Construction	2
FASHDSN 119B	History of Costume II	1.5
FASHDSN 125B	Textile Science	1.5
FASHDSN 126	Manufacturing and Design Room Processes	1
FASHDSN 137	Bustier Creation	2
FASHDSN 140	Advanced Draping and Design	2
FASHDSN 147	Fashion Show Production	2
FASHDSN 148	Active Wear Design	2
FASHDSN 151	Advanced Arts and Design	2
FASHDSN 941	Cooperative Education- Fashion Design	4
FASHMER 001	Entrepreneurial Fashion	3
FASHMER 020	Apparel Product Development	3
FASHMER 025	Fashion and Industry Interchange	3
FASHMER 050	International Fashion Business	3

FASHION DESIGN

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Fashion Design may be earned by completing 46 units of Required Courses and 2 units of Major Electives listed under the Associate degree in Fashion Design with a "C" or better in each course.

FASHION TECHNOLOGY

Associate in Arts Degree

Major Units: 42

Requirements for the Associate in Arts degree in Fashion Technology may be met by completing 36 units of Required Courses and 6 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

The Fashion Technology Associate in Arts degree is designed for those students attending in the evening and on Saturday . Since the structure of the evening courses does not allow for extensive lab experience, the department has a comprehensive internship program offered through the Cooperative Education Office, which allows students to obtain valuable on the job experience.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Design and construct apparel, from conception to finished garment, using industry standard tools.
- Develop industry recognized documents and technical specifications for production and product development of apparel.
- Use technology related design applications a level commensurate with apparel industry standards.

REQUIRED COURSES

		UNITS
FASHDSN 225	Pattern Making and Design I	2
FASHDSN 226	Pattern Making and Design II	2
FASHDSN 227	Pattern Making and Design III	2
FASHDSN 228	Pattern Grading and Design I	2
FASHDSN 229	Pattern Grading and Design II	2
FASHDSN 236	Fashion Sketching and Design I	2
FASHDSN 237	Fashion Sketching and design II	2
FASHDSN 238	Fashion Sketching and Design III	2
FASHDSN 239	Gown Draping and Design I	2
FASHDSN 240	Gown Draping and Design II	2
FASHDSN 241	Gown Draping and Design II	2
FASHDSN 941	Cooperative Education – Fashion Design	8

—AND—

Select 6 units from one of the options below:

OPTION 1: SAMPLE MAKING AND DESIGN		UNITS
FASHDSN 222	Sample Making and Design I	2
FASHDSN 223	Sample Making and Design II	2
FASHDSN 224	Sample Making and Design III	2

OPTION 2: TAILORING TECHNIQUES		UNITS
TAILRNG 250	Tailoring Techniques I	2
TAILRNG 251	Tailoring Techniques II	2
TAILRNG 252	Tailoring Techniques III	2
TAILRNG 253	Tailoring Techniques IV	2

MAJOR ELECTIVES

Select at least 6 units from courses below		UNITS
FASHDSN 244	Photoshop for Fashion Design	2
FASHDSN 255	Computerized Product Design	2
FASHDSN 256	CAD Apparel Pre-Production Techniques	2
FASHDSN 257	Apparel Pattern Design Systems	2
FASHDSN 250	Beginning Computer Apparel Systems	2
FASHDSN 258	Computer-Aided Pattern Systems	2
FASHDSN 270	Illustrator for Fashion Design	2

NOTE: Courses offered for the Fashion Design, Associate in Arts degree may be substituted for courses required for the Fashion Technology, Associate in Arts degree

FASHION TECHNOLOGY

Certificate of Achievement

Major Units: 28

A Certificate of Achievement in Fashion Technology may be earned by completing 28 units of Required Courses with a "C" or better in each course.

A full range of condensed lab courses in clothing construction, sketching, grading, draping and pattern making are offered during the evening and on Saturdays. These courses may be taken in any order, and lead to a Certificate in Fashion Technology.

By fulfilling the program requirements, students are proficient in construction and assembly methods, illustration, both technical and fashion, pattern making, grading, and draping techniques. These courses will prepare students for apparel computer courses where they will apply skills using the latest computer technology.

REQUIRED COURSES		UNITS
FASHDSN 225	Pattern Making and Design I	2
FASHDSN 226	Pattern Making and Design II	2
FASHDSN 227	Pattern Making and Design III	2
FASHDSN 228	Pattern Grading and Design I	2
FASHDSN 229	Pattern Grading and Design II	2
FASHDSN 236	Fashion Sketching and Design I	2
FASHDSN 237	Fashion Sketching and Design II	2
FASHDSN 238	Fashion Sketching and Design III	2
FASHDSN 239	Gown Draping and Design I	2
FASHDSN 240	Gown Draping and Design II	2
FASHDSN 241	Gown Draping and Design III	2

AND

Select six units from one of the options below:

OPTION 1: SAMPLE MAKING AND DESIGN		UNITS
FASHDSN 222	Sample Making and Design I	2
FASHDSN 223	Sample Making and Design II	2
FASHDSN 224	Sample Making and Design III	2

OPTION 2: TAILORING TECHNIQUES		UNITS
TAILRNG 250	Tailoring Techniques I	2
TAILRNG 251	Tailoring Techniques II	2
TAILRNG 252	Tailoring Techniques III	2
TAILRNG 253	Tailoring Techniques IV	2

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

FASHION MERCHANDISING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Fashion Merchandising	T008653C	A.S.	21*	45	-	45
Fashion Merchandising	T021867D	C		45	-	45

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Fashion Merchandising is the-planning, organization, and development of fashion products to be sold at a profit. The program at LATTC is unique in that it offers instruction covering both manufacturing processes and retail expertise. Computer technology plays an important role in the program offering instruction on AIMS software.

Retail is a major industry in Southern California and fashion constitutes one of its largest segments. Retail positions range from major department stores to specialty outlets, and from personal stylists to employment in wholesale manufacturing. Los Angeles has taken the lead as the largest apparel manufacturing center in the United States, and the Fashion Merchandising curriculum is designed to provide specialized training in fashion trends, and consumer demand, as well as wholesale concepts.

Upon completion of the program, students will understand the cultural aspects of fashion in history, entrepreneurial opportunities in the fashion industry, and how to communicate the latest fashion trends and styling. Students will also be proficient in international business processes preparing them for the global apparel market.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Students will develop operational and promotional activities necessary to launch and sell brands / private labels for a retail or wholesale business.

FASHION MERCHANDISING

Associate in Science Degree

Major Units: 45

Requirements for the Associate in Science degree in Fashion Merchandising may be met by completing 45 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
FASHMER 010	Retail Merchandising	3
FASHMER 025	Fashion and Industry Interchange	3
FASHMER 021	Cultural Perspectives of Dress	3
CAOT 082	Microcomputer Software Survey in the Office	3
-or- CO INFO 701	*Introduction to Computers & Their Uses (3)*	

SEMESTER II		UNITS
FASHMER 020	Apparel Product Development	3
FASHMER 035	Fashion Promotion	3
FASHMER 040	Modern Merchandising Math	3
CAOT 085	Microcomputer Office Applications: Spreadsheet	3
-or- CAOT 084	*Microcomputer Office Applications: Word Processing (3)*	
-or- BUS 001	*Introduction to Business (3)*	

SEMESTER III		UNITS
FASHMER 030	Wholesale Merchandising	3
FASHMER 050	International Fashion Business	3
FASHDSN 244	Photoshop for Fashion Design	2
-or- VISCOM 129	*Digital Photo Manipulation (2)*	
-or- FASHDSN 270	*Illustrator for Fashion Design (2)*	
COMM 101	Public Speaking	3

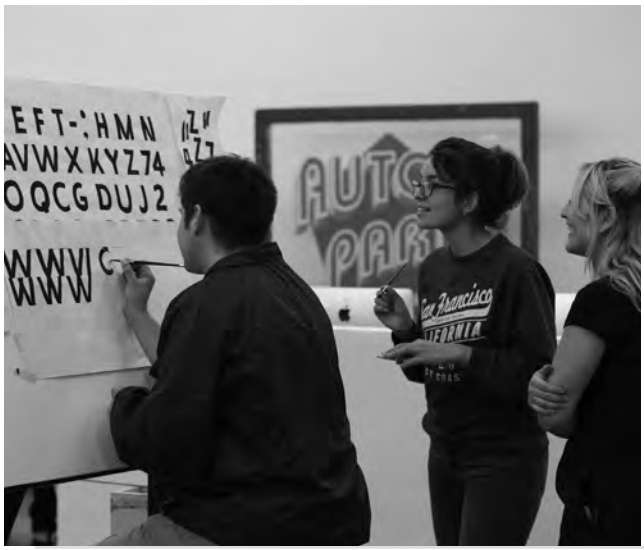
SEMESTER IV		UNITS
FASHMER 001	Entrepreneurial Fashion	3
FASHMER 027	Advanced Retail Merchandising	3
-or- FASHMER 041	*Fashion Merchandise Buying (3)*	
FASHMER 941	Cooperative Education – Fashion Merchandising	4

FASHION MERCHANDISING

Certificate of Achievement

Major Units: 45

Requirements for the Certificate of Achievement in Fashion Merchandising may be met by completing 45 units of Required Courses listed under the Associate degree in Fashion Merchandising with a "C" or better in each course.



SIGN GRAPHICS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Sign Graphics	T002921C	AA	21*	40	4	44
Sign Graphics	T021862D	C		40	4	44

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Sign makers design and produce signs to advertise and identify businesses, industries, public services, entertainment, as well as other areas. Students learn how to design and execute a wide variety of signs including temporary signs such as posters and paper banners plus permanent signs on wood, metal, canvas, vehicles, walls and glass. Students learn the fundamentals of lettering, design, composition, and color, while practicing hand and eye coordination. Students also learn to both draw and brush a diverse set of alphabets and a variety of interior and exterior signs. In addition, students study how to design and execute signs on sign specific software including patterns, vinyl lettering, and vinyl application plus how to use plotters, scanners, and clip art images.

Many sign makers are self-employed, work freelance or are employed in a commercial sign shop. Employment opportunities are competitive and only those with good hand skills and knowledge have the best chance for employment. Specialty skill instruction like dimensional letters, sandblasted signs, gold leaf and high-end layout and design are offered to advanced students. Advanced students participate in a business module for pricing and eventual self-employment.

By fulfilling the program requirements, students are proficient in basic hand lettering, sign design and layout, the production of temporary signs, exterior permanent signs, window signs and specialty signs, computer operation including printing, cutting and applying vinyl lettering and general production skills needed to complete a successful sign. Students will also understand basic pricing and sales techniques, record keeping or small business operation, and obtaining licenses.

Elective courses in silk screening and mural painting are also offered in this program. Silk screening is a printing method for multiple or large number jobs. The student will learn how to make a screen, cut a variety of stencils, prepare the screen and print an image. Proper ink usage and clean-up will be taught. Students will print on a variety of substrates including multicolor prints on T-shirts.

In the mural painting course, techniques for producing large format murals are taught using a variety of methods including the grid method. Students will learn layout and design, pattern making and transferring artwork to the wall. Surface preparation, paints, tools and brushes will also be covered.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Design and produce signs to industry standards using hand lettering techniques and the latest digital printing options.

SIGN GRAPHICS

Associate in Arts Degree

Major Units: 44

Requirements for the Associate in Arts degree in Sign Graphics may be met by completing 40 units of Required Courses and 4 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
SGNGRPH 101	Individual Lettering	10
SEMESTER II		**UNITS**
SGNGRPH 102	Exterior Display Signs	10
SEMESTER III		**UNITS**
SGNGRPH 103	Window Signs	10
SEMESTER IV		**UNITS**
SGNGRPH 104	Advanced Computer and Design	10

MAJOR ELECTIVES

Select at least 4 units from the courses below		UNITS
SGNGRPH 201	Fundamentals of Mural Painting	2
SGNGRPH 203	Screen Printing I	2
SGNGRPH 205	Screen Printing Computer Techniques	2
SGNGRPH 212	Sign Design and Layout	2

SIGN GRAPHICS

Certificate of Achievement

Major Units: 44

A Certificate of Achievement in Sign Graphics may be earned by completing 40 units of Required Courses and 4 units of Major Electives listed under the Associate degree in Sign Graphics with a "C" or better in each course.

TAILORING

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Tailoring	T002926D	C		12	8	20
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The LATTC Tailoring Certificate program is uniquely designed for the working adult. Courses are offered during evening and weekend hours and cover all aspects of the pattern making and construction techniques necessary to complete tailored garments. Courses include construction techniques for bespoke men's and women's garments including trousers, jackets and coats. Tailors are distinctly different from dressmakers in that they are specialized in constructed garments such as jackets, coats and trousers or slacks.

The skills for custom tailoring are always in demand. Stylists work with tailors to outfit sports figures, celebrities, and specialty customers. Costume designers work with tailors to create multiple versions of garments needed in film production, and customers seeking individual design and fit seek out the assistance of professional tailors.

The Tailoring Certificate of Achievement prepares students to construct trousers, jackets, vests and coats for personal fit and for custom tailoring. Upon completion of the program, students are able to draft patterns as well as construct tailored garments.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students will be able to draft and construct tailored men's style clothing using custom and industry techniques.

TAILORING

Certificate of Achievement

Major Units: 20

A Certificate of Achievement in Tailoring may be earned by completing 12 units of Required Courses and 8 units of Major Electives listed, with a "C" or better in each course.

REQUIRED COURSES

		UNITS
TAILRNG 250	Tailoring Techniques I	2
TAILRNG 251	Tailoring Techniques II	2
TAILRNG 252	Tailoring Techniques III	2
TAILRNG 253	Tailoring Techniques IV	2
TAILRNG 255	Men's Pattern Drafting I	2
TAILRNG 256	Men's Pattern Drafting II	2

MAJOR ELECTIVES

Select at least 8 units from the courses below		UNITS
FASHDSN 118	Advanced Clothing Construction	2
FASHDSN 126	Manufacturing and Design Room Process	1
FASHDSN 137	Bustier Creation	2
FASHDSN 138	Tailoring Techniques for Ready to Wear	2
FASHDSN 140	Advanced Draping and Design	2
FASHDSN 147	Fashion Show Production	2
FASHDSN 148	Activewear Design	2
FASHDSN 151	Advanced Fashion Art and Design	2
FASHDSN 941	Cooperative Education-Fashion Design	4
FASHMER 001	Entrepreneurial Fashion	3
FASHMER 020	Apparel Product Development	3
FASHMER 025	Fashion and Industry Interchange	3
FASHMER 030	Wholesale Merchandising	3
FASHMER 050	International Fashion Business	3
FASHDSN 222	Sample Making And Design I	2
FASHDSN 223	Sample Making And Design II	2
FASHDSN 224	Sample Making And Design III	2
FASHDSN 225	Pattern Making And Design I	2
FASHDSN 226	Pattern Making And Design II	2
FASHDSN 227	Pattern Making And Design III	2
FASHDSN 228	Pattern Grading And Design I	2
FASHDSN 229	Pattern Grading And Design II	2
FASHDSN 236	Fashion Sketching And Design I	2
FASHDSN 237	Fashion Sketching And Design II	2
FASHDSN 238	Fashion Sketching And Design III	2
FASHDSN 239	Gown Draping And Design I	2
FASHDSN 240	Gown Draping And Design II	2
FASHDSN 241	Gown Draping And Design III	2
FASHDSN 244	Photoshop for Fashion Design	2
FASHDSN 250	Beginning Computer Apparel Systems	2
FASHDSN 255	Computerized Product Design	2
FASHDSN 256	CAD Apparel Pre-Production Techniques	2
FASHDSN 257	Apparel Pattern Design Systems	2
FASHDSN 258	Computer-Aided Pattern Systems Applications	2
FASHDSN 264	Apparel Computer Systems Analysis	2
FASHDSN 270	Illustrator For Fashion Design	2
FASHDSN 285	Directed Study - Fashion Design	2

VISUAL COMMUNICATIONS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Visual Communications	T008493C	A.A.	21*	46	2	48
Visual Communications	T021863D	C		46	2	48

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

The Visual Communications program at LATTC is the starting point for exciting careers in animation, art direction, digital imaging, graphic design, illustration, multi-media, web design and other related fields. The fast paced two-year program begins with fundamentals: color, design, drawing, prepress and typography. Advanced levels create finished portfolios on a Macintosh computer, utilizing industry standard digital software. Student portfolios demonstrate creativity and discipline, displaying dynamic art sensibilities and creating visual solutions for problems of marketing and publishing. The Visual Communications program focuses on four core areas:

- GRAPHIC DESIGN: Beginning levels will study the areas of layout and design, typography, and advertising concepts. Advanced levels will develop logos and corporate identity programs, design brochures with extended text, and create original magazine advertising, which is directed to specific audience demographics. Problem solving, brainstorming and computer training will receive equal emphasis. Graduating student portfolios incorporate a wide variety of projects showcasing the student's ability to conceptualize, design and use typography as a communication tool.
- DRAWING: Beginning levels will study freehand observational drawing, perspective and the principles of light and shade. Black and white mediums will be explored in pencil, markers and ink. Advanced levels create comprehensive layouts in color marker and pencil as preliminary development. Finished designs and illustrations for advertising and on-line usage are then created traditionally or digitally and serve as portfolio samples.
- DIGITAL PREPRESS: Thorough study of the preparation of art, graphics, photography, and typography for reproduction in print. Beginning levels concentrate on understanding the mechanics of color separations and print specifications. This knowledge is then applied as students create digital files that utilize specific print requirements. Advanced levels prepare complex graphic computer files for output at commercial printers.
- COMPUTER GRAPHICS: The creation of art and design on the computer requires mechanical know-how and considerable familiarization with the workings of several graphic software applications. The Visual Communications program offers instruction in Adobe Creative Suites: Acrobat, Dreamweaver, Flash, Fireworks, Illustrator, InDesign and Photoshop and HTML. Graduating student portfolios demonstrate familiarization with each of these software applications and an ability to manipulate each for specific uses and creative affects.

Today's commercial marketplace for artists has never been more available. Flash motion graphics and web design have initiated new and creative directions. Traditional artists and conventional designers continue as before but have incorporated digital software within their accomplished collection of talents. This blending of tradition and technology is the primary emphasis within the Visual Communications program.

By fulfilling the program requirements, students can pursue many different creative careers. While it is advisable for students to continue higher education, many graduates have entered the workplace upon completion of the Visual Communications program alone, realizing creative and financial success. Graduating students acquire visual sensitivities with respect to type, images and graphics; they are trained in the visual software used by industry, and understand marketing as it applies to commercial art. Additionally, graduates market their work appropriately to specific audiences for freelance opportunities.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree/Certificate** program, students are able to:

- Students will be able to design original layouts utilizing creative marketing concepts that reflect Graphic Design and related industry standards.
- Students will be able to use advanced traditional and digital artist tools with technical proficiency, aesthetic sensitivity, and refinement.

VISUAL COMMUNICATIONS

Associate in Arts Degree

Major Units: 48

Requirements for the Associate in Arts degree in Visual Communication may be met by completing 46 units of Required Courses and 2 units of Major Electives with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

REQUIRED COURSES

SEMESTER I		UNITS
VISCOM 100	Graphic Design I	2
VISCOM 103	Basic Computer Systems	2
VISCOM 105	Digital Prepress I	2
VISCOM 106	Drawing I	2
VISCOM 108	2D Design Fundamentals	2
VISCOM 118	Digital Drawing	2

SEMESTER II		UNITS
VISCOM 112	Digital Prepress II	2
VISCOM 114	Digital Typesetting	2
VISCOM 115	Graphic Design II	2
VISCOM 116	Advertising Concepts	2
VISCOM 119	Digital Page Layout	2
VISCOM 129	Digital Photo Manipulation	2

SEMESTER III		UNITS
VISCOM 120	Drawing II	2
VISCOM 124	Computer Illustration I	2
VISCOM 126	Portfolio Development I	2
VISCOM 127	Digital Prepress III	2
VISCOM 128	Designing Logos and Trademarks	2
VISCOM 135	Web Graphics - Preproduction for Websites	2

SEMESTER IV		UNITS
VISCOM 130	Drawing III	2
VISCOM 131	Computer Illustration II	2
VISCOM 132	Portfolio Development II	2
VISCOM 133	Digital Portfolio Preparation	2
VISCOM 134	Graphic Design Business Practices	2

MAJOR ELECTIVES

Select at least 2 units from the courses below		UNITS
VISCOM 204	Flash Motion Graphics (Beginning Level)	2

VISUAL COMMUNICATIONS

Certificate of Achievement

Major Units: 48

A Certificate of Achievement in Visual Communication may be earned by completing with a "C" or better 46 units of Required Courses and 2 units of Major Electives listed under the Associate degree in Visual Communication with a "C" or better in each course.



Health & Related Sciences Pathway (HRS)

ABOUT THE PATHWAY

The Health & Related Sciences Pathway (HRS) offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to enter the workforce in Healthcare and Kinesiology related fields. The Pathway consists of the areas of Nursing, Kinesiology, Health, Health Occupations, Biology, Anatomy, Physiology and Micro-Biology.

LATTC's Nursing programs host external pre-licensure nursing education approval from the California Board of Registered Nurses (BRN). The nursing program also has a Bachelor's of Science in Nursing (BSN) collaborative with CSU Los Angeles, CSU Fullerton, and CSU Northridge. The Kinesiology AA Degree allows you to transfer to a four- year institution and continue your studies toward a Bachelor's Degree.

PATHWAY TEAM

Dean: Vacant

Chair: Angela Gee ~ Email: GeeAl@lattc.edu

Nursing Director: Paula Johnson -Email: johnsop@laccd.edu

Counselor: Phyllis Braxton ~ Email: BRAXTOPD@lattc.edu

CONTACT US

NURSING

Email: Nursing@lattc.edu

Phone number: (213) 763-5381

Hours of operation: 8:00 am – 4:30 pm

Office Staff: Angel Rodriques ~ Email: RodriqAL@lattc.edu

ALL OTHER PATHWAY AREAS

Email: Health@lattc.edu

Phone number: (213) 763-3727

Hours of operation: 6:30 AM – 3:30 PM

Office Staff: Tracy Hale ~ Email: HaleTY@lattc.edu

Office Location: B3 - Room 165

Pathway Website: http://pathways.lattc.edu/catalog-programs/hrs/

PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
Biology	AS-T	Pre-Health Professions II	C
Kinesiology	AA-T	Public Health Science	AS-T
Nursing, Registered	AS	Senior Care Technician	C
Nursing, Registered - LVN-RN Career Ladder	AS	Senior Exercise Leader, Land & Aquatics Programming Certificate	C
LVN to RN 30-Unit Option	--		

BIOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Biology	T037241H	AS-T	IGETC for STEM only	10	23-25	33-35
At least 60 degree applicable units are required to earn an Associate degree. This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Science in Biology for Transfer Degree prepares students to transfer into a curriculum at a California State University (CSU) to pursue a Baccalaureate degree in Biology (or a related major). Students who complete this degree will be guaranteed admission with Junior status to the California State University system, although not a particular campus or major. The Associate in Science in Biology for Transfer Degree may also be appropriate for all students who want to pursue a career in the life sciences and allied health professions such as nursing, medicine, dentistry and pharmacy.

Students will apply fundamental concepts of biology and relate them to mathematics, physics and chemistry. These concepts addressed in the Associate in Science in Biology for Transfer Degree will prepare students to enter fields such as genetic engineering, forensics, biochemistry, veterinary medicine, pathology, botany, zoology, marine biology, forestry, microbiology, conservation biology, ecology, environmental studies, and bioinformatics. The biological sciences are a leading field contributing to major discoveries that directly affect society and individuals.

The Associate in Science in Biology for Transfer (AS-T) Degree will be awarded upon:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including completion of:

- *The Intersegmental General Education Transfer Curriculum for Science, Technology, Engineering, and Mathematics (IGETC for STEM) pattern.* **Note: Completion of IGETC, Area 1C: Oral Communication is required for CSU Admissions.**
- *A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.*

2. Obtainment of a minimum grade point average of 2.0.

- *All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass/No Pass" basis (Title 5 § 55063). Note: some UC and CSU have limitations on courses taken for Pass/No Pass; please contact the campus for more details.*

3. Completion of a minimum of 12 semester units in residence.

Students interested in transferring and/or completing an Associate in Science in Biology for Transfer are highly encouraged to consult with a LATTC counselor for more information on university admission, identifying similar degrees at CSU and transfer requirements to other institutions.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Explain the fundamental principles of biology.
- Apply the scientific method to various fields in biology and to major issues impacting society.

BIOLOGY

Associate in Science for Transfer

Major Units: 33-35

Requirements for the Associate in Science for Transfer (AS-T) in Biology may be met by completing 10 units of Required Courses and 23-25 units of Major Electives with a "C" or better along with general education courses meeting IGETC for STEM only.

REQUIRED CORE

		UNITS
BIOLOGY 006	General Biology I	5
BIOLOGY 007	General Biology II	5

AND

List A: Select 23-25 units from the following		UNITS
CHEM 101	General Chemistry I	5
CHEM 102	General Chemistry II	5
MATH 265	Calculus with Analytic Geometry I	5
PHYSICS 006	General Physics I	4
and		
PHYSICS 007	General Physics II	4
OR		
PHYSICS 101	Physics for Engineers and Scientists I	5
and		
PHYSICS 102	Physics for Engineers and Scientists II	5

Major Required Subtotal	**33-35 units**
IGETC for STEM	31 units
CSU Transferable Elective units	(as needed to reach 60 unitts)
TOTAL CSU transferrable units	**60 units**

KINESIOLOGY

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Kinesiology	T032948G	AA-T	IGETC/ CSU	20-23		20-23
At least 60 degree applicable units are required to earn an Associate degree. This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

Kinesiology is the study of movement as it relates to physical activity, health, disease prevention, exercise, and sport. Kinesiology Majors are grounded in an interdisciplinary body of knowledge, which encompasses the biological, psychological, physical, and social sciences. They use this knowledge to understand how the human body responds to movement, exercise, exercise training, and overall fitness. Kinesiology majors can find employment in health care, coaching, sports officiating, and athletic training. Public schools also recruit kinesiologists for their physical education departments or programs. Lastly, a baccalaureate degree in Kinesiology can also lead to advanced degrees in Physical Therapy, Occupational Therapy, or Medical School.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 21 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Describe the fundamental principles of Kinesiology, including anatomy and physiology, movement, health promotion, physiological response to exercise, mechanics, and how they relate to career choices.
- Discuss the importance of lifelong participation in a fitness program as related to overall health and well-being.
- Identify physical fitness concepts, healthy living practices, lifelong wellness, appropriate stress reduction techniques, sport, and physical skill development.

KINESIOLOGY

Associate in Arts for Transfer

Major Units: 21-24

Requirements for the Associate in Arts for Transfer (AA-T) in Kinesiology may be met by completing 20-23 units of coursework with a "C" or better along with general education courses meeting IGETC or CSU Requirements.

REQUIRED CORE

Select 11 units from the courses below		UNITS
KIN MAJ 100	Introduction to Kinesiology	3
ANATOMY 001	Introduction to Human Anatomy	4
PHYSIOL 001	Introduction to Human Physiology	4

AND

MOVEMENT BASED COURSE REQUIREMENTS 3 units

Take a maximum of one unit from three of the following movement areas:

AQUATICS

KIN 300-1	Swimming/Non-Swimmer I	1
KIN 300-2	Swimming/Non-Swimmer II	1
KIN 300-3	Swimming/Non-Swimmer III	1
KIN 301-1	Swimming Skills I	1
KIN 301-2	Swimming Skills II	1
KIN 301-3	Swimming Skills III	1
KIN 303-1	Aqua Aerobics I	1
KIN 303-2	Aqua Aerobics II	1
KIN 303-3	Aqua Aerobics III	1
KIN 303-4	Aqua Aerobics IV	1

COMBATIVES

KIN 330-1	Cardio Kickboxing I	1
KIN 330-2	Cardio Kickboxing II	1
KIN 330-3	Cardio Kickboxing III	1

FITNESS

KIN 180	Marathon TR Run/Walk	1.5
KIN 237	Boot Camp I	1
KIN 337	Boot Camp II	1
KIN 307-1	Run and Swim I	1
KIN 307-2	Run and Swim II	1
KIN 329-1	Body Conditioning I	1
KIN 329-2	Body Conditioning II	1
KIN 329-3	Body Conditioning III	1
KIN 332-1	Step Aerobics I	1
KIN 334-1	Fitness Walking I	1
KIN 334-2	Fitness Walking II	1
KIN 350-1	Weight Training I	1
KIN 350-2	Weight Training II	1
KIN 351-1	Yoga I	1
KIN 351-2	Yoga II	1

TEAM SPORTS

KIN 366-1	Badminton Skills I	1
KIN 366-2	Badminton Skills II	1
KIN 387	Basketball	1
KIN 391-1	Volleyball	1

RESTRICTED ELECTIVES

RESTRICTED ELECTIVES — **6 UNITS MIN.**

Select 2 courses from below:

BIOLOGY 003	*Introduction to Biology*	*4*
OR		
BIOLOGY 005	*Human Biology*	*5*
CHEM 051	*Fundamentals of Chemistry I*	*5*
OR		
CHEM 101	*General Chemistry I*	*5*
KIN MAJ 101	*First Aid and CPR*	*3*
OR		
HEALTH 012	*Safety Education and First Aid*	*3*
MATH 227	*Statistics*	*4*
OR		
MATH 227S	*Statistics with Support*	*4*
PHYSICS 006	*General Physics I*	*4*

Total Min. Units	*21*
CSU or IGETC for CSU GE Pattern units	*37-39*
CSU Transferable Elective units	*(as needed to reach 60 units)*
TOTAL CSU transferrable units	*60*

MAJOR REQUIRED MINIMUM SUBTOTAL	20-23 units
CSU or IGETC for CSU GE Pattern	37-39 units
CSU Transferable Elective units	(as needed to reach 60 units)
TOTAL CSU transferrable units	60 units

NURSING, REGISTERED

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Nursing, Registered	T002922C	A.S.	21*	42	-	42
Nursing, Registered: LVN to RN Career Ladder	T008498C	A.S.	21	32	-	32
Nursing, Registered 30-Unit Option				28-30	-	28-30

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible, except the Nursing, Registered 30-Unit Option.

PREREQUISITE COURSES

A GPA of 2.5 or better must be earned in all college level courses and a 2.5 grade point average in the science prerequisites.

Please note: You must be accepted into the Nursing Program before you can enroll in these classes. Once accepted enrollment will be done by the department. You cannot enroll online.

PROGRAM OVERVIEW

The Registered Nursing (RN) Program at LATTC combines nursing and general education courses with selected laboratory experiences during which students provide nursing care to clients in hospitals and other health care facilities. Nursing courses include medical surgical nursing, geriatric nursing, maternal child health nursing, pediatric nursing, psychiatric nursing, pharmacology, and nursing management and leadership and preceptorship. The program is designed to be completed within four semesters after admission.

Applicants must meet health as well as other requirements mandated by the program and affiliating hospitals/clinic prior to entry. Candidates are admitted to the program in the Fall and Spring semesters. Candidates must enter the program with a minimum overall 2.5 grade point average in all college level courses and a 2.5 grade point average in the science prerequisites. A candidate may file an application only after all prerequisites have been completed. At that time, the student will be eligible to take the nursing entrance examination called TEAS (Test of Essential Academic Skills). If the student achieves a passing score on the TEAS, he or she will be placed on the waiting list. If a student does not achieve a passing score on the TEAS, he or she will be provided with remediation opportunities and permitted to retake the exam. Students may retake the entrance exam once. Program flyers with prerequisites and admission information may be obtained from the Counseling Office or the Department of Allied Health. The Registered Nursing Program is approved by the California Board of Registered Nursing (BRN).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Provide effective nursing care to patients according to recognized industry standards.
- Apply scientific and social theories to nursing practice.

NURSING, REGISTERED

Associate in Science Degree

Major Units: 42

PROGRAM OVERVIEW

The Registered Nursing (RN) Program is approved by the California Board of Registered Nursing (BRN) to ensure compliance with statutory and regulatory requirements. Applicants must meet health as well as other requirements mandated by the program and affiliating hospitals/clinic prior to entry. Candidates are admitted to the program in the Fall and Spring semesters. Candidates must enter the program with a minimum overall 2.5 grade point average in all college level courses and a 2.5 grade point average in the science prerequisites. A candidate may file an application only after all of the following prerequisites have been completed.

PREREQUISITE COURSES:	UNITS
ANATOMY 001: Introduction to Human Anatomy	4
MICRO 001: Introductory Microbiology	5
-or- MICRO 020: General Microbiology	4
PHYSIOL 001: Introduction to Human Physiology	4
PSYCH 001: General Psychology I	3
PSYCH 041: Life-Span Psychology: From Infancy to Old Age	3
ENGLISH 101: College Reading and Composition I	3

After acceptance of the application, the candidate will be eligible to take the Test of Essential Academic Skills) (TEAS) nursing entrance examination. After achieving 62% or above on the TEAS, the candidates' name will be placed on a waiting list. If a candidate does not achieve a passing score on the TEAS, remediation opportunities will be provided and retake of the exam will be permitted. Students may retake the nursing entrance exam once.

By fulfilling the program requirements, students will have the necessary knowledge and skills to meet the entry level registered nurse competencies of patient-centered care, safety, informatics, teamwork and collaboration, quality improvement, evidence-based practice, leadership, professionalism, patient education, and communication.

Upon completion of the ADN (RN) program, the graduate is eligible for the National Licensing Examination (NCLEX-RN) for licensure as a Registered Nurse in the State of California. Graduates who complete the ADN (RN) curriculum earn an Associate in Science in Nursing Degree.

PROGRAM LEARNING OUTCOMES (PLOs):

Upon completion of the degree program, students are able to:

- Practice within the ethical, legal and regulatory frameworks and scope of practice for registered nurses.
- Articulate their role and responsibility in the larger system of health care.

REQUIRED COURSES

Nursing courses must be taken in sequence and completed with a grade of "C" or better.

SEMESTER I		UNITS
REGNRSG 169	Introduction to Nursing Concepts	3.5
REGNRSG 170A	Fundamentals of Nursing I	3
REGNRSG 170B	Fundamentals of Nursing II	3
REGNRSG 171	Nursing Simulation Lab, BASIC	1

SEMESTER II		UNITS
REGNRSG 172	Medical-Surgical Nursing I	4
REGNRSG 173	Psychiatric Mental Health Nursing	4
REGNRSG 174	Nursing Simulation Lab Intermediate	1

SEMESTER III		UNITS
REGNRSG 175	Medical-Surgical Nursing II	4
REGNRSG 176	Reproductive Nursing and Women's Health	3.5
REGNRSG 177	Nursing Simulation Lab Advanced	1

SEMESTER IV		UNITS
REGNRSG 178	Medical-Surgical Nursing III	3
REGNRSG 179	Care of Children and Family	3.5
REGNRSG 180	Nursing Leadership and Management 3	

NURSING, REGISTERED: LVN TO RN CAREER LADDER

Associate in Science Degree

Major Units: 32

Requirements for the Associate in Science degree in Nursing, Registered: LVN to RN Career Ladder may be met by completing 32 units of Required Courses with a "C" or better along with General Education units. Information on the General Education unit requirements may be found in the catalog under Graduation Requirements.

PROGRAM OVERVIEW

Nursing is a field that is in high demand and is one that is personally rewarding and constantly stimulating. **The Career Ladder Program at Los Angeles Trade-Technical College** is approved by the Board of Registered Nursing. It combines nursing theory with selected laboratory experiences and general education courses. Program courses are sequenced from simple to complex. Nursing courses include medical surgical nursing, reproductive and women's health, nursing of children and families, psychiatric nursing, geriatric and community nursing, leadership and preceptorship. The graduate of the Career Ladder program is eligible to apply for the State Board of Registered Nursing Licensing Examination (NCLEX) once all nursing program and Associate in Science Degree requirements are satisfactorily met.

Applicants with a valid VN license may enter into second semester after completing the LVN to RN Bridge course (RN 135) and passing the pharmacology exam and dosage calculation examination. Students have the option of challenging Medical Surgical Nursing I, RN 126, R Reproductive and Women's Health Nursing, RN 131, and RN 132, Nursing Care of Children and Families. This may be done after completing 12 units at LATTC and after being accepted into the Career Ladder program.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students entering at the intermediate level will provide effective nursing care to patients according to recognized industry standards.
- Students entering at the intermediate level will apply scientific and social theories to nursing practice.

Please note: Students enter in 2nd semester and take all courses in the generic RN Program. Career Ladder students may challenge RN 131 and RN 132.

PREREQUISITES		UNITS
Current valid California LVN license, plus the following:		
ANATOMY 001	Introduction to Human Anatomy	4
MICRO 001	Introductory Microbiology	5
-or- MICRO 020	*General Microbiology (4)*	
PHYSIOL 001	Introduction to Human Physiology	4
PSYCH 001	General Psychology I	3
PSYCH 041	Life-Span Psychology: From Infancy to Old Age	3
ENGLISH 101	College Reading and Composition I	3
TEAS EXAM	(passing grade 62%)	
REGNRSG 135	Transition from LVN to RN *(Must be taken after all other prerequisites have been completed)*	2

REQUIRED COURSES

SEMESTER II		UNITS
REGNRSG 126	Medical-Surgical Nursing I	5
REGNRSG 129	Gerontology and Community Based Nursing	2
REGNRSG 130	Psychiatric Mental Health Nursing	3
REGNRSG 136	Nursing Simulation Lab Intermediate	1
SEMESTER III		**UNITS**
REGNRSG 127	Medical-Surgical Nursing II	5
REGNRSG 131	Reproductive Nursing and Women's Health	3.5
REGNRSG 137	Nursing Simulation Lab Advanced	1
SEMESTER IV		**UNITS**
REGNRSG 128	Medical-Surgical Nursing III	3
REGNRSG 132	Care of Children and Family	3.5
REGNRSG 133	Nursing Leadership and Management	3

LVN TO RN 30-UNIT OPTION

Major Units: 28-30

The 30 unit option is offered to applicants with a valid VN license. Those applicants take 2 courses in second semester and all courses in third and fourth semester. They are then eligible to take the NCLEX-RN licensing exam. This option does not lead to a degree. In addition, students who wish to return to LATTC and obtain an AS degree may not apply these courses to their major.

NOTE: This educational option may not be recognized in states outside of California. Check with an individual state BRN for more information.

PREREQUISITES

A grade of "C" or better must be obtained in all courses. High school graduate or GED, U.S. university degree or A.S./A.A. degree is required.

		UNITS
MICRO 020	General Microbiology	4
ANATOMY 001	Introduction to Human Anatomy	4
PHYSIOL 001	Introduction to Human Physiology	4
TEAS 5.0 EXAM	(passing grade 62%)	
REGNRSG 135	Transition from LVN to R.N. *(Must be taken after all other prerequisites have been completed)*	2

REQUIRED COURSES

SEMESTER II		UNITS
REGNRSG 129	Gerontology and Community Based Nursing	2
REGNRSG 130	Psychiatric Mental Health Nursing	3
REGNRSG 136	Nursing Simulation Lab Intermediate	1
SEMESTER III		**UNITS**
REGNRSG 127	Medical-Surgical Nursing II	5
REGNRSG 131	Reproductive Nursing and Women's Health	3.5
REGNRSG 137	Nursing Simulation Lab Advanced	1
SEMESTER IV		**UNITS**
REGNRSG 128	Medical-Surgical Nursing III	3
REGNRSG 132	Care of Children and Family	3.5
REGNRSG 133	Nursing Leadership & Management	3

NOTE: Nursing courses must be taken in sequence and completed with a grade of "C" or better.

PRE-HEALTH PROFESSIONS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Pre-Health Professions II*	T037706D	C		18-19	-	18-19
Public Health Science	T039531H	AST	CSU/ IGETC	30	3	33
*This program is not Financial Aid Eligible.						

PROGRAM OVERVIEW

The health related professions continue to be in high demand. The Pre-Health Professions Certificate provides the core courses in biology, chemistry, and mathematics needed to apply to various health related programs. Coursework provides many science prerequisites for programs in the health professions, which includes but are not limited to nursing, physician assistant, pharmacy, physical therapy, occupational therapy, dental hygiene, radiology technology, dentist, and medical doctor.

After program completion, students will be able to apply the process of science to the study of life and human health; apply basic chemistry concepts to perform experiments; and use algebraic skills needed in the scientific field. Students will also develop the knowledge and skills to prepare for various required health programs' admission exams.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Apply fundamental biological, chemical, and mathematical principles as it relates to human health.

PRE-HEALTH PROFESSIONS II

Certificate of Achievement

Major Units: 18-19

A Certificate of Achievement in Pre-Health Professions II may be earned by completing 18-19 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
MATH 125	Intermediate Algebra	5
SEMESTER II		**UNITS**
CHEM 051	Fundamentals of Chemistry I	5
SEMESTER III		**UNITS**
MICRO 001	Introductory Microbiology	5
-or- MICRO 020	*General Microbiology (4)*	
PHYSIOL 001	Introduction to Human Physiology	4

PUBLIC HEALTH SCIENCE

PROGRAM OVERVIEW

The Associate in Science in Public Health Science for Transfer Degree AS-T prepares students for transfer to California State Universities. Students who complete the degree will be ensured preferential transfer status to CSUs for Public Health majors and majors in related disciplines. The Associate in Science in Public Health Science for Transfer Degree AS-T requirements will fulfill the lower division major requirements at many CSUs. Students are advised, however, to meet with a counselor to determine the lower division course requirements for specific CSUs. The major in Public Health prepares students for careers in the health professions, local state and federal agencies, health departments, educational institutions, healthcare organizations and health insurance companies, research organizations, crisis agencies, and many other fields. This degree is designed to prepare graduates for public health and related programs at the bachelor's degree level.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 34 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLOs)

- Students will be able to identify, assess, utilize and articulate credible information resources on personal and public health current issues, such as the Internet, social media, media outlets, and libraries.
- Students will be able to understand and apply knowledge of Personal and Public Health in real life settings from the sub-disciplines of Human Anatomy and Physiology, Statistics, Chemistry, and Psychology.

PUBLIC HEALTH SCIENCE

Associate in Science for Transfer

Major Units: 33
Required: 30
Electives: 3

DEGREE REQUIREMENTS

REQUIRED CORE COURSES		30 UNITS
ANATOMY 001	Introduction to Human Anatomy	4
BIOLOGY 005	Human Biology	4
CHEM 101	General Chemistry I	5
HEALTH 011	Principles of Healthful Living	3
HEALTH 101	Introduction to Public Health	3
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	(4)
PHYSIOL 001	Introduction to Human Physiology	4
PSYCH 001	Introduction to Psychology	3

LIST A: SELECT ONE COURSE		3 UNITS
ECON 001	Principles of Economics I	3
ECON 002	Principles of Economics II	3
HEALTH 006	Nutrition for Healthful Living and Physical Fitness	3
HEALTH 051	Drugs and Alcohol in Society	3
HEALTH 021	Human Sexuality	3
SOC 001	Introduction to Sociology	3

Total units	33
General Education (CSU or IGETC for CSU)	37-39
CSU electives to meet 60-unit requirement	
TOTAL Degree Units	**60**

Note: It is strongly recommended that students meet with a LA Trade Tech counselor to review AS-T requirements. Students transferring to a CSU campus that accepts this degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system, or those students who do not intend to transfer.

Career Opportunities in Health Education (Transfer)

There are a variety of jobs in public health, including but not limited to: Biostatistician, Medical and Health Services Manager, Health Informatics Specialist, Health Care Administrator, Health Educator, Community Health Worker, Epidemiologist, Environmental Scientist, Environmental Engineer, Global Health, Health Services Manager, Health Department Administrator, Government Policy Analyst.

SENIOR CARE TECHNICIAN

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Senior Care Technician	T033802D	C		16.5	-	16.5
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Senior Care Technician certificate is intended to prepare students for a new role in agencies that provide care to elderly at various levels of independence. The role combines basic nursing skills, psychosocial skills, resource management and administrative skills needed to provide holistic care to seniors who require services that allow them to live as independently as possible in a structured environment.

The Senior Care Technician will be able to provide direct and indirect services to seniors and be a valuable resource for the senior, the facility and the community in which the seniors are located. The Senior Care Technician will have a skill set to deal with dementia and other difficult behaviors and help develop and transfer these skills to the direct care staff. In conclusion, the Senior Care Technician will have assessment and care skills that are over and above those of Certified Nurse Aids but below those of Licensed Vocational Nurses. They will fill a niche in senior services.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students will be able to assess and provide proper patient care techniques, including physical and psychosocial, for the elderly in a variety of health and patient care settings in accordance with industry legal, ethical, and medical standards and regulations.
- Students will be able to demonstrate interpersonal behaviors supportive of the development and maintenance of safe, respectful, ethical, and culturally sensitive peer and patient relationships.

SENIOR CARE TECHNICIAN

Certificate of Achievement

Major Units: 16.5

A Certificate of Achievement in Senior Care Technician may be earned by completing 16.5 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

SEMESTER I		UNITS
HLTHOCC 062	Skill Set for The Health Care Professional	2
HLTHOCC 063	Basic Medical Terminology, Pathophysiology and Pharmacology	2
HLTHOCC 064	Cultural And Legal Topics For Health Care Professionals	1
HLTHOCC 065	Fundamentals for the Health Care Professional	2.5

SEMESTER II		UNITS
HEALTH 046	Basic Life Support CPR/AED for the Healthcare Provider	1
HLTHOCC 049	Fundamentals of Elder Care	5
PSYCH 001	General Psychology I	3

SENIOR EXERCISE LEADER, LAND & AQUATICS PROGRAMMING CERTIFICATE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Senior Exercise Leader, Land & Aquatics Programming Certificate	T038533D	C		15.5	1	16.5
This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Senior Exercise Leader program is designed to prepare students for employment in the Senior Care,

Fitness, and Recreational Therapy industries. Preparation is included for leading seniors in land and water based activities that might occur in a home, recreation, or structured care facility.

Career opportunities for students completing this program of study include, but are not limited to:

- 31-1011.00 – Home care aid, home attendant, care giver
- 39-9021.00 – Personal care attendant, resident care assistant, patient care assistant
- 39-9032.00 – Recreation workers, activity aids, activity assistant, program assistant
- 29-1125.00 – Recreation therapist assistant, activity coordinator, activities director, recreation specialist

Program Learning Outcomes (PLO)

By fulfilling the program requirements, students will have the necessary knowledge and skills to

- Develop appropriate exercise programming that enhances function, health, fitness, balance, mobility, and performance for seniors both on land and in water.
- Conduct interviews, questionnaires, and basic fitness assessments to determine fitness goals, ability to move, and comfort in the water.
- Provide instructions, demonstrations, and performance cues on safe and effective exercise techniques for seniors on land and in the water.
- Lead individual and group activities on land and in the water that provide physical, mental, and social health benefits This certificate builds upon and/or towards the Senior Care certificate. It also provides an additional option for Kinesiology majors wishing to investigate or prepare for a career in the senior fitness or senior care industry.

COURSE REQUIREMENTS

SEMESTER 1		7.5 UNITS
HLTHOCC 062	Skill Set for the Health Care Professional	2
HLTHOCC 063	Basic Medical Terminology, Pathophysiology and Pharmacology	2
HLTHOCC 064	Cultural and Legal Topics for Health Care Professionals	1
HLTHOCC 065	Fundamentals for the Health Care Professional	2.5

SEMESTER 2		9 UNITS
HEALTH 046	Basic Life Support CPR/AED for the Healthcare Provider	1
KIN MAJ 150	Senior Fitness Assessment, Strength & Conditioning Programming	3
KIN MAJ 151	Senior Fitness Exercise Leader	3
COOP ED 195	Work Experience – General I	1
Elective Course	1 course	1 min.

RESTRICTED ELECTIVES

KIN 047	Adapted Swimming and Hydroexercise	1
KIN 303-1	Aqua Aerobics I	1
KIN MAJ 134	Advanced Lifesaving	2
KIN MAJ 135	Water Safety Instruction	3


Hill-Rom

Liberal Arts (LA) & Transfer Prep Pathway

ABOUT THE PATHWAY

The Liberal Arts (LA) and Transfer Prep Pathway offers programs of study that enable students to gain the competencies needed to build credentials for lifelong career success as they prepare to transfer to a 4-year institution and/or earn a two-year degree.

PATHWAY TEAM

Dean: Vincent Jackson ~ Email: jacksovc@lattc.edu

Chair(s):

(Behavioral/Social Sciences) Philip Huld ~ Email: huldpj@laccd.edu

(English) Jennifer Ortiz ~ Email: ORTIZJI@lattc.edu

(Language Arts & Humanities) Deirdre McDermott ~ Email: WoodDA@lattc.edu

(Math) Tayebeh Meftagh ~ Email: MeftagT@lattc.edu; (213) 763-7330

Counselor: Eboni McDuffie ~ Email: Mcduffe@lattc.edu

Office Staff: Aaron Chan ~ Email: ChanaT@lattc.edu

CONTACT US

Office Location: F5, Room 516

Email: Libarts@lattc.edu

Phone number: (213) 763-3923

Hours of operation: Monday – Thursday: 8am to 6pm, Friday: 8am to 3pm

Website: http://pathways.lattc.edu/catalog-programs/la/

PATHWAY CERTIFICATES AND DEGREES

PROGRAM OF STUDY	AWARD	PROGRAM OF STUDY	AWARD
American Sign Language	C	Liberal Arts: Behavioral and Social Sciences	AA
CSU General Education (CSU-GE-Breadth)	C	Mathematics	AS-T
English	AA-T	Political Science	AA-T
Intersegmental General Education Transfer Curriculum (IGETC)	C	Psychology	AA-T
Interdisciplinary Studies: Arts & Sciences	AA	Social Justices Studies – Gender Studies	AA-T
Liberal Arts & Sciences: Emphasis In Mathematics, Physical and Natural Sciences	AA	Sociology	AA-T
History	AA-T		

AMERICAN SIGN LANGUAGE

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
American Sign Language	T033805D	C		18	-	18
This program is not Financial Aid Eligible.						

PROGRAM OVERVIEW

The LATTC American Sign Language Certificate program is designed to meet the needs of students who seek further education in the field of deaf services; as well as prepare students for entry-level positions in interpreting, advocacy, instructional aides and other employment opportunities.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Students will demonstrate formal American Sign Language performance incorporating expressive and receptive skills in preparation for future interpreter training programs and advanced American Sign Language courses.
- Demonstrate receptive skills at a normal rate of speed, express particular experiences with reasonable ease and adhere to proper grammar and cultural rules during practical application of American Sign Language within the Deaf Culture.

AMERICAN SIGN LANGUAGE

Certificate of Achievement

Major Units: 18

Requirements for the American Sign Language Certificate of Achievement may be met by completing 18 units of Required Courses with a "C" or better in each course.

REQUIRED COURSES

		UNITS
A S L 001	American Sign Language I	4
A S L 002	American Sign Language II	4
A S L 003	American Sign Language III	4
A S L 004	American Sign Language IV	4
A S L 030	Finger Spelling I	2

CSU GENERAL EDUCATION (CSU-GE-BREADTH)

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
CSU General Education (CSU-GE-Breadth)	T036134D	C		39	-	39
This program is not Financial Aid Eligible.						

PROGRAM OVERVIEW

The Certificate of Achievement in CSU General Education (CSU-GE-Breadth) is a program designed for students planning to transfer to either the California State University (CSU) system. It offers students a program of study which meets CSU general education transfer requirements. Although the certificate recognizes the completion of CSU general education requirements, it does not guarantee admission to a specific campus within the CSU system nor does it guarantee admission to a specific major. Some majors and colleges may require a different lower division preparation and/or a higher GPA than is necessary for this certificate.

Students who intend to transfer must meet all current CSU general education transfer requirements including minimum GPA and eligibility for certification. Students are strongly advised to meet with a counselor to discuss transfer requirements and lower division major preparation that is needed for their intended transfer school.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Communicate effectively, both verbally and in writing.
- Critically analyze and solve problems using the appropriate technique for the issue at hand, including appropriate use of logic, mathematics, multi-disciplinary, and cultural considerations where applicable.
- Critically examine the function, media, subject matter, organization, aesthetic, style, and relative excellence of representative examples of the arts, literature, philosophy, and foreign languages including approaches from various historical, cultural, and gender-based origins.
- Develop an understanding of the information available, the perspectives and approaches of the physical, biological, social and behavioral sciences, appreciating the power and limits of these methods of inquiry and both individual, ethical, and societal responsibilities.
- Organize and present information in person in a logical and understandable manner.

CSU GENERAL EDUCATION (CSU-GE-BREADTH)

Certificate of Achievement

Major Units: 39

Requirements for the CSU General Education (CSU-GE-Breadth) of Achievement may be met by completing 39 units of Required Courses listed under the California State University General Education Check Sheet with a "C" or better in each course. Please consult with a counselor for more details.

ENGLISH

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
English	T032905G	AA-T	CSU/ IGETC	6	12	18
At least 60 degree applicable units are required to earn an Associate degree. This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Arts Degree in English for Transfer (AA-T) is for students who intend to complete a bachelor's degree in English at a California State University. Core course work explores primarily British and American writers through an array of literary traditions, providing opportunities for students to express their understanding and appreciation of the literary world through analysis, research and composition.

This degree provides lower division preparation for students planning to transfer into English programs. Students will take courses in English as well as related fields required for English majors. Students who complete this degree will be guaranteed admission with junior status to the California State University, though not a particular campus or major, and will be given priority admission to our local CSU campus.

The Associate in Arts in English for Transfer (AA-T) degree will be awarded upon completion of the following:

- Completion of 60 transferable semester units to the California State University
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one the following General education patterns
- The Intersegmental General Education Transfer Curriculum (IGETC), with "C"s or better in all coursework AND completion of Area 1C Oral communication (CSU admission requirement)
- California State University General Education – Breadth Requirements (CSU GE). Areas A1, A2, A3, & B4 must be completed with a grade of "C" or better (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Write coherent college-level essays with clear syntax and varied sentence structure, and exhibiting knowledge of Standard American English rules of punctuation and grammar.
- Conduct and present research, conforming to Modern Language Association (MLA) Standards.
- Analyze and evaluate a diverse body of literature in a variety of presentation formats.

ENGLISH FOR TRANSFER (AA-T)

Associate in Arts for Transfer

Major Units: 18

Requirements for the Associate in Arts Transfer degree in English may be met by completing 6 units of Required Courses and 12 units of Major electives with a "C" or better along with general education courses meeting IGETC or CSU Requirements.

REQUIRED COURSES

		UNITS
ENGLISH 102	College Reading and Composition II	3
ENGLISH 103	Composition and Critical Thinking	3

MAJOR ELECTIVES

List A- Select any two (2) of the following (6 units)		UNITS
ENGLISH 203	World Literature I	3
ENGLISH 205	English Literature I	3
ENGLISH 206	English Literature II	3
ENGLISH 207	American Literature I	3
ENGLISH 208	American Literature II	3

List B- Select any one (1) course. Any course not used in LIST A or one course from this list (3 units)		UNITS
ENGLISH 127	Creative Writing	3

List C- Select any one (1) course not already used in LISTS A or B or one of the following courses (3 units)		UNITS
ENGLISH 212	Poetry	3
ENGLISH 215	Shakespeare I	3
HUMAN 001	Cultural Patterns of Western Civilization	3

MAJOR REQUIRED SUBTOTAL	18 units
CSU or IGETC for CSU GE Pattern	37-39 units
CSU Transferable Elective units	(as needed to reach 60 units)
TOTAL CSU transferrable units	60 units

HISTORY

PROGRAM OVERVIEW

The Associate in Arts in History for Transfer degree will enable students to develop skills in analyzing primary and secondary sources, identifying arguments and points of view, and conducting historical research. In addition, a strong background in history will enable students to put events and developments into their historical context and to synthesize these events and developments in order to reach rational and fact-based conclusions. More broadly, students will develop strong critical thinking, communication, and problem-solving skills that will prepare them for the requirements of upper division course work.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLO's)

Upon completion of the Degree program, students are able to:

- Students will be able to identify connections between specific people, groups, events and ideas and larger historical themes, developments and topics.
- Students will be able to critically analyze a variety of primary and secondary sources and draw valid historical interpretations from them.

HISTORY

Associate in Arts Degree for Transfer
Major Units: 18

REQUIRED CORE		6 UNITS
HISTORY 011	Political and Social History of the United States I	3
HISTORY 012	Political and Social History of the United States II	3

RESTRICTED ELECTIVES

LIST A: Select two courses		6 UNITS
HISTORY 086	Introduction to World Civilization I	3
HISTORY 002	Introduction to Western Civilization II	3
OR		
HISTORY 087	Introduction to World Civilization II	(3)

LIST B-1: Select one course.		3 UNITS
HISTORY 041	The African American in the History of the United States I	3
HISTORY 042	The African American in the History of the United States II	3
HISTORY 043	The Mexican-American in the History of the United States I	3
HISTORY 044	The Mexican-American in the History of the United States II	3
HISTORY 052	The Role of Women in the History of the U.S.	3

LIST B-2: Select one course from below or any course not already used from List A or B-1.		3 UNITS
ART 101	Survey of Art History I	3
ART 102	Survey of Art History II	3
ENGLISH 203	World Literature I	3
LABR ST 001	U.S. Labor Histor	3
LABR ST 004	Labor In America	3
LABR ST 021	The Working Class and Cinema	3
POL SCI 001	The Government of the United States	3
SOC 001	Introduction to Sociology	3

Total Major Units	18
CSU GE or IGETC general education pattern	37-39
CSU transfer elective units to meet	60-unit minimum
Total Degree units	60

IGETC (INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM)

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
IGETC (Intersegmental General Education Transfer Curriculum)	T036231D	C		37-39	-	37-39
This program is not Financial Aid Eligible.						

PROGRAM OVERVIEW

The Certificate of Achievement in Intersegmental General Education Transfer Curriculum (IGETC) is a program designed for students planning to transfer to either the California State University (CSU) or University of California (UC) system. It offers students a program of study which meets IGETC general education transfer requirements.

Although the certificate recognizes the completion of IGETC general education requirements, it does not guarantee admission to a specific campus within the CSU or UC system nor does it guarantee admission to a specific major. Some majors and colleges may require a different lower division preparation and/or a higher GPA than is necessary for this certificate.

Students who intend to transfer must meet all current IGETC general education transfer requirements including minimum GPA and eligibility for certification. Students are strongly advised to meet with a counselor to discuss transfer requirements and lower division major preparation that is needed for their intended transfer school.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Communicate effectively, both verbally and in writing.
- Critically analyze and solve problems using the appropriate technique for the issue at hand, including appropriate use of logic, mathematics, multi-disciplinary, and cultural considerations where applicable.
- Critically examine the function, media, subject matter, organization, aesthetic, style, and relative excellence of representative examples of the arts, literature, philosophy, and foreign languages including approaches from various historical, cultural, and gender-based origins.
- Develop an understanding of the information available, the perspectives and approaches of the physical, biological, social and behavioral sciences, appreciating the power and limits of these methods of inquiry and both individual, ethical, and societal responsibilities.
- Organize and present information in person in a logical and understandable manner.

IGETC (INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM)

Certificate of Achievement

Major Units: 37-39

Requirements for the IGETC Certificate of Achievement may be met by completing 37-39 units of Required Courses listed under the IGETC CSU/UC General Education Check Sheet with a "C" or better in each course. Please consult with a counselor for more details.

LIBERAL ARTS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Interdisciplinary Studies: Arts and Sciences	T018856C	A.A.	21*	18		18
Liberal Arts: Behavioral and Social Sciences	T033815C	A.A.	21*	18		18

At least 60 degree applicable units are required to earn an Associate degree.

*GE Units requirements may be fulfilled by completing any General Education Pattern; please consult with a counselor for more details.

These programs are Financial Aid Eligible.

PROGRAM OVERVIEW

Students planning to transfer to a four-year college or university may choose the Associate in Arts degree with a major in Liberal Arts and Sciences by choosing one of the options listed below.

The Liberal Arts degree is designed for students who desire a broad base of knowledge in the liberal arts and sciences. The Liberal Arts degree is one option for students who plan to transfer to a four-year university, including the California State University (CSU) or the University of California (UC).

NOTE: Students need to complete additional units to meet the required 60 units for the Associate of Arts degree.

Students should be aware that not all courses on this list are offered every semester.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Apply scientific principles, theories, and/or models to explain or predict the behavior of natural physical phenomena.
- Apply scientific knowledge and reasoning to evaluate the human interaction with the natural world and identify major issues impacting society.
- Apply and construct written, verbal, numeric or non-verbal expression to convey logical thought, analyze arguments and self-express.
- Critically evaluate communication in a symbol system appropriate to the academic discipline.
- Articulate the human condition through language, reasoning, artistic and/or cultural creation.
- Examine the perspectives, principles, theories, methods, and core concepts of the social and behavioral sciences within their contemporary, historical, cultural and geographical contexts.
- Compare and contrast the values, attitudes, modes of creative expression, and/or dynamics of interpersonal interactions of people from diverse cultural and societal backgrounds.

INTERDISCIPLINARY STUDIES: ARTS AND SCIENCES

Associate in Arts Degree

Major Units: 18

PROGRAM OVERVIEW

The Interdisciplinary Studies: Arts and Sciences degree is designed for students who wish to pursue broad areas of knowledge in arts and sciences plus additional knowledge in an "Areas of Emphasis." This area of emphasis integrates the study of the world around us by developing analytical skills needed to understand the physical world and the human beings who occupy it, including the artifacts they produce. The Interdisciplinary Studies: Arts and Sciences degree is designed for students who wish to explore different disciplines (subject areas) before deciding on a definite major program prior to transferring to a four-year university, or for students who may not be planning to transfer but wish to earn a degree in a particular area of study that interests them.

REQUIREMENTS FOR THE AA DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 AA units
- Minimum 2.0 GPA
- Complete general education requirements with one of the following GE patterns:
- LACCD GE pattern
- CSU GE
- IGETC pattern
- Complete a minimum of 18 units from area of emphasis coursework
- All courses must be completed with a grade of "C" or better

PROGRAM LEARNING OUTCOMES(PLO's)

Students who complete a degree in the Interdisciplinary Studies Program will be able to:

- Demonstrate integrative and applied learning.
- Demonstrate critical inquiry, analysis, thinking, writing, and quantitative skills.
- Demonstrate knowledge of human cultures and the physical and natural world.

INTERDISCIPLINARY STUDIES: ARTS AND SCIENCES

Associate in Arts Degree

Major Units: 18

COURSE REQUIREMENTS

Complete 18 units in areas of emphasis as follows:

- Complete at least 6 units from each of the following three categories listed below:

NATURAL SCIENCES — **6 UNITS MIN.**

ANATOMY 001	Human Anatomy	4
ANTHRO 101	Human Biological Evolution	3
ASTRON 001	Elementary Astronomy	3
ASTRON 005	Fundamentals of Astronomy Laboratory	1
BIOLOGY 003	Introduction to Biology	4
BIOLOGY 005	Introduction to Human Biology	4
BIOLOGY 006	General Biology I w/Lab	5
BIOLOGY 007	General Biology II w/Lab	5
CHEM 051	Fundamentals of Chemistry	5
CHEM 070	Introductory Organic and Biochemistry	4
CHEM 101	General Chemistry I	5
CHEM 102	General Chemistry II	5
CHEM 211	Organic Chemistry for Science Majors I	5
CHEM 212	Organic Chemistry for Science Majors II	5
CHEM 221	Biochemistry for Science Majors	5
EARTH 001	Earth Science	3
ELECTRN 002	Introduction to Electronics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
ENG GEN 231	Dynamics	3
ENV SCI 001	The Human Environment:	3
GEOG 001	Physical Geography	3
GEOLOGY 001	Physical Geology	3
GEOLOGY 006	Physical Geology Lab	1
MATH 215	Mathematics for Elementary School Teachers	3
MATH 227	Statistics	4
MATH 227S	Statistics with Support	4
MATH 230	Mathematics for Liberal Arts Students	3
MATH 235	Finite Mathematics	5
MATH 236	Calculus for Business and Social Sciences	5
MATH 241	Trigonometry with Vectors	4
MATH 241S	Trigonometry with Vectors with Support	4
MATH 245	College Algebra	3
MATH 260	Precalculus	5
MATH 260S	Precalculus with Support	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 270	Linear Algebra	3
MATH 272	Methods of Discrete Mathematics	5
MATH 275	Ordinary Differential Equations	3
MICRO 001	Introductory Microbiology w/ Lab	5
MICRO 020	General Microbiology w/Lab	4
PHYSICS 006	General Physics	4
PHYSICS 007	General Physics II	4
PHYSICS 011	Introductory to Physics w/Lab	4
PHYSICS 012	Physics Fundamentals	3
PHYSICS 014	Physics Fundamentals Laboratory	1
PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5
PHYSIOL 001	Introduction to Human Physiology	4
PSYCH 002	Biological Psychology	3

LIST 2: ARTS & HUMANITIES — **6 UNITS MIN.**

ASL 001	American Sign Language I	4
ASL 002	American Sign Language II	4
ASL 003	American Sign Language III	4
ASL 004	American Sign Language IV	4
ARC 130	History of Architecture I	2
ARC 131	History of Architecture I	2
ART 101	Survey of Art History I	3
ART 102	Survey of Art History II	3
ART 103	Art Appreciation I	3
ART 201	Drawing I	3
ART 300	Introduction to Painting	3
ENGLISH 102	College Reading and Composition I 3	
ENGLISH 103	Composition and Critical Thinking	3
ENGLISH 127	Creative Writing	3
ENGLISH 203	World Literature	3
ENGLISH 205	English Literature I	3
ENGLISH 206	English Literature II	3
ENGLISH 207	American Literature I	3
ENGLISH 208	American Literature II	3
ENGLISH 212	Poetry	3
ENGLISH 215	Shakespeare I	3
ENGLISH 240	Literature and the Motion Picture	3

FASHDSN 119A	History of Costume I	1.5
FASHDSN 119B	History of Costume II	1.5
FRENCH 001	Elementary French I	5
FRENCH 002	Elementary French II	5
HISTORY 002*	Introduction to Western Civilization II	3
HISTORY 052*	Role of Women in the History of the U.S.	3
HUMAN 001	Cultural Patterns of Western Civilization	3
HUMAN 002	Studies in Selected Cultures	3
HUMAN 060	People and Their World: Technology and Humanities	3
KIN MAJ 106	Sports Ethics	3
KIN MAJ 108	Ancient Olympic Games	4
LABR ST 021	The Working Class and Cinema	3
MUSIC 101	Fundamentals of Music	3
MUSIC 116	Survey and History of Rock,	3

POP AND SOUL MUSIC

MUSIC 141	Jazz Appreciation	3
MUSIC 650	Beginning Guitar	3
PHILOS 001	Introduction to Philosophy	3
PHILOS 020	Ethics	3
SPANISH 001	Elementary Spanish I	5
SPANISH 002	Elementary Spanish II	5
SPANISH 035	Spanish for Spanish Speakers I	5
SPANISH 036	Spanish for Spanish Speakers II	5
THEATER 100	Introduction to Theater	3
VISCOM 106	Drawing I	2
VISCOM 108	2D Design Fundamentals	2
VISCOM 120	Drawing II	2
VISCOM 130	Drawing III	2

LIST 3: BEHAVIORAL & SOCIAL SCIENCES. 6 UNITS MIN.

ADM JUS 001	Introduction to Administration of Justice	3
ADM JUS 004	Principles and Procedures of the Justice System	3
ADM JUS 067	Community Relations I	3
ANTHRO 102	Human Ways of Life: Cultural Anthropology	3
BUS 001	Introduction to Business	3
BUS 005	Business Law I	3
CH DEV 001	Child Growth and Development	3
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family & Community	3
CH DEV 042	Teaching in a Diverse Society	3
CH DEV 046	School Age Programs I	3
ECON 001	Principles of Economics I	3
ECON 002	Principles of Economics II	3
EDUC 001	Introduction to Teaching	3
GEOG 002	Cultural Elements of Geography	3
GEOG 007	World Regional Geography	3
HEALTH 101	Introduction to Public Health	3
HISTORY 002	Introduction to Western Civilization II	3
HISTORY 011	Political and Social History of the United States I	3
HISTORY 012	Political and Social History of the United States II	3
HISTORY 041	The African American in the History of the U.S. I	3
HISTORY 042	The African American in the History of the U.S. II	3
HISTORY 043	The Mexican-American in the History of the United States I	3
HISTORY 044	The Mexican-American in the History of the United States II	3
HISTORY 052	Role of Women in the History of the U.S.	3
HISTORY 086	Introduction to World Civilization I	3
HISTORY 087	Introduction to World Civilization II	3
KIN MAJ 109	Women in Sport	
KIN MAJ 120	History of Physical Education, Kinesiology and Sport	3
LABR ST 001	US Labor History	3
LABR ST 004	Labor in America	3
POL SCI 001	The Government of the United States	3
POL SCI 002	Modern World Governments	3
POL SCI 007	Contemporary World Affairs	3
PSYCH 001	General Psychology I	3
PSYCH 013	Social Psychology	3
PSYCH 014	Abnormal Psychology	3
PSYCH 032	Psychology of Women	3
PSYCH 041	Life Span Psychology: From Infancy to Old Age	3
PSYCH 069	Psychology in Film	3
PSYCH 074	Research Methods in the Behavioral Sciences	3
SOC 001	Introduction to Sociology	3
SOC 002	American Social Problems	3
SOC 011	Race and Ethnic Relations	3
SOC 028	The Family: A Sociologica Approach I	3
SOC 031	Sociology of Gender	3

Total major units 18

General Education Requirements

Choose one of the following general education patterns:

- LACCD GE pattern 21 units
- CSU GE 39 units
- IGETC 37 units
- Degree applicable elective units to meet the 60-unit requirement
- Total Degree units 60

TRANSFER NOTES

Which GE Pattern you choose to follow is based on your transfer plans. Students planning to transfer to a four-year university are cautioned that this degree may not meet all of the lower division requirements into a particular major. However, through careful educational planning with a counselor, this degree would offer a solid foundation in the transfer process. Students should consult with a counselor for specific information regarding their intended major at their target transfer institution.

LIBERAL ARTS: BEHAVIORAL AND SOCIAL SCIENCES

Associate in Arts Degree

Major Units: 24

PORGRAM OVERVIEW

The Associate Degree in Liberal Arts: Behavioral and Social Sciences is concerned with providing a broad understanding of the social, cultural, and intellectual world in which we live. Behavioral and Social science students have a diverse interest in human problems and seek a liberal education in a broad spectrum of

understandings, insights, and appreciations. Multidisciplinary in nature, this area of emphasis seeks to provide an understanding of the interrelationships and varied methodologies of its many subject areas. The goal of this area of emphasis is to develop students' intellectual and emotional understanding, appreciation, insights, and flexibility in order for them to succeed in government services, commerce or industry, and teaching. Students who receive an associate degree in the Social and Behavioral Sciences typically continue their studies at a university to receive a bachelor's degree in such disciplines as Anthropology, Child Development, Economics, Geography, History, Labor Studies, Political Science, Psychology, Social Work or Sociology.

PLEASE NOTE: All courses below transfer to CSU. Many courses are also transferable to UC. The courses that universities and colleges require for transfer vary. When selecting courses for transfer purposes, students should consult with a Counselor to determine the particular transfer requirements of specific transfer institutions.

REQUIREMENTS for the AA DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 degree applicable units
- Minimum 2.0 GPA
- Complete one of the following general education patterns:
- LACCD GE
- CSU GE
- IGETC GE
- Complete a minimum of 18 units in area of emphasis
- All courses must be completed with a grade of C or better.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Examine the perspectives, principles, theories, methods, and core concepts of the social and behavioral sciences within their contemporary, historical, cultural and geographical contexts.
- Apply and construct written, verbal, numeric or non-verbal expression to convey logical thought, analyze arguments and self-express.
- Compare and contrast the values, attitudes, modes of creative expression, and/or dynamics of interpersonal interactions of people from diverse cultural and societal backgrounds.

LIBERAL ARTS: BEHAVIORAL AND SOCIAL SCIENCES

Associate in Arts Degree

18 Units

COURSE REQUIREMENTS

Complete minimum of 18 units taking at least 1 course from at least three different disciplines listed below:

ADMINISTRATION OF JUSTICE:

ADM JUS 001	Introduction to Administration of Justice	3
ADM JUS 002	Concepts of Criminal Law	3
ADM JUS 004	Principles and Procedures of the Justice System	3
ADM JUS 067	Community Relations I	3

ANTHROPOLOGY:

ANTHRO 102	Human Ways of Life: Cultural Anthropology	3

BUSINESS:

BUS 001	Introduction to Business	3
BUS 005	Business Law I	3

CHILD DEVELOPMENT:

CH DEV 001	Child Growth and Development	3
CH DEV 002	Early Childhood: Principles and Practices	3
CH DEV 010	Health, Safety and Nutrition	3
CH DEV 011	Child, Family and Community	3
CH DEV 042	Teaching in a Diverse Society	3
CH DEV 046	School Age Programs I	3

ECONOMICS:

ECON 001	Principles of Economics I	3
ECON 002	Principles of Economics II	3

EDUCATION:

EDUC 001	Introduction to Teaching	3

GEOGRAPHY:

GEOG 002	Cultural Elements of Geography	3
GEOG 007	World Regional Geography	3

HEALTH:

HEALTH 101	Introduction to Public Health	3

HISTORY:

HISTORY 002	Introduction to Western Civilization II	3
HISTORY 011	Political and Social History of the United States I	3
HISTORY 012	Political and Social History of the United States II	3
HISTORY 041	The African American in the History of the United States I	3
HISTORY 042	The African American in the History of the United States II	3
HISTORY 043	The Mexican-American in the History of the United States I	3
HISTORY 044	The Mexican-American in the History of the United States II	3
HISTORY 052	Role of Women in the History of the U.S.	3
HISTORY 086	Introduction to World Civilization I	3
HISTORY 087	Introduction to World Civilization II	3

KINESIOLOGY MAJOR:

KIN MAJ 109	Women in Sport	3
KIN MAJ 120	History of Physical Education, Kinesiology and Sport	3

LABOR STUDIES:

LABR ST 001	US Labor History	3
LABR ST 004	Labor in America	3

POLITICAL SCIENCE:

POL SCI 001	The Government of the United States	3
POL SCI 002	Modern World Governments	3
POL SCI 007	Contemporary World Affairs	3

PSYCHOLOGY:

PSYCH 001	General Psychology I	3
PSYCH 013	Social Psychology	3
PSYCH 014	Abnormal Psychology	3
PSYCH 032	Psychology of Women	3
PSYCH 041	Life-Span Psychology: From Infancy to Old Age	3
PSYCH 069	Psychology in Film	3
PSYCH 074	Research Methods in the Behavioral Sciences	3

SOCIOLOGY:

SOC 001	Introduction to Sociology	3
SOC 002	American Social Problems	3
SOC 011	Race and Ethnic Relations	3
SOC 028	The Family: A Sociological Approach	3
SOC 031	Sociology of Gender	3

Total major units 18

General Education Requirements

Choose one of the following general education patterns:

- LACCD GE pattern 21 units
- CSU GE 39 units
- IGETC 37 units

Degree level electives units to meet 60-unit requirement

Total degree units 60

NOTE: Choosing a GE pattern to follow is based on your interest to transfer or not. Speak with your counselor or visit the University Transfer Center to find out more about which GE Pattern to follow if you are planning to transfer.

LIBERAL ARTS & SCIENCES: EMPHASIS IN MATHEMATICS, PHYSICAL AND NATURAL SCIENCES CROSS-LISTED IN APPLIED SCIENCE PATHWAY

PROGRAM OVERVIEW

This area of emphasis offers a broad and interdisciplinary foundation in the sciences necessary for continued training at the upper division (or advanced) level for many bachelor's degree programs in the natural sciences including biology, chemistry, geology, mathematics, physics, and many others. It is a starting point for students who are preparing for careers in business, industry, medicine, health sciences, education, and government, where scientific and technical skills are in great demand.

PLEASE NOTE: The courses that universities and colleges require for transfer vary. When selecting courses for transfer purposes, students should consult with Counseling Services to determine the particular transfer requirements of specific transfer institutions.

REQUIREMENTS for the AA DEGREE

To qualify for this degree, you must meet these requirements:

- Minimum of 60 degree applicable units
- Minimum 2.0 GPA
- Complete general education requirements with one of the following GE patterns
- LACCD GE pattern
- CSU GE
- IGETC pattern
- Complete a minimum of 18 units from area of emphasis coursework
- Courses must be completed with a grade of "C" or better

PROGRAM LEARNING OUTCOMES (PLO's)

Upon completion of the Degree program, students are able to:

- Apply scientific principles, theories, and/or models to explain or predict the behavior of natural physical phenomena.
- Apply scientific knowledge and reasoning to evaluate the human interaction with the natural world and identify major issues impacting society.

LIBERAL ARTS & SCIENCES: EMPHASIS IN MATHEMATICS, PHYSICAL AND NATURAL SCIENCES

Associate in Arts Degree
Major Units: 18

COURSE REQUIREMENTS

Complete 18 units with a minimum of 3 units from each of the following categories listed below:

LIST A: LIFE SCIENCES:

ANATOMY 001	Human Anatomy	4
ANTHRO 101	Physical Anthropology	3
BIOLOGY 003	Introduction to Biology	4
BIOLOGY 005	Introduction to Human Biology	4
BIOLOGY 006	General Biology I w/Lab	5
BIOLOGY 007	General Biology II w/Lab	5
MICRO 001	Introductory Microbiology w/ Lab	5
MICRO 020	General Microbiology w/Lab	4
PHYSIOL 001	Introduction to Human Physiology	4
PSYCH 002	Biological Psychology	3

LIST B: PHYSICAL SCIENCES:

ASTRON 001	Elementary Astronomy	3
ASTRON 005	Fundamentals of Astronomy Lab.	1
CHEM 051	Fundamentals of Chemistry	5
CHEM 070	Introductory Organic and	4

Biochemistry

CHEM 101	General Chemistry I	5
CHEM 102	General Chemistry II	5
CHEM 211	Organic Chemistry for Science Majors I	5
CHEM 212	Organic Chemistry for Science Majors II	5
CHEM 221	Biochemistry for Science Majors	5
EARTH 001	Earth Science	3
ELECTRN 002	Introduction to Electronics	3
ENG GEN 151	Materials of Engineering	3
ENG GEN 220	Electrical Circuits I	4
ENG GEN 231	Dynamics	3
ENV SCI 001	The Human Environment:Physical Processes	3
GEOG 001	Physical Geography	3
GEOLOGY 001	Physical Geology	3
GEOLOGY 006	Physical Geology Lab	1
PHYSICS 006	General Physics I	4
PHYSICS 007	General Physics II	4
PHYSICS 011	Introductory to Physics w/Lab	4
PHYSICS 012	Physics Fundamentals	3
PHYSICS 014	Physics Fundamentals Laboratory	1
PHYSICS 101	Physics for Engineers and Scientists I	5
PHYSICS 102	Physics for Engineers and Scientists II	5
PHYSICS 103	Physics for Engineers and Scientists III	5

LIST C: MATHEMATICS:

MATH 215	Principles of Mathematics I	3
MATH 227	Statistics	4
MATH 227S	Statistics with Support	4
MATH 230	Mathematics for Liberal Arts Students	3
MATH 235	Finite Mathematics	5
MATH 236	Calculus for Business & Social Sciences	5
MATH 241	Trigonometry with Vectors	4
MATH 241S	Trigonometry with Vectors with Support	4
MATH 245	College Algebra	3
MATH 260	Precalculus	5
MATH 260S	Precalculus with Support	5
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5
MATH 270	Linear Algebra	3
MATH 272	Methods of Discrete Mathematics	5
MATH 275	Ordinary Differential Equations	3

Total major units 18 min.

General Education Requirements

Choose any general education pattern below:

- LACCD GE pattern 21 units
- CSU GE 39 units
- IGETC 37 units

Degree applicable elective units to meet the 60-unit requirement

Total Degree units 60

Which GE Pattern you choose to follow is based on your transfer plans. Speak with a counselor to find out more about which GE Pattern to follow.



MATHEMATICS

Award Title	Academic Plan	Award Type	GE Units	Required Course Units	Major Elective Units	Major Units
Mathematics	T031014H	AST	IGETC/ CSU	15	6-7	21-22
At least 60 degree applicable units are required to earn an Associate degree. This program is Financial Aid Eligible.						

PROGRAM OVERVIEW

The Associate in Science for Transfer in Mathematics prepares a student for transfer into the CSU system for further study in pure or applied mathematics. Earning a 4-year degree in mathematics prepares students for careers in which mathematical skills are in great demand, such as science, technology, engineering, computer science, business, industry, medicine, education or government. The goal of this degree is to provide a clear pathway for transfer students applying to the California State University (CSU). Completion of the Associate in Science in Mathematics for Transfer (AST) ensures transfer students will complete the lower division general education requirements as well as the articulated lower division major requirements for the bachelor's degree in Mathematics prior to transferring.

The Associate in Science in Mathematics for Transfer (AS-T) degree will be awarded upon completion of the following.

- Completion of 60 transferable semester units to the California State University
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one the following General education patterns
- The Intersegmental General Education Transfer Curriculum (IGETC), with "C"s or better in all coursework AND completion of Area 1C Oral communication (CSU admission requirement)
- California State University General Education – Breadth Requirements (CSU GE). Areas A1, A2, A3, & B4 must be completed with a grade of "C" or better (CSU admission requirement)
- A minimum of 23 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063).

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Degree** program, students are able to:

- Apply techniques of Differential and Integral Calculus to solve problem in mathematics, statistics and applied sciences.
- Analyze data using methods of differential or integral calculus or statistics.
- Apply techniques of linear differential equations and systems of differential equations to develop mathematical models for application problems.

MATHEMATICS

Associate in Science for Transfer Degree
Major Units: 21-22

Requirements for the Associate in Science Transfer degree in Mathematics may be met by completing 15 units of Required Courses and 6-7 units of Major Electives with a "C" or better along with general education courses meeting IGETC or CSU Requirements.

REQUIRED COURSES:

		UNITS
MATH 265	Calculus with Analytic Geometry I	5
MATH 266	Calculus with Analytic Geometry II	5
MATH 267	Calculus with Analytic Geometry III	5

MAJOR ELECTIVES:

Select at least 6-7 units from the courses below		UNITS
MATH 270	Linear Algebra	3
MATH 275	Ordinary Differential Equations	3
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	4

MAJOR REQUIRED Units	**21-22**
CSU or IGETC for CSU GE Pattern	37-39
CSU Transferable Elective units (as needed to reach 60 units)	
TOTAL CSU transferrable units	60

POLITICAL SCIENCE

PROGRAM OVERVIEW

Political science, the systematic and rigorous study of government, public policy and the political behavior of individuals, groups, and institutions, is becoming increasingly crucial in a complex and controversial world. Most social, economic and moral issues have political implications, and governmental policy affects most aspects of daily life. The goal of the Associate in Arts in Political Science for Transfer degree (ADT) is to provide students with an understanding of the American political system and other political systems within the context of global forces, international conflicts, ideological systems and diversity. Courses in this degree are designed to introduce students to the field of political science and the primary subfields of political science, and to equip students with the specialized research and analytical skills necessary to examine political issues. This analytical framework will familiarize students with the more generalized problem-solving skills sufficient to allow them to make valuable contributions to any vocation or enterprise they pursue.

Political Science for Transfer Degree Requirements

- Completion of 60 transferable semester units to the California State University.

- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C: Oral Communication (CSU admission requirement)
- A minimum of 19 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEVEL LEARNING OUTCOMES (PLO'S)

Upon completion of this program, students will be able to:

- Demonstrate knowledge of important findings, theories, and changing issues relevant to political science;
- Demonstrate critical thinking about political issues and evaluate theories and arguments major assertions, background assumptions, the evidence used to support assertions, and their explanatory value;
- Utilize appropriate investigative methods and appropriate technologies to access relevant research.

POLITICAL SCIENCE

Associate in Arts for Transfer Degree
Major Units: 19

REQUIRED CORE		13 units
POL SCI 001	The Government of the United States	3
POL SCI 002	Modern World Governments	3
POL SCI 007	Contemporary World Affairs	3
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	(4)

RESTRICTED ELECTIVES

Select two courses from below		6 units
ADM JUS 001	Introduction to Administration of Justice	3
HISTORY 011	Political and Social History of the United States I	3
HISTORY 012	Political and Social History of the United States II	3
HISTORY 052	The Role of Women in the History of the U.S.	3
LABR ST 001	U.S. Labor History	3
LABR ST 004	Labor in America	3
PSYCH 001	General Psychology I	3
SOC 001	Introduction to Sociology	3

Total major units	**19**
CSU GE or IGETC general education pattern	39-37
CSU transfer electives to meet 60-unit minimum	
Total Degree units	60

PSYCHOLOGY

PROGRAM OVERVIEW

Psychology is a discipline that uses the scientific method to study animal and human behavior. This Associate in Arts in Psychology for Transfer degree offers students the opportunity to meet lower division transfer requirements for a major in Psychology, leading to a Bachelor of Arts or Bachelor of Science in Psychology at a California State University (CSU). Students who earn this degree will receive priority admissions at a CSU. The Associate of Arts in Psychology for Transfer degree is the first step in preparing students for professions and areas of interest related to psychology such as Clinical Psychology, Counseling, Medicine, Law, Management, Business, Social Work, and Teaching.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.

Full completion of one of the following General Education patterns:

- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC).
- A minimum of 19 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLOS):

Upon completion of the Degree program, students are able to:

- Identify the major concepts, theoretical perspectives, research methods, core empirical findings, and historic trends in psychology from diverse perspectives.
- Critically evaluate research reports and synthesize a body of research findings.
- Develop testable hypotheses and select appropriate research design to test hypotheses.



PSYCHOLOGY

Associate in Arts for Transfer
Major units: 19

REQUIRED CORE		10 units
MATH 227	Statistics	4
OR		
MATH 227S	Statistics with Support	(4)
PSYCH 001	General Psychology I	3
PSYCH 074	Research Methods in Behavioral Science	3

RESTRICTED ELECTIVES

LIST A: Select one (1) course		3 units min.
BIOLOGY 003	Introduction to Biology	4
PSYCH 002	Biological Psychology	3

LIST B:		3 units
PSYCH 041	Life Span Psychology: From Infancy to Old Age	3

LIST C: Select one (1) courses		3 units
PSYCH 013	Social Psychology	3
PSYCH 014	Abnormal Psychology	3
PSYCH 032	Psychology of Women	3
PSYCH 069	Psychology in Film	3

Total Major Units	**19**
CSU GE or IGETC general education pattern	37-39
CSU Transfer elective to complete 60-unit minimum	
Total Degree units	60

SOCIAL JUSTICES STUDIES

PROGRAM OVERVIEW

Whereas sociology is the study of society, the Associate in Arts in Social Justice Studies for Transfer Degree (General Option) focuses on the social construction of reality and social interaction with an emphasis on how social structure creates inequality based on group membership, such as ethnicity, class and gender. Social Justice is an interdisciplinary field of study that permits students to focus on the intersection of gender, ethnicity/race, class, and sexual orientation, as pertaining to issues of politics, economics, environment, and education. In addition, students will develop strong critical thinking, communication, and problem-solving skills that will prepare them for the requirements of upper division course work.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLOS):

Upon completion of this program, students will:

- Students will be able to identify and analyze the causes of race and gender inequality in the United States.
- Students will identify and analyze social policies that have the potential to alleviate race and gender inequalities.

SOCIAL JUSTICS STUDIES – GENDER STUDIES OPTION

Associate in Arts for Transfer
Major units: 18-19

REQUIRED CORE		9 units
SOC 011	Race and Ethnic Relations	3
SOC 031	Sociology of Gende	3

Select ONE Core course from below:

HEALTH 008	Women's Personal Health	3)
PSYCH 032	Psychology of Women	(3)

Restricted Electives: 9 units

Select 3 courses from at least 2 of the following 4 areas:
NOTE: Only one course from Area 4 may be used

Area 1: Arts & Humanities

LABR ST 021	The Working Class and Cinema	3

Area 2: History or Government

HISTORY 041	The African American in the History of the U.S. I	3
HISTORY 042	The African American in the History of the U.S. II	3
HISTORY 043	The Mexican-American in the History of the U.S. I	3
HISTORY 044	The Mexican-American in the History of the U.S. I	3
HISTORY 052	The Role of Women in the History of the U.S.	3

Area 3: Social Sciences

ANTHRO 102	Human Ways of Life: Cultural Anthropology	3
PSYCH 013	Social Psychology	3
PSYCH 032	Psychology of Women	3
SOC 002	American Social Problems	3
SOC 028	The Family: A Sociological Approach	3

Area 4: Quantitative Reasoning & Research Methods (limit one course)

MATH 227	Statistics	4
MATH 227S	Statistics with Support	4
PSYCH 074	Research Methods in the Social Sciences	3

Total Major Units 18-19
CSU GE or IGETC general education pattern 37-39
CSU Transfer elective to complete 60-unit minimum

Total Degree units 60

SOCIAL JUSTICS STUDIES – GENERAL OPTION

Associate in Arts for Transfer
Major units: 18

REQUIRED CORE		9 units
SOC 011	Race and Ethnic Relations	3
SOC 031	Sociology of Gender	

Select ONE Core course from below:

HEALTH 008	Women's Personal Health	(3)
POL SCI 007	Contemporary World Affairs	(3)
PSYCH 032	Psychology of Women	(3)

RESTRICTED ELECTIVES: 9 units

Select 3 courses from at least 2 of the following 4 areas:
NOTE: Only one course from Area 4 may be used.

Area 1: Arts & Humanities

LABR ST 021	The Working Class and Cinema	3

Area 2: History or Government

HISTORY 041	The African American in the History of the U.S. I	3
HISTORY 042	The African American in the History of the U.S. II	3
HISTORY 043	The Mexican-American in the History of the U.S. I	3
HISTORY 044	The Mexican-American in the History of the U.S. I	3
HISTORY 052	The Role of Women in the History of the U.S.	3
LABR ST 001	U.S. Labor History	3

Area 3: Social Sciences

ADM JUS 001	Introduction to Administration Of Justice	3
ANTHRO 102	Human Ways of Life: Cultural Anthropology	3
GEOG 002	Cultural Elements of Geography	3
LABR ST 004	Labor in America	3
PSYCH 013	Social Psychology	3
PSYCH 032	Psychology of Women	3
SOC 001	Introduction to Sociology	3
SOC 002	American Social Problems	3
SOC 028	The Family: A Sociological Approach	3

Area 4: Quantitative Reasoning & Research Methods (limit one course)

MATH 227	Statistics	4
MATH 227S	Statistics with Support	4
PSYCH 074	Research Methods in the Social Sciences	3

Total Major minimum Units 18

CSU GE or IGETC general education pattern	37-39
CSU Transfer elective to complete 60-unit minimum	
Total Degree units	60

SOCIOLOGY

PROGRAM OVERVIEW

Sociology is the scientific study of society, social institutions and social relationships. A key contribution of the discipline is that social factors matter. Our lives are not only shaped by personal psychology, but also by our place in the social world. Sociology examines how social structures, such as the workplace, political, economic, educational and religious institutions affect individuals and how individuals influence these structures. Sociologists also explore how people's socioeconomic status, race, ethnicity, age, gender, sexualities and marital status affect their attitudes, behavior and chances in life. Sociologists organize their knowledge in theories, which they both create and test through social research. Often such research is aimed at understanding important social issues and problems. Sociologists study the patterns of behavior that characterize human interaction. They seek to discover the main forces that unite and separate social groups and to determine the conditions that transform social life. The Associate in Arts in Sociology for Transfer degree is designed to assist students in seamlessly transferring to a CSU major in Sociology.

DEGREE REQUIREMENTS

- Completion of 60 transferable semester units to the California State University.
- Obtainment of a minimum grade point average of 2.0 in all transferable coursework.
- Full completion of one of the following General Education patterns:
- California State University General Education – Breadth Requirements (CSU GE).
- The Intersegmental General Education Transfer Curriculum (IGETC) for CSU, with completion of Area 1C Oral communication (CSU admission requirement)
- A minimum of 18 semester units required for the major
- All courses in the major must be completed with a grade of "C" or better or a "P" if the course is taken on a "Pass-No Pass" basis (Title 5 § 55063)

PROGRAM LEARNING OUTCOMES (PLO's)

Upon completion of the Degree program, students are able to:

- Articulate the role of sociological theories in multiple social contexts.
- Identify and explain major sociological and theoretical perspectives
- Critically analyze important social issues and problems
- Identify patterns of behavior that characterizes human interaction

SOCIOLOGY

Associate in Arts for Transfer Degree

Major Units:

CORE COURSES		9 units min.
SOC 001	Introduction to Sociology	3

Select two courses from the following:

MATH 227	Statistics	4
OR		
MATH 227	Statistics with Support	(4)
SOC 004	Sociological Analysis	3
SOC 002	American Social Problems	3

RESTRICTED ELECTIVES

LIST A: **6 units**

Select two courses below or any course not already used above

PSYCH 013	Social Psychology	3
SOC 011	Race and Ethnic Relations	3
SOC 028	The Family: A Sociological Approach	3
SOC 031	Sociology of Gender	3

LIST B: **3 units**

Select one course below or any course not already used above

ADM JUS 001	Introduction to Administration of Justice	3
ANTHRO 102	Human Ways of Life: Cultural Anthropology	3
GEOG 002	Cultural Elements of Geography	3
PSYCH 001	General Psychology	3

Total Major Units 18-19

CSU GE or IGETC general education pattern	39-37
Elective units to meet CSU	60 minimum transfer

Total Degree Units 60

Apprenticeship Education

APPRENTICESHIP EDUCATION

Department Chair: William (Bill) Elarton, Room SQ-122
(213) 763-3701, cdm@lattc.edu

NOTE: Open to Registered Apprentices ONLY

Prerequisites: Registered Apprenticeship.

EDUCATIONAL PROGRAMS AND COURSES

- Electrical Lineman
- Engineer: Operating/Maintenance

LATTC's Apprenticeship Education program offers classes to students who are indentured to learn a trade under agreement with the State of California Division of Apprenticeship Standards, and are required to attend college classes during their indenture ship. The LATTC Apprenticeship Education program is part of a state approved industrial plan for training skilled workers. It is enabled nationally by the Federal Apprenticeship Law (known as the Fitzgerald Act of 1937) and on the state level by the Shelley-Maloney Labor Standards Act of 1939. The program is authorized and supported by the California Apprenticeship Council under the supervision of the joint Apprenticeship Committee (equal employer and employee representation) for each trade under standards approved by the State of California.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

Apprentices training under the cooperative direction of the college and Apprenticeship committees for their trade may petition to receive credit toward the Associate in Arts degree or the Associate in Science degree for all courses successfully completed. A Certificate of Completion will be awarded when the proper application is made and the student has successfully completed all the apprenticeship assigned in their discipline. Additional courses may be substituted with the approval of the apprenticeship coordinator. Substitutions will be limited to 50%.

There are two primary parts to the training of an apprentice: (1) on-the-job training and instruction in the manipulative processes, and (2) in-school training which involves instruction in technical subjects related to the on-the-job training. On-the-job training is comprised of 40 hours per week of supervised work experience and instruction wherein an apprentice rotates through a series of sequential work experiences which are designed to develop the all-around skills of the trade.

State apprenticeship law requires that state and local boards responsible for vocational education administer related and supplemental instruction for apprentices. College offerings provide the apprentice with a study of technical subjects, subject to regular class attendance for the duration of the apprenticeship training period. An example of topics studied, which are generally applicable to a majority of trades, includes applied math and science, blueprint reading and drawing, materials, equipment, processes, and health and safety.

Los Angeles Trade Technical College plays no part in the apprenticeship selection process. For further information about apprenticeship programs operating in California and the possibility of becoming an indentured apprentice in any trade, contact the California State Division of Apprenticeship Standards at 8th floor, Room 8000,320 West Fourth Street, Los Angeles, California 90012. Their phone number is (213) 576-7750 or go to Apprenticeship Program Information Guide.

For more information about LATTC Apprenticeship Program visit the website at https://college.lattc.edu/cmu/program/apprenticeship-programs/, come see us in Sequoia Hall, Room SQ-122, or call at (213) 763-7151.

ELECTRICAL LINEMAN APPRENTICESHIP

Certificate of Achievement

Prerequisites: Students enrolling in these classes must have been accepted into a California Indentured Apprenticeship Program. Student apprentices will be monitored and evaluated during this program by the joint apprenticeship committee for their trade and will gain the skills necessary to perform as a journeyman in their trade. A Certificate of Achievement may be awarded when a student completes 24 units in this program.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the **Certificate** program, students are able to:

- Use hand and power tools to perform basic utility power-line work such as; hammers, saws, chain-saw, wrenches, and other related equipment.
- Perform calculations and measurements commiserate to entry level power-line work.
- Pole Climbing Competencies (Climbing with Confidence), demonstration of things such as; string and transfer overhead wire, set and remove utility poles, hang transformers, hang and remove cross-arms, install and remove cut-outs, etc.

See "Course Descriptions" Section for detail course information for the following -

701A	Electrical Lineman Apprenticeship I A	3
701B	Electrical Lineman Apprenticeship I B	3
702A	Electrical Lineman Apprenticeship II A	3
702B	Electrical Lineman Apprenticeship II B	3
703A	Electrical Lineman Apprenticeship IIIA	3
703B	Electrical Lineman Apprenticeship III B	3
704A	Electical Lineman Cable Splicer I A	3
704B	Electical Lineman Cable Splicer I B	3
Elective(s):		
709	Electrical Craft Helper	4

OPERATION MAINTENANCE ENGINEER APPRENTICES

Certificate of Achievement

Prerequisites: Students enrolling in these classes must have been accepted into a California Indentured Apprenticeship Program. A Certificate of Achievement may be awarded for completion of a combination of 36 units in this program and the A/C Refrigeration Mechanic program. Student apprentices will be monitored and evaluated during this program by the joint apprenticeship committee for their trade and will gain the skills necessary to perform as a journeyman in their trade.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the Certificate program, students are able to:

- Use hand and power tools to perform stationary engineer operations.
- Perform calculations and measurements related to stationary engineer work.
- Work independently & interdependently to safely accomplish shared professional outcomes.
-

See "Course Descriptions" Section for detail course information for the following -

100	O.S.H.A. Based Safety Standards: Construction & Industry	2
703	Energy Management	4
704	Motor Control I	2
720	HVACR - I	2
724	Fundamentals of Electricity	2
727	Industrial Mechanics	2
739	Locksmithing and Security Systems for Apprentices	4
740	Tenant Relations and Reports for Apprentices	4
744	HVACR - Conditioning Controls	2
745	Plumbing Code I	4
746	Plumbing Code Principles and Practices	2
747	Electrical Trouble Shooting	2
748	Electrical Codes & Ordinances (NEC)	
749	HVACR II	2
750	Indoor Air qualitiy	4
751	Print Reading	3
753	Boilers for Apprentices	4



Pre-professional educational Pathways

COOPERATIVE WORK EXPERIENCE EDUCATION

Contact: **Christie Dam**
213.763.7075, DamMC@lattc.edu

PROGRAM OVERVIEW

Cooperative Work Experience Education (CWEE) combines on-the-job experience with regular classroom instruction. It is designed to expand students' skills and knowledge, and to improve self-understanding by integrating classroom study with supervised work experience.

CWEE is based on the principle that well educated individuals develop most effectively through the incorporation of related education and work experience. By monitoring structured work experiences in business, industry, government and human services settings, LATTC provides enrichment to college studies which enhance the student's total development.

In the Cooperative Work Experience Education program, an individual student's educational objectives are carefully planned and coordinated between the College, the student, and the employer to ensure a positive and realistic employment experience.

Cooperative Work Experience Education has the following objectives:

- To provide opportunity for the student to secure employment on a part-time or full-time basis.
- To gain realistic work experience that is meaningfully related to the student's college study program.
- To provide the student the opportunity to acquire knowledge, skills, and attitudes essential for successful employment.

A student enrolled in Cooperative Work Experience Education:

- Has the opportunity to learn or improve employment skills under actual working conditions.
- Gains perspective on career goals through application of classroom theory to "real life experience."
- Builds self-identity and confidence as a worker through individual attention given by instructor/coordinators and employers.
- Has opportunities to test personal abilities in work environments.
- Has a more realistic approach to the Job market.
- May refer to work experience education in future job applications.
- Benefits financially while learning, and can begin a career earlier.

STUDENT QUALIFICATIONS

GENERAL WORK EXPERIENCE (195, 295, 395)

Hours by arrangement: 1-3 units

Prerequisite: Approval of Work Experience Coordinator

This is a program where supervised employment is intended to assist students in acquiring desirable work habits, attitudes, and career awareness. The work experience need not be related to the students' educational goals. The course may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period in general work experience education. Each unit of credit requires 60 hours of non-paid work or 75 hours of paid work.

Students employed in a job not related to their major should enroll in:

COOP ED General Course(s): 195, 295 or 395

Section: See schedule

Units: 1-3

Room: TBA

OCCUPATIONAL WORK EXPERIENCE (911, 921, 931, 941)*

Hours by arrangement: 1-4 units

Prerequisite: Employment in a field related to the students' program of study as verified and approved by the Cooperative Work Experience Coordinator.

This is a program of supervised training conducted in the form of on-the-job training in an employment area related to students' occupationally oriented program of study that will enhance the students' educational goals on campus. The course may be repeated for a maximum of 16 total units, subject to a maximum of 4 units during one enrollment period in occupational work experience education. Each unit of credit requires 60 hours of non-paid work or 75 hours of paid work.

* Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Transferability: Please consult www.assist.org for transfer major related work experience coursework.

Students employed in a job related to their major should enroll in:

Discipline Specific Courses: 911, 921, 931 or 941

Section: See schedule

Units: 1-4

Room: TBA

Courses within the following disciplines provide Occupational Work Experience Education credit:

- Accounting (ACCTG)
- Automotive Collision Repair (AUTOCOR)
- Automotive and Related Technology (AUTORTK)
- Business (BUS)
- Building Construction Techniques (BLDGCTQ)
- Carpentry (CRPNTRY)
- Child Development (CH DEV)
- Culinary Arts (CLN ART)
- Diesel and Related Technology (DIESLTK)
- Electrical Construction and Maintenance (ECONMT)
- Electronics Technology (ELECTRN)
- Fashion Design (FASHDSN)
- Fashion Merchandising (FASHMER)
- Health Occupations (HLTHOCC)
- Management (MGMT)
- Plumbing (PLUMBNG)
- Professional Baking (PROFBKG)
- Refrigeration and Air Conditioning Mechanics (REF A/C)
- Solid Waste Management Technology (SWM TEK)
- Supervision (SUPV)
- Supply Water Technology (WATER)
- Welding/Gas and Electric (WELDG/E)

CALIFORNIA STATE UNIVERSITY: APPROVED COOPERATIVE EDUCATION SUBJECT AREAS

Los Angeles Community College District policy provides that a maximum of eight (8) semester units in cooperative education courses completed in the subject areas listed below may be applied toward the California State University.

Cooperative Education

The following courses provide Cooperative Work Experience Education credit:

195	Work Experience General I	(1) (CSU)
295	Work Experience General I	(2) (CSU)
395	Work Experience General I	(3) (CSU)
911	Work Experience in Major I	(1)
921	Work Experience in Major I	(2)
931	Work Experience in Major I	(3)
941	Work Experience in Major I	(4)

Prerequisite: Employment in a field related to the students' program of study as verified by the signature of the cooperative education advisor. Supervised training is conducted in the form of on-the-line job training in an employment area that will enhance the students' educational goals on campus.

Please consult www.assist.org for transferability of major related work experience coursework.

Noncredit - Certificates

COLLEGE READINESS

Certificate of Competency

Award Title	Academic Plan
College Readiness	T024218E

PROGRAM OVERVIEW

This certificate prepares students for success in college. Students will obtain the basic skills needed to successfully transition to college classes and start working towards their certificate, degree, or transfer goals.

PROGRAM LEARNING OUTCOMES (PLOs)

- Utilize the basic speaking and listening skills necessary for success in obtaining employment and/or advancement in the workplace.
- Demonstrate the basic reading and writing skills necessary for success in obtaining employment and/or advancement in the workplace.

REQUIRED COURSES

		UNITS
BSICSKL 002 CE	Basic English Skills	0
BSICSKL 023 CE	College and Scholastic Assessment Prep	0
BSICSKL 035 CE	Basic Math Skills	0
BSICSKL 060 CE	Basic Computer Literacy	0
BSICSKL 075 CE	Introduction to Post-Secondary Education	0

CUSTODIAL TECHNICIAN TRAINING

Certificate of Completion

Award Title	Academic Plan
Custodial Technician Training	T036965E

PROGRAM OVERVIEW

The Custodial Technician Training program provides students with the professionalism, knowledge and skills required for Custodial Services positions. The program is designed for front line custodians and teaches basic skills in cleaning and maintenance of floors and other surface areas. The program introduces students to employability skills and technical report writing mechanics.

PROGRAM LEARNING OUTCOMES (PLOs)

- Perform basic procedures for cleaning and polishing a variety of surfaces.
- Generate basic cleaning reports of technical nature.

REQUIRED COURSES

		UNITS
BSICSKL 019CE	Technical English Writing	0
VOC ED 060CE	Custodial Technician Training	0

ENGLISH AS A SECOND LANGUAGE: BEGINNING

Certificate of Competency

Award Title	Academic Plan
English as a Secong Language: Beginning	T024459E

PROGRAM OVERVIEW

Students who earn this certificate will receive instruction in speaking, listening, reading and writing and the basic skills necessary for success in obtaining employment and/or advancement in the workforce.

PROGRAM LEARNING OUTCOMES (PLOs)

- Apply listening, speaking, reading and writing skills to successfully attain their academic goals.
- Apply listening, speaking, reading and writing skills to successfully attain their vocational goals.

REQUIRED COURSES

		UNITS
E S L NC 006 CE	English as a Second Language-0	0
E S L NC 007 CE	English as a Second Language-1	0
E S L NC 008 CE	English as a Second Language-2	0

ENGLISH LITERACY AND CIVICS
Certificate of Competency

Award Title	Academic Plan
English Literacy and Civics	T024029E

PROGRAM OVERVIEW

Courses in this program are designed to help students advance their English proficiency.

REQUIRED COURSES

		UNITS
E S L NC 001 CE	English as a Second Language- Beginning 1	0
E S L NC 008 CE	English as a Second Language-2	0
ESLCVCS 010 CE	ESL and Civics -1	0

ENTRY LEVEL LABORER FOR THE ENERGY & CONSTRUCTION SECTORS
Certificate of Completion

Award Title	Academic Plan
Entry Level Laborer for the Energy & Construction Sectors	T036614E

PROGRAM OVERVIEW

This entry level program provides a generalized understanding of various energy and construction related career expectations and requirements. The use of tools, safety principles and practices, and employment soft skills will also be covered.

PROGRAM LEARNING OUTCOMES (PLOs)

- Demonstrate accuracy and proficiency in describing career options.
- Demonstrate accuracy and proficiency in the selection of tools and PPE.

REQUIRED COURSES

		UNITS
BSICSKL 073CE	Industry Overview and Career Opportunities	0
BSICSKL 077CE	Fundamentals of Workplace Success - Teamwork	0
VOC ED 259CE	(O.S.H.A.) Safety Standards: Construction & Indrustry	0
VOC ED 257CE	Craft Helper	0
VOC ED 255CE	Significant Changes to Industry Codes	0

LIFEGUARD TRAINING
Certificate of Completion

Award Title	Academic Plan
Lifeguard Training	T036617E

PROGRAM OVERVIEW

Successful completion of this certificate provides candidates with recognized vocational certification for employment at: swimming pools, splash parks, aquatic parks, hotels and resorts as a lifeguard, shallow water lifeguard and/or aquatic attraction lifeguard. Successful completion of the required courses leads to the American Red Cross certificates in Lifeguard Training, Shallow Water Lifeguard or Aquatic Attraction Lifeguard.

PROGRAM LEARNING OUTCOMES (PLOs)

- Complete the first aid, CPR/AED certificate for either the American Red Cross or the American Heart Association.
- Complete the American Red Cross certificate for Lifeguard training, Waterfront/Waterpark, Shallow Water lifeguarding, and/or Aquatic attraction lifeguarding.

REQUIRED COURSES

		UNITS
VOC ED 311CE	Workplace Safety: First Aid/CPR Basics	0
VOC ED 312CE	Workplace Safety: Water Safety	0

LUBE TECHNICIAN
Certificate of Completion

Award Title	Academic Plan
Lube Technician	T036814E

PROGRAM OVERVIEW

This entry level program provides a generalized understanding of preventative automotive maintenance focusing on oil and fluid maintenance.

This program is designed to meet the Automotive industry's growing need for entry-level service support positions. This is the foundational certificate designed for entry-level job attainment or transition to the credit Automotive program.

PROGRAM LEARNING OUTCOMES (PLOs)

- Demonstrate accuracy, proficiency and quality in oil change task performance.

REQUIRED COURSES

		UNITS
BSICSKL 078CE	Fundamentals of Workplace Success II-Effective Communication and Leadership	0
VOC ED 325CE	Introduction to Automotive Maintenance and Service	0
VOC ED 326CE	Automotive Diagnostics & Repair	0

RECREATION AND COMMUNITY SERVICES ASSISTANT

Certificate of Completion

Award Title	Academic Plan
Recreation and Community Services Assistant	T024048E

PROGRAM OVERVIEW

This program is designed to train students to perform paraprofessional work assisting in organizing and conducting recreation, sports, cultural, and leisure activities. Work may include: assisting with developing, planning, and evaluating activities and events; providing basic skill instruction; performing handling procedures, commodities and maintaining records, directing group activities; and maintaining facilities, equipment and supplies.

REQUIRED COURSES

		UNITS
VOC ED 214CE	Advanced Lifelong Fitness Center	0
VOC ED 311CE	Workplace Safety: First Aid/CPR Basics	0
VOC ED 312CE	Workplace Safety: Water Safety	0
VOC ED 313CE	Workplace Fitness and Conditioning	0

SEWING OPERATOR

Certificate of Completion

Award Title	Academic Plan
Sewing Operator	T036615E

PROGRAM OVERVIEW

This program will provide instruction on all basic industry machinery operation as well as apparel construction, special fabric handling.

PROGRAM LEARNING OUTCOMES (PLOs)

- Student will be able to construct apparel using industry-recognized machinery.
- Student will be able to alter garments for proper fit.

REQUIRED COURSES

		UNITS
VOC ED 504CE	Sewing Machine Basics	0
VOC ED 506CE	Sewing Special Fabrics	0

SUSTAINABLE SMALL BUSINESS DEVELOPMENT

Certificate of Completion

Award Title	Academic Plan
Sustainable Small Business Development	T037088E

PROGRAM OVERVIEW

This Sustainable businesses are enterprises that strive to meet the triple bottom line, which is a social, environmental and financial framework to evaluate business performance and success over time. This certificate provides a pathway to career and college degree coursework in Business and/or Entrepreneurship.
Throughout the 6 courses the students explore the feasibility of aspects of an idea....leading to an understanding of whether or not a the full complex idea is viable and sustainable.

PROGRAM LEARNING OUTCOMES (PLOs)

- Assess the viability of a socially responsible, entrepreneurial idea, product or service.

REQUIRED COURSES

		UNITS
VOC ED 190CE	Pathway to Socially Responsible Entrepreneurship	0
VOC ED 191CE	Starting Your Own Small Business	0
VOC ED 192CE	Managing Small Business Operations	0
VOC ED 193CE	Marketing and Sales for Small Business	0
VOC ED 194CE	Technology for Small Business	0
VOC ED 195CE	Entrepreneurial Finance	0

UTILITIES AND CONSTRUCTION PREPARATION

Certificate of Completion

Award Title	Academic Plan
Utilities and Construction Preparation	T024132E

PROGRAM OVERVIEW

The program focuses on preparing students for entry into the construction trades and/or utilities sectors.

REQUIRED COURSES

		UNITS
BSICSKL073CE	Industry Overview and Career Opportunities	0
BSICSKL074CE	Employment Test Preparation	0
BSICSKL077CE	Fundamentals of Workplace Success-Teamwork	0
BSICSKL078CE	Fundamentals of Workplace Success II-Effective Communication and Leadership	0
VOC ED 252CE	Exploration of Construction and Maintenance Careers	0
VOC ED 311CE	Workplace Safety: First Aid/CPR Basics	0
VOC ED 313CE	Workplace Fitness and Conditioning	0

WATER SAFETY INSTRUCTOR

Certificate of Completion

Award Title	Academic Plan
Water Safety Instructor	T036686E

PROGRAM OVERVIEW

Employment preparation as a certified American Red Cross Swimming and Water Safety Instructor with expertise in swimming and water safety instruction for all ages and abilities, water fitness, including fitness swimming, pre-swim team, water aerobics and beginning spring board diving.

PROGRAM LEARNING OUTCOMES (PLOs)

Students will be able to:

- Complete the first aid, CPR/AED certificate for either the American Red Cross or the American Heart Association.
- Complete the American Red Cross certificate for Lifeguard training, Waterfront/Waterpark, Shallow Water lifeguarding, and/or Aquatic attraction lifeguarding.
- Complete the American Red Cross Water Safety Instruction Certification.

REQUIRED COURSES

		UNITS
VOC ED 311CE	Workplace Safety: First Aid/CPR Basics	0
VOC ED 312CE	Workplace Safety: Water Safety	0
VOC ED 314CE	Water Safety Instruction	0

WORKPLACE READINESS

Certificate of Completion

Award Title	Academic Plan
Workplace Readiness	T024169E

PROGRAM OVERVIEW

This program will provide students with the skills to successfully search for, obtain and maintain employment.

PROGRAM LEARNING OUTCOMES (PLOs)

- Demonstrate the necessary computer literacy skills to successfully search for, obtain, and maintain employment.
- Utilize pre‐employment / consumer training skills to successfully search for, obtain, and maintain employment.
- Demonstrate job search skills to successfully search for, obtain, and maintain employment.
- Employ effective image, etiquette, and interpersonal communication skills to successfully obtain and maintain employment.

REQUIRED COURSES

		UNITS
BSICSKL 041 CE	Softskills Basic 1A - Job Search Planning	0
BSICSKL 042 CE	Softskills Basic 1B - The Successful Job Search	0
BSICSKL 045 CE	Microsoft Office Application Basics	0
BSICSKL 055 CE	Softskills Basic 3B - Image, Etiquette and Interpersonal Communication	0
VOC ED 008CE	Pre-Employment Skills/Consumer Training	0

Course Descriptions - Credit Courses

ACCOUNTING

ACCTG 001 INTRODUCTORY ACCOUNTING I (5) UC/CSU

Lecture: 5 hours

Advisory: Business 38.

Introduces the fundamental principles and concepts of accounting as a basis for financial communication in business. This includes the procedures for maintaining records in business transactions and the preparation of financial statements for the sole proprietorship in a service and merchandisinf firm. Procedures and techniques for internal control, deferrals and accruals, inventory, plant assets, accounts receivable, accounts payable, and payroll are included.

Student Learning Outcome(s):

1. Analyze and record financial transactions and post to ledgers. 2. Analyze and prepare year-end adjustments using worksheets and completing the accountable cycle. 3. Analyze and prepare basic financial statements. Evaluate economic situations of the business by using simple financial ratios.

ACCTG 002 INTRODUCTORY ACCOUNTING II (5) UC/CSU

Lecture: 5 hours

Prerequisite: Accounting 1.

Continues the introductory phase of accounting. Topics covered include: Partnerships, Corporations, Income Tax, Bonds, Cash Flow, Financial Statement Analysis, Managerial Accounting, Job Order and Process Cost Systems, Cost Behavior and Analysis, Budgeting, Performance Evaluation, Product Pricing, Capital Investment Analysis.

Student Learning Outcome(s):

1. Students will Journalize and post transactions involving sale of stock, changes in retained earnings, declaration of cash and stock dividends, sales and early redemption of bonds. 2. Students will prepare statements of cash flows using the indirect method.

ACCTG 003 INTERMEDIATE ACCOUNTING I (3) CSU

Lecture: 3 hours

Advisory: Accounting 2 and Business 38.

This course provides complete analytical application and an advanced review of topics discussed in Accounting I and II. Topics include assets (current, fixed, and intangible), investments, financial statements, income taxes, liabilities, stockholders equity, revenue recognition, asset acquisition and leases. This course places a high emphasis on financial reporting standards.

Student Learning Outcome(s):

Students will demonstrate skills and knowledge of income statement preparation and presentation.

ACCTG 011 COST ACCOUNTING (3) CSU

Lecture: 3 hours

Advisory: Accounting 1; Accounting 2; Business 38.

This course covers both managerial and cost accounting, with emphasis on cost and non-systems; types of cost; elements of cost; cost behavior; variances for labor, materials and overhead; indirect expenses; allocation of cost to by-products; standard cost and budgets.

Student Learning Outcome(s):

Student will be able to use cost-volume-profit (CVP) analysis to analyze decisions.

ACCTG 015 TAX ACCOUNTING I (3) CSU

Lecture: 3 hours

This course is a study of Federal Income Taxes as they apply to individuals and sole proprietorships and a analysis of appropriated tax laws. Consideration of applicable accounting procedures and preparation of reports and returns are emphasized.

Student Learning Outcome(s):

1. Students will learn how to complete an individual income tax return. 2. Students will learn how to calculate gross income with exclusions.

ACCTG 018 COMPUTERIZED PAYROLL ACCOUNTING (3)

Lecture: 2 hours / Lab: 2 hours

Advisory: Accounting 1.

This course will cover procedures and practices involved in a manual or automated payroll system. Students will become familiar with current Federal and California laws affecting payroll, computation of payroll taxes and preparation of required payroll tax returns/forms.

Student Learning Outcome(s):

Students will demonstrate competency in computing federal and state liabilities for employer's payroll taxes.

ACCTG 021 BOOKKEEPING AND ACCOUNTING I (3) UC/CSU

Lecture: 3 hours

Advisory: Business 38.

This course includes fundamentals of double entry bookkeeping; preparation of the trial balance; worksheets and financial statement; use of controlling accounts; the control of cash and bank reconciliation statements.

Student Learning Outcome(s):

1. Analyze financial transactions and prepare the appropriate journal entries to document the transaction in the accounting records. 2. Analyze and prepare basic financial statements such as trial balances, journal entries income statements. 3. Evaluate the post-closing trial balance and prepare the necessary post-closing entries for the opening trial balance for subsequent periods.

ACCTG 025 AUTOMATED ACCOUNTING METHODS AND PROCEDURES (3) CSU

Lecture: 3 hours

This course emphasizes the hands-on use of popular computer software applications to accounting and business, with special reference to the general ledger, billing, accounts receivable, accounts payable, payroll, and inventory control.

Student Learning Outcome(s):

Students will demonstrate the application of the accounting software to record various types business transactions and prepare standard financial reports for a service business.

ACCTG 921 COOPERATIVE EDUCATION - ACCOUNTING (2) CSU

Lab: 6 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Students must be able to identify employment or volunteer/intern placement in order to participate in program. Completion of two in-person, campus seminars, online work, and 120-150 field hours by the end of the course is required.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student in the field of Accounting.

ADMINISTRATION OF JUSTICE

ADM JUS 001 INTRODUCTION TO ADMINISTRATION OF JUSTICE (3) UC/CSU

Lecture: 3 hours

Philosophy, history, and theories of the criminal justice system, including the origins and evolution of criminal law and due process, the roles and functions of the local, state, and federal jurisdictions, and the interrelationships among criminal justice agencies: law enforcement, courts, and corrections; crime causation, analysis and the social impact of crime. The conceptual approach utilized in this course recognizes that criminal justice is itself a distinct academic discipline rather than an interdisciplinary course of study. Three hours lecture per week.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of the criminal justice system. SLO #2 Critically analyze and then organize information on the criminal justice system system. SLO #3 Properly apply the English language to write an explanatory paper about the criminal justice system.

ADM JUS 002 CONCEPTS OF CRIMINAL LAW (3) UC/CSU

Lecture: 3 hours

This course deals with the structure of law, definitions, and the most frequently used sections of the California Penal Code. Topics include origins of federal and state laws, interpretation and application of laws, identifying elements of property crimes and criminal liability.

Student Learning Outcome(s):

1. Explain the major historical steps leading to the development of U.S. criminal law patterns 2. Explain the elements, conduct, results of conduct, and attendant circumstances of certain crimes. 3. Explain the sources of development in the case law of significant criminal law matters.

ADM JUS 003 LEGAL ASPECTS OF EVIDENCE (3) CSU

Lecture: 3 hours

Students will be able to locate, develop and lift fingerprints from crime scenes; a must for those students interested in law enforcement as a police officer or evidence specialist or private investigations.

This course provides instruction in the origins, development and philosophy of criminal evidence. This course looks at the many different types of evidence brought into the justice system. Also covered are the rules governing the admissibility of evidence in court.

Student Learning Outcome(s):

1. Explain the origins, development and philosophy of criminal evidence. 2. Explain the types of criminal evidence utilized by our courts. 3. Explain rules regarding the use of evidence in our court system.

ADM JUS 004 PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM (3) UC/CSU

Lecture: 3 hours

A detailed study of the role and responsibilities of the American court system and its purpose; an examination of the philosophy, history, structure, operation, concepts and services related to the judiciary; a study of case law methodology and case research and their impact on society; an examination of the legal process from pre-arrest through trial, sentencing options and correctional procedures.

Student Learning Outcome(s):

SLO 1: List historical and conceptual significance of the court system, administration and management. SLO 2: Discuss the criminal trial process and the specific roles and responsibility of each member. SLO 3: Evlauate the judicial process and its effect on society.

ADM JUS 005 CRIMINAL INVESTIGATION (3) CSU

Lecture: 3 hours

Fundamentals of the theories, concepts, and methodology of criminal investigation. This course will look at the investigative procedures from the crime scene to the courtroom, inclusive of legal constraints, ethics, and types of evidence; techniques and procedures for basic interview and interrogation procedures; identification of proper crime scene management, follow-up, case preparation and organization.

Student Learning Outcome(s):

1. Describe all the steps involved in a criminal investigation. 2. Identify, classify, collect and preserve physical evidence.

ADM JUS 008 JUVENILE PROCEDURES (3) CSU

Lecture: 3 hours

This course covers the juvenile justice system and related juvenile justice issues. Topics include an overview of the juvenile justice system, treatment and prevention programs, history, theories, methodology, and special areas and laws unique to juveniles.

Student Learning Outcome(s):

SLO 1: Discuss the histories and philosophies of the juvenile justice system. SLO 2: Identify and compare the legislative policies related to juvenile offenders and the procedures for implementation. SLO 3: Describe the impact of legislative change on the development of national standards for juvenile justice.

ADM JUS 014 REPORT WRITING FOR PEACE OFFICERS (3) CSU

Lecture: 3 hours

This course provides instruction in the practice of various types of technical writing commonly used in police agencies, the appropriateness of different styles in different contexts and the conceptualization of the material, and the utilization of machine tabulation in reports and methods of reporting criminal statistics.

Student Learning Outcome(s):

1. Write clear and concise law enforcement reports. 2. Improve basic grammar and apply the grammar rules to writing police reports.

ADM JUS 041 OFFICER SAFETY (3) CSU

Lecture: 3 hours

The study of techniques of protection against persons armed with dangerous and deadly weapons. Students examine the moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms and other weapons.

Student Learning Outcome(s):

1. List safety hazards that pose threats to officers. 2. Describe the operation and application of safety equipment used to protect officers. 3. List the many factors that should be considered when approaching a dangerous situation.

ADM JUS 053 FORENSIC FINGERPRINT EVIDENCE (3) CSU

Lecture: 3 hours

Students will be able to locate, develop and lift fingerprints from crime scenes; a must for those students interested in law enforcement as a police officer or evidence specialist or private investigations.

Student Learning Outcome(s):

1. Define technical terminology used in fingerprint processing work. 2. Explain and interpret fingerprint patterns and classifications. 3. Explain fingerprint searching & filing procedures. 4. Classify finger print cards.

ADM JUS 062 FINGERPRINT CLASSIFICATION (3) CSU

Lecture: 3 hours

This is a practical course which covers the technical terminology of fingerprinting, pattern interpretation, and classification of fingerprints, the taking of fingerprints, searching and filing procedures and laboratory work in the classroom.

Student Learning Outcome(s):

1. Define technical terminology used in fingerprint processing work. 2. Explain and interpret fingerprint patterns and classifications. 3. Explain fingerprint searching & filing procedures. 4. Classify finger print cards.

ADM JUS 067 COMMUNITY RELATIONS I (3) UC/CSU

Lecture: 3 hours

Examination of the complex relationship between the community and the justice system with emphasis on the challenges of dealing with the role of race, ethnicity, gender relations, sexual orientation, social class, language, and culture in shaping these relations.

Student Learning Outcome(s):

SLO 1: Analysis of assigned textual readings; in-class debate on the increasing social and economic bifurcation of society SLO 2: Differentiate value systems and ideologies as they apply to community relations and diversity SL)2: Evaluate immigration and its effect on society; examining in-class videos on race relations for content synthesization.

ADM JUS 073 LAW AND MINORITY GROUPS (3) CSU

Lecture: 3 hours

This course examines the growing crises of race, ethnicity, gender and discrimination within the American Justice System. Myths and realities about crime and minorities are analyzed. Racism, and inequities within the legal structures including court trials, corrections and the death penalty are discussed. Changes in criminal justice administration advocated by minority groups are reviewed.

Student Learning Outcome(s):

1. Analyze and evaluate how myths about race, ethnicity and crime have influenced our Criminal Justice System. 2. Compare and contrast the crime rates within and without minority communities. 3. Analyze, evaluate and describe the factors that have influenced race-based differences in the crime rate. Propose steps to be implemented for the reduction or eradication of race based criminal justice disparities.

ADM JUS 075 INTRODUCTION TO CORRECTIONS (3) CSU

Lecture: 3 hours

This course surveys the total correctional cycle and the relationships of its components, including historical, theoretical and philosophical explanations of criminal behavior; statistics and research findings; employment opportunities; and employment requirements. This course will also examine the basic nature of correctional work; aims and objectives of correctional administration; probation and parole; skills; knowledge and attitudes required for employment in this field.

Student Learning Outcome(s):

1. Identify the components of the U.S. Corrections system and its history of development. 2. Understand the procedures used in jails and prisons and their effect on inmates. 3. Compare and contrast the various alternatives to incarceration and for which populations each are best suited.

ADM JUS 501 AN A TO Z GUIDE TO CRIMINAL JUSTICE CAREERS (3) CSU

Lecture: 3 hours

This course reviews the hot jobs in the criminal justice arena and outlines a method for the student to decide on their career path. Hiring process and interview skills will be explored. Fitness for duty and other physical and physiological characteristics will be discussed. An A to Z guide to Local, State, and Federal Criminal Justice Careers will be presented.

Student Learning Outcome(s):

1. List career opportunities. 2. Develop a self career map/plan.

ADM JUS 502 INTRODUCTION TO FORENSIC PSYCHOLOGY (3) CSU

Lecture: 3 hours

This is a basic course dealing with the nature of Psychology within the criminal justice system. The aims and objectives of Forensic Psychology as applied to corrections, probation practices, institutions, services, and inmate supervision will be discussed.

Student Learning Outcome(s):

Define various psychological traits and conditions and discuss the impact they have on corrections and probations institution services.

ADM JUS 750 ETHICS AND THE CRIMINAL JUSTICE SYSTEM (3) CSU

Lecture: 3 hours

This course identifies and explores ethics, values definitions and applications in the criminal justice system: police, courts, probation, parole, corrections and private security organizations. Remedial strategies relating to unethical behavior by individuals and groups will also be addressed.

Student Learning Outcome(s):

1. Discuss strategies addressing unethical behavior by staff. 2. Explain the ethical right and wrong when applied to various aspects of the criminal justice system.

AMERICAN SIGN LANGUAGE

A S L 001 AMERICAN SIGN LANGUAGE I (4) UC/CSU

Lecture: 4 hours

This is an introductory course designed to develop basic conversational skills using the manual alphabet and American Sign Language. It is planned to assist in communicating with deaf individuals and have a better understanding of deaf culture. This course develops basic vocabulary and grammar of American Sign Language. Its emphasis is placed on comprehension skills and vital aspects of the Deaf culture and community.

Student Learning Outcome(s):

1. Distinguish between Deaf and Hearing Culture. 2. Student will prepare and present a Formal ASL Presentation incorporating expressive and receptive ASL language skills.

A S L 002 AMERICAN SIGN LANGUAGE II (4) UC/CSU

Lecture: 4 hours

Prerequisite: American Sign Language I.

This is an intermediate course in American Sign Language with special emphasis on vocabulary, grammar dialog, and on the improvement of expressive and receptive skills. This course includes exposure to deaf culture and the history of sign languages.

Student Learning Outcome(s):

1. The student will demonstrate comprehension of ASL vocabulary and grammar. 2. The student will demonstrate ASL conversational fluency on an intermediate level. 3. The student will demonstrate use of descriptive classifiers, personal and possessive pronouns.

A S L 003 AMERICAN SIGN LANGUAGE III (4) UC/CSU

Lecture: 4 hours

Prerequisite: A S L 002.

Intermediate course with continued development of American Sign Language vocabulary, grammar, and beginning conversational; fluency with special emphasis on idiomatic constructions. Further development of conversational techniques focusing on receptive and expressive skills. Expanded study of Deaf cultural issues. (Overview of topics include: language functions, such as, giving reasons, making requests, asking where, giving specific directions, correcting and confirming information, complaining, making suggestions, asking for permission, expressing concern, declining/explaining, asking for/giving definitions, describing objects, describing weekend activities, telling about disrupted plans; grammatical structures, such as, topic-comment, weak hand referencing, locatives, temporal aspect modulations, verb inflections, role shifting, conditional sentences, contrastive structure, classifier types, non-manual markers, number functions; and discourse structures, such as, presenting informative speeches using ASL).

Student Learning Outcome(s):

1 Receptive skills: Able to understand the meaning of a signed message produced at a normal rate of speed. 2. Expressive skills: Able to express particular interests and varied experiences with reasonable ease. 3. Grammar/Culture: Able to show a satisfactory knowledge of proper grammar/culture rules.

A S L 004 AMERICAN SIGN LANGUAGE IV (4) UC/CSU

Lecture: 4 hours

Prerequisite: ASL 003

In this course students focus on advanced vocabulary and grammar and further develop and refine communicative skills and fluency through spontaneously generated conversations that accentuate various aspects of Deaf culture and community.

Student Learning Outcome(s):

1. Receptive skills: can understand most conversations within the range of his/her experience with a high degree of fluency. 2. Expressive skills: Able to use ASL with a high degree of fluency and accuracy for most topics and levels of communication. 3. Grammar/Culture: Able to show a satisfactory knowledge of proper grammar/culture rules.

A S L 030 FINGER SPELLING I (1) CSU

Lab: 2 hours

Develops skills in expressive and receptive use of the Manual Alphabet. Deals with specific individual problems and techniques for corrections. [Overview of topics include: hand positioning (location and angle), handshapes, rhythm, fluency, spelling, and numbers; reception of fingerspelled handshapes, patterns and pauses/transitions. O/P MEDI-CAL B

Student Learning Outcome(s):

1. Student demonstrates beginning level comprehension of fingerspelling (receptive skills). 2. Student demonstrates beginning level ability in fingerspelling (expressive skills). 3. Demonstrates knowledge related to fingerspelling processes and practices.

ANATOMY

ANATOMY 001 INTRODUCTION TO HUMAN ANATOMY (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: Biology 003 or 005 or 006

A detailed study of structures and systems of the human body. Laboratory work includes microscopy, mammalian dissections, and use of anatomical models.

Student Learning Outcome(s):

1. Students will demonstrate technical skills to study anatomy including use of the microscope and dissection tools. 2. Students will identify human body structures and pathways using models and dissections. 3. Students will understand health applications and pathology for each body system.

ANTHROPOLOGY

ANTHRO 101 HUMAN BIOLOGICAL EVOLUTION (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course is an introduction to the field of biological anthropology. Topics covered include genetic inheritance, the mechanisms of evolution, the biology and behavior of living primates, the history of human evolution as seen in the fossil record, and modern human biological variation.

Student Learning Outcome(s):

Students will understand human beings as the result of a natural evolutionary process.

ANTHRO 102 HUMAN WAYS OF LIFE: CULTURAL ANTHROPOLOGY (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course provides a comparative survey of human culture, including the study of human society, language, religion, political and economic organization, with examples drawn from contemporary preliterate, peasant, and urban societies.

Student Learning Outcome(s):

Students will develop comprehension and appreciation of human cultural variation and diversity.

ANTHRO 111 LABORATORY IN HUMAN BIOLOGICAL EVOLUTION (2) UC/CSU

Lecture: 1 hour(s) / Lab: 2 hour(s)

This course is a hands-on laboratory experience in selected topics related to human evolution that may include: molecular, Mendelian, and population genetics; modern human variation; geological time and fossilization; comparative primate anatomy; modern primate behavior; human fossil record; and forensic analysis.

Student Learning Outcome(s):

Students will understand human beings as the result of a natural evolutionary process. a. Comprehend the basics of modern evolutionary theory and Mendelian genetics. b. Compare and contrast human beings with our closest living relatives, the non-human primates. c. Examine the fossil record of human evolution. d. Critically analyze human variation and its relationship to the concept of “race” and its practical applications.

ARCHITECTURAL INTERIORS

INT 200 RESIDENTIAL PLANNING (3) CSU

Lecture: 2.5 hour / Lab: 2.5 hours

Using sustainable Design strategies,standards and geospatial tools (CADD/BIM/GIS), the student will learn how to participate in the interior design profession as a “viewer and a doer”for the entire life cycle of a building and focusing on interior residential planning. Basic concepts will be covered in class to understand the fundamentals variables that determine interior spaces: lights, air, circulation, texture, pattern, geometry, experience, styles, natural resources, energy efficiency,form, materials, thermal/moisture protection and others. A study is made using a “small house project” layout, livability, functionality, size, orientation, cost, furnishing, equipment, and ornamentation and future inhabitants. The “small house project” is put in context through a brief history of American shelters – their construction types and styles. At this point the student is ready for developing, retrofitting, adding and remodeling the “small house project” including basic interior construction details and finishes. Residential construction problems are explored with an emphasis placed in functional design.

Student Learning Outcome(s):

1.- Student designs and builds a tensegrity/triangulated structure, as he or she locates and compares the theoretical, practical, and contextual issues that influence sustainable interior design with the consideration of accountability, durability and responsibility in fulfilling personal, community, and workplace roles. 2.- Student understands and presents a CAD/BIM tool commands that applies to interior design, as he/she communicates information and ideas effectively to multiple audiences using

a senderreceiver model. 3.- Student designs a product or a building for interior design by using mathematics and geometry found in nature through a collaboration with industry experts and team work.

ARCHITECTURE

ARC 130 HISTORY OF ARCHITECTURE I (2) UC/CSU

Lecture: 2 hours

This course covers the study of architecture history from the prehistoric times to the Renaissance, the development of place and function as it is influenced by the geographical, climatic, religious, social, economic and historical forces. This course analyzes the difference between world architecture history and western architecture history, including the characteristics of Latin America, Islamic and Asia. The history of architecture is seeing through a perspective of how the built environment has responded to nature forces and resources; air, water, air and land. In addition each period identities technological innovation that characterized the historical roots in numerous civilizations.

Student Learning Outcome(s):

1. From Pre-historic to the Renaissance time, the student draws a manual sketch of a building or city, as he/she identifies and locates materials, technology, socioeconomic forces, math/geometry, sustainable strategies and design principles that shaped it. 2. Student creates a report and summary for each period of time including all concepts and discoveries discussed in class, as he/she compares the relationship between architecture and the external environment. 3. Student develops a final architectural and environmental design project from a particular period of time and applies a skill tool like CAD/BIM, to a physical/digital/3D printing model or infographic.

ARC 131 HISTORY OF ARCHITECTURE II (2) UC/CSU

Lecture: 2 hours

This course covers the study of architecture history from the Renaissance to our current times, the development of place and function as it is influenced by the geographical, climatic, religious, social, economic and historical forces. This course analyzes the difference between world architecture history and western architecture history, including the characteristics of Latin America, Islamic and Asia. The history of architecture is seeing through a perspective of how the built environment has responded to nature forces and resources; air, water, air and land. In addition each period identities technological innovation that characterized the historical roots in numerous civilizations.

Student Learning Outcome(s):

1. From the Renaissance to our time, the student draws a manual sketch of a building or city, as he/she identifies and locates materials, technology, socioeconomic forces, math/geometry, sustainable strategies and design principles that shaped it. 2. Student creates a written summary for each period of time derived from all the concept and discoveries discussed in class, as he/she compares the relationship between architecture and the external environment. 3. Student develops a final architecture and environmental design project from a particular period of time and applies a skill tool like CAD/BIM, to a physical/digital/3D printing model or infographic.

ARC 151 MATERIALS OF CONSTRUCTION (3) UC/CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This course covers materials and methods of construction in the field of architecture, engineering and construction; wood, concrete, steel and masonry. This course analyzes each material characteristics, methods of construction, testing requirements, allowable uses, energy transfer capacity, structural behavior and their use in multiple construction assemblies. Materials and methods of constructions are covered in this class in alignment with sustainable standards, government agencies regulations, local incentives, carbon footprint and geospatial simulations.

Student Learning Outcome(s):

1. Using sustainable strategies and mathematical skills, the student understands each construction material; wood, metal, masonry, concrete, plastic and glass, as well as their relationship between architecture, engineering and construction. 2. Student understands and uses tools like CAD/BIM to draw details for each construction materials; wood, metal, masonry, concrete, plastic and glass, as it relates to standards and building codes. 3. Student locates technical information, as he or she interprets information to draw conclusions, based on the best analysis, to make informed decisions for a formula or a table for each construction material; wood, metal, masonry, concrete, plastic and glass.

ARC 152 EQUIPMENT OF BUILDINGS (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

Using geospatial tools and sustainable strategies this course applies the basic principles of design, selection and operation of equipment in buildings. Building equipments are systems that integrate architectural design with water distribution, water recycling and harnessing, air circulation, natural air flow, air heating and cooling, natural light, and acoustics. Passive and solar strategies are integrated into equipment as well as new technologies.

Student Learning Outcome(s):

1. Using sustainable strategies and mathematical skills, the student understands each building system; water/plumbing, electrical/energy, air conditioning/HVAC, acoustics and fire, as well as their relationship between architecture, engineering and construction. 2. Student understands and uses tools like CAD/BIM for each building system; water/plumbing, electrical/energy, air conditioning/HVAC, acoustics and fire as it relates to industry standards and building codes. 3. Student locates technical information and interprets information to draw conclusions, based on the best analysis, to make informed decisions for a formula or a table for each of the building systems; water/plumbing, electrical/energy, air conditioning/HVAC, acoustics and fire.

ARC 160 COMPUTERS FOR DESIGNERS (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

The student will learn how to become a designer and a technologist in three dimensional digital environments for architecture, urban and environmental design. The student will use the power of the tools to be inspired and to collaborate. This course is geared towards the built environment, ecological, entertainment and industrial designers. Students will learn how the space of a place affects the way we think, act and create. Emphasis is placed on how designers can optimize and understand the role of digital mediums in today's competitive edge and sustainable demands. Basic computer operations like operating systems, interfaces, print, view, export, file management, image manipulation are covered within the design exercises.

Student Learning Outcome(s):

1. Student designs an object transformation on a 3D modeling tool ,as he/she uses system thinking to analyze how various components interact with each other to produce outcomes in a complex work environment. 2. Student designs a product or building using computer aided design and 3D printing technology, as he/she demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Engineering and Architecture sector workplace environment. 3. Following mathematical models student designs an interactive map using spatial information system from local, district, state, and federal regulatory agencies, entities, laws, and regulations.

ARC 172 ARCHITECTURAL DRAWING I (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This is an architecture drawing class that will focus on construction documents for wood construction. The course will cover how these architectural drawings are documents that instruct all the stake holders how to use, build and maintain a high performance building. The course will explain how construction documents made out of wood are connected to the life cycle of a building. It covers an integrated building approach, as it identifies the deliverables for: programing (identify the need), design drawings (identify the solutions), construction documents (drawings used to build the building), operation/maintain (as built drawings) and assessment (analysis for upgrade and improvement). This course will also cover CAD, BIM, GIS tools, LEED Credits, Sustainable Standards and their relationship to a set of construction documents for wood construction. Fundamentals of architectural drafting, symbols, dimensioning, and methods of representation are also mastered during this course. The student will prepare a set of construction documents for a simple wood building structure.

Student Learning Outcome(s):

1. Using sustainable standards and contemporary tools like CAD/BIM 3D printing tools, the student understands and produces a set of construction documents (drawings and specification) for a wood/concrete building. 2. Student coordinates, plans and locates technical information for a project using site and building restrictions imposed by various entities for a masonry/ concrete building and the production of maintenance and operations manuals that address project long term sustainability and resilient requirements. 3. Student understands and explores mathematical methods and details used to analyze simple structures, properties of materials, cost estimating, load transfer and strain-stress relationships for a masonry/concrete building.

ARC 173 ARCHITECTURAL DRAWING II (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This is an architecture drawing class that will focus on construction documents for concrete and masonry construction. The course will cover how these architectural drawings are documents that instruct all the stake holders how to use, build and maintain a high performance building. The course will explain how construction documents made out of concrete and masonry are connected to the life cycle of a building. It covers an integrated building approach as it identifies the deliverables for: programing (identify the need), design drawings (identify the solutions), construction documents (drawings used to build the building), operation/maintain (as built drawings) and assessment (analysis for upgrade and improvement). In addition this course will cover CAD, BIM, and GIS tools, LEED Credits, Sustainable Standards and their relationship to a set of construction documents for concrete and masonry construction. The student will develop a simple set of construction documents for concrete and masonry.

Student Learning Outcome(s):

1. Using sustainable standards and contemporary tools like CAD/BIM 3D printing tools, the student understands and produces a set of construction documents (drawings and specification) for a masonry/concrete building. 2. Student coordinates, plans and locates technical information for a project using site and building restrictions imposed by various entities for a masonry/ concrete building and the production of maintenance and operations manuals that address project long term sustainability and resilient requirements. 3. Student understands and explores mathematical methods and details used to analyze simple structures, properties of materials, cost estimating, load transfer and strain-stress relationships for a masonry/concrete building.

ARC 185 DIRECTED STUDY - ARCHITECTURE (1) CSU

Lecture: 1 hour

This course allows students to pursue a directed study in the Architecture Technology field on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in Architecture Technology.

ARC 201 ARCHITECTURAL DESIGN I (3) UC/CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This course will use sustainable strategies and geospatial tools to explore architecture design solutions. In this course students will work in a design laboratory studio exploring space and form. The solutions focus on analysis, proportion, solar passive, water conservation, biomimicry, planning layout, aesthetic, interpretation, and the nature of materials. Methods of presentations are studied, as well as design methodologies.

Student Learning Outcome(s):

1. Student designs and builds a tensegrity/triangualted structure, as he or she locates and compares the theoretical, practical, and contextual issues that influence sustainable architecture design with the consideration of accountability, durability and responsibility in fulfilling personal, community, and workplace roles. 2. Student understands and presents a CAD/BIM tool commands that applies to architecture design, as he/she communicates information and ideas effectively to multiple audiences using a sender/ receiver model. 3. Student designs a product or a building for architecture design by using mathematics and geometry found in nature and through a collaboration with industry experts and team work.

ARC 202 ARCHITECTURAL DESIGN II (3) UC/CSU

Lecture: 2 hour / Lab: 3 hours

This course looks at space and form as a canvas for an architect, moving beyond abstraction language paradoxes, and formal gymnastics. Design and form integrates embodied energy of all resources, cognitive experiences, new materials, stronger social concerns and the need to react to location and space. It will see the creation of place and space, as a first act of human intention and use nature templates to solve holistic solutions. This course analyzes how the geometry of space influences how we communicate, behave, think, create, and produce; as well as its influences in cognition and mental model. This course will focus on building a better future through participatory design and the use of digital age tools including fabrication and geospatial

Student Learning Outcome(s):

1. Student designs and builds a tensegrity/triangualted structure, as he or she locates and compares the theoretical, practical, and contextual issues that influence sustainable urban design with the consideration of accountability, durability and responsibility in fulfilling personal, community, and workplace roles. 2. Student understands and presents a CAD/BIM tool commands that applies to urban design, as he/she communicates information and ideas effectively to multiple audiences using a sender/ receiver model. 3. Student designs a product or a building for urban design by using mathematics and geometry found in nature and through a collaboration with industry experts and team work.

ARC 261 COMPUTER-AIDED DESIGN FOR ARCHITECTURE I (3) UC/CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This is a digital modeling course for space and form design. This course covers space modeling, energy simulation, solar paths, light analysis, texture, rendering and materials, as well as its relationship to BIM, CAD and geospatial tools

Student Learning Outcome(s):

Students will submit the following according to standards: Renderings, Lighting Studies, Solar simulation, Walk through of any built environment (if applicable), Texture studies, ePortfolio.

ARC 271 ARCHITECTURAL DRAWING III (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This is an architecture drawing class that will focus on construction documents for steel construction. The course will cover how these architectural drawings are documents that instruct all the stake holders how to use, build and maintain a high performance building. The course will explain how construction documents made out of concrete and masonry are connected to the life cycle of a building. It covers an integrated building approach as it identifies the deliverables for: programing (identify the need), design drawings (identify the solutions), construction documents (drawings used to build the building), operation/maintain (as built drawings) and assessment (analysis for upgrade and improvement). The student will prepare a complete set of construction documents for a simple steel building structure. Appropriate reference material that focus on concrete and masonry will be covered in class like fastening, flashing, crack control and others.

Student Learning Outcome(s):

1. Using sustainable standards and contemporary tools like CAD/BIM 3D printing tools, the student understands and produces a set of construction documents (drawings and specification) for a steel/concrete building. 2. Student coordinates, plans and locates technical information for a project using site and building restrictions imposed by various entities for a masonry/concrete building and the production of maintenance and operations manuals that address project long term sustainability and resilient requirements. 3. Student understands and explores mathematical methods and details used to analyze simple structures, properties of materials, cost estimating, load transfer and strain-stress relationships for a masonry/concrete building.

ARC 285 DIRECTED STUDY - ARCHITECTURE (2) CSU

Lecture: 2 hours

This course allows students to pursue a directed study in the Architecture Technology field on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in Architecture Technology.

ARC 341 GIS METROPOLITAN ACCESS PLANNING SYSTEMS I (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

This course will cover the interconnection of BIM, CAD, GIS, spatial systems and online mapping in one construct. GIS technology and related geospatial technologies will explore intelligent building drawings as they connect to multiple environments; ecological, buildings and socio economic forces. GIS are spatial drawings with multiple types of information associated with them; business, land use, roads, rivers, parcel maps, census, others. This course introduces fundamental concepts and functionality of spatial thinking and visual computation. The course uses the GIS analytical process to quantify and qualify multiple layers of spatial information applied to sustainable projects.

Student Learning Outcome(s):

1. Student understands how to create maps around their neighborhood and locates sector terminology and protocols to communicate effectively in oral, written, and multimedia formats. 2. Student learns the basic skill to obtain GIS tool Industry Certification, as he/she recognizes the role and function of professional organizations, industry associations, and organized labor in a productive society. 3. Student designs spatial information for architecture, urban planning and economic development using mathematical principles of pattern recognition.

ARC 385 DIRECTED STUDY - ARCHITECTURE (3) CSU

Lecture: 3 hours

This course allows students to pursue a directed study in the Architecture Technology field on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in Architecture Technology.

ART

ART 101 SURVEY OF ART HISTORY I (3) UC/CSU

Lecture: 3 hours

This course encompasses the historic study of architecture, painting and sculpture, with incidental references to the related minor arts. A survey is made of the chronological development of Western and non-European art from the Prehistoric to the Renaissance, with special emphasis upon the cultural factors that contributed to its evolution.

Student Learning Outcome(s):

Students will identify, compare, and analyze Western and Non-Western art and architecture from the Prehistoric to the Renaissance and demonstrate knowledge of art terminology and artistic styles through objective and essay exams, oral presentations and museum projects.

ART 102 SURVEY OF ART HISTORY II (3) UC/CSU

Lecture: 3 hours

A survey of the major visual arts of the Western world from the Early Renaissance to the present, linking art and architecture with social, economic, political and religious aspects of western and global cultures.

Student Learning Outcome(s):

Students will identify, compare, and analyze art and architectural styles,theories, and individual artistic expression from the Early Renaissance to present in the Western World while demonstrating knowledge of art terminology and artistic styles through objective and essay exams, oral presentations and museum projects.

ART 103 ART APPRECIATION I (3) UC/CSU

Lecture: 3 hours

This course is designed specifically for those students who desire to expand their visual awareness through training in visual perceptual skills. The course includes exploration of the basic elements of art; visual skills are enhanced by practice in drawing techniques based on perception. Students will acquire a broad understanding of the nature of art through study of selected works from art history.

Student Learning Outcome(s):

Students will identify and compare the various media and techniques of arts as well as analyze the nature of art, the use of the elements and principles and identify selected works from art history.

ART 201 DRAWING I (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Instruction is given in basic pencil drawing, charcoal, pastel, and other sketching media. Painting in wash, ink, and watercolor, from still life and outdoor assignments is included. This is a course for beginners and non art majors, as well as, a brush up course for artists.

Student Learning Outcome(s):

Students will create drawings in a variety of materials using line,shape, form and light logic.

ART 300 INTRODUCTION TO PAINTING (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

An introduction to various painting materials, media, and techniques. Emphasis is placed on color mixing, value, intensity and compositional organization.

Student Learning Outcome(s):

Students will create paintings in a variety of media using color theory, color mixing, value, and intensity. Students will demonstrate compositional organization and techniques in their paintings.

ART 501 BEGINNING TWO-DIMENTIONAL DESIGN (3) CSU

Lecture: 3 hours

Introduction to the concepts, applications and influences related to two-dimensional art and composition, including the study of the basic principles and elements of line, shape, texture, value, color and spatial illusion.

Student Learning Outcome(s):

Students will create designs using the elements and principles of two-dimensional design in the visual arts including line, shape, value, color and texture.

ART 502 BEGINNING THREE-DIMENSIONAL DESIGN (3) CSU

Lecture: 3 hours

This is a fundamental course involving the relationships of elements common to three-dimensional visual arts. A study is made of line, mass, texture, value and shape in a variety of materials. Emphasis is on form and space. Exercises will be given in geometric and biomorphic shapes. Various mediums and fabrication techniques will be explored, including the use of mat-board, plastics, paint, and a variety of other materials

Student Learning Outcome(s):

Students will create three-dimensional compositions using mass, volume, texture, line, value and shape in a variety of materials.

ASTRONOMY

ASTRON 001 ELEMENTARY ASTRONOMY (3) UC/CSU

Lecture: 3 hours

This course is a general introduction and overview of Astronomy and covers many topics including constellations, seasons, history of Astronomy, the electromagnetic spectrum, telescopes, the Earth and other planets of our solar system, the Sun, binary stars, the Milky Way Galaxy, properties of galaxies and the Big Bang Theory. Students are kept abreast of current developments in the field.

Student Learning Outcome(s):

1. To describe the origins of the Universe, the Big Bang Theory, and the present general structure of the Universe. 2. To recognize components and facts of the solar system, including planets, satellites, asteroids, comets, and theories of the origin of the solar system. 3. To examine the methods astronomers use to explore the natural phenomena of the universe including the scientific method, the nature of matter, energy, radiation and the historical development of astronomical ideas. 4. To describe the nature of stars, including star formation and evolution, stellar energy sources and how this is related to our sun. 5. To describe the nature of the Milky Way and other galaxies and their distribution in the universe and currently accepted theories of Cosmology. 6. To describe the current theory of the origin of life on Earth.

ASTRON 005 FUNDAMENTALS OF ASTRONOMY LABORATORY (1) UC/CSU

Lab: 3 hours

Corequisite: ASTRON 001

This course provides the laboratory work to accompany or follow Astronomy 1. This course uses astronomical instruments and laboratory equipment. Includes work with celestial sphere, sky charts, optical bench, telescopes, spectroscopes, and photometer. The course requires field trips for evening observations.

Student Learning Outcome(s):

1. Be able to set up and use an astronomical telescope to observe and identify features of selected astronomical bodies. 2. Be able to examine and analyze data from astronomical charts and images. 3. Be able to use and examine a planisphere and charts to identify constellations, stars and planets in the night sky, as demonstrated during evening viewing sessions. 4. Be able to identify constellations, stars, planets, and other objects in the night sky by direct observation.

AUTOMOTIVE COLLISION REPAIR

AUTOCOR 112 AUTO BODY CONSTRUCTION, REPAIR AND WELDING FUNDAMENTALS (9)

Lecture: 3 hours / Lab: 18 hours

This course covers basic auto body construction types, nomenclature, body adjustments, and repairs. Instruction includes welding on high strength steels, alloys, and plastic composites. Replacement of structural and non-structural auto body components is also covered.

Student Learning Outcome(s):

1. The student will be able to show proper tool usage and demonstrate welding techniques according to I-CAR standards. 2. The student will be able to analyze various types of structural and non- structural damage.

AUTOCOR 122 INTERMEDIATE COLLISION REPAIR-PARTS REPLACEMENT, METAL REPAIR, FRAME STRAIGTENING & REFINISHING (9)

Lecture: 3 hours / Lab: 18 hours

This course offers instruction in auto body repair procedures and alignment. Various repairs of metals, plastics and composites along with frame straightening techniques and refinishing procedures will be covered.

Student Learning Outcome(s):

1. Student will be able to perform panel replacement. Student will be able to perform frame measuring and assess frame for damage. 2. Student will be able to prepare and refinish a panel.

AUTOCOR 132 UNITIZED BODY PANEL, SECTION, & FRAME; REPLACEMENT & ALIGNMENT (9)

Lecture: 3 hours / Lab: 18 hours

Instruction is given in bolt-on procedures and welding procedures of panel replacements and the use of pulling equipment for proper sheet metal alignment. Students will understand the techniques of outer body panel repairs, replacements,and adjustments. Students will repair, remove and replace steel / aluminum / SMC / plastic body panels, doors, deck lids, bumpers, and hoods. Students will adjust and align panels to manufacturer's specifications. Instruction is given in body section replacement and structural sectioning, including removing and replacing mechanical parts, using manufacturer's body repair manual and I-CAR recommendations. Measuring for cutting and proper alignment of sections is stressed. Students will understand the proper techniques of body/structural sectioning and anti-corrosion protection. Students learn proper frame alignment and the methods of straightening damaged frames and unitized body construction. Students learn to utilize computerized laser beam frame measuring equipment. Body shop practices are also covered.

Student Learning Outcome(s):

1. Students will utilize proper safety equipment when working in the lab. 2. Students will properly remove and replace body panels to OEM specifications. 3. Students will properly set up the Squeeze-type resistance spot welding machine. 4. Students will properly create spot welds to factory specifications. 5. Students will properly repair steel body panels. 6. Students will properly repair aluminum body panels. 7. Students will replace bolt-on aluminum body panels, riveted- bonded aluminum body panels, and adhesively bonded aluminum body panels. 8. Students will properly prepare plastics for repair and welding. 9. Students will be able to differentiate between High Strength Steel (HSS), Advanced High Strength Steel (AHSS), and Ultra High Strength Steel (UHSS). 10. Students will be able to repair and replace complete and partial unibody frame panels made of HSS, AHSS, and UHSS. 11. Students will be able to repair and replace complege and partial full-frame sections made of HSS, AHSS, and UHSS. Students will be able to take corrosion precautions and apply corrosion preventing materials where needed. 12. Students will utilize proper safety precautions when measuring and straightening frames with equipment. 13. Students will identify proper measurements by examining Body Dimension Specifications from vehicle manufacturers. 14. Students will be able to evaluate the effects of impact forces through full-frame and unibody construction by measuring with specific gauge tupe measurements to OEM specification measurements found in Body Dimension Chards. 15. Students will be able to evaluate the effects of impact forces through full-frame and unibody construction by measuring with specific computerized measuring systems and comparing the measurements of OEM specification measurements found in Software Dimension Charts. 16. Students will be able to utilize barious types of unibody and full-frame straightening equipment to unclude in-floor straightening equipment, [ortable body and frame pullers, rack straightining systems and bench straightening.

AUTOCOR 142 ADVANCED COLLISION REPAIR, ESTIMATING, REFINISHING (9)

Lecture: 3 hours / Lab: 18 hours

Students are taught collision analysis for body, frame and refinishing of damaged vehicles. Students create damage reports for customers and insurance companies. Students are given access to Mitchell University online instruction and certification website. Instruction is given in proper repair procedures, nomenclature, and terminology so students can clearly justify damage reports to customers, insurance adjusters, and technicians. This course provides training on the basics of UltraMate Premier Suite-E Claim Manager, a tool that allows users to place all claim related data (estimates,images, etc.) into a single electronic claim folder.It will offer a review of auto collision repair techniques and includes lectures, demonstrations and guest speakers. Advanced instruction is offered in inspection, paint repair and repaint to I-CAR and industry standards. The DuPont Certification for Compliant Coatings Rule 1151 is taught in this course. It will include paint application problems and solutions. Spot and panel paint options including color matching are taught. Certification testing for the DuPont Certificate is given and certificates are awarded to qualifying students.

Student Learning Outcome(s):

Students wll e able to create damage reports using Mitchell UltraMate Software.

AUTOCOR 148 PAINT PREPARATION AND APPLICATION (3)

Lecture: 1 hour / Lab: 6 hours

Students receive instruction in the types and properties of paint, solvent and spot painting. Cause and effect relationships of paint and surface blemishes, paint application problems, repairs and final detailing as required to I-CAR and industry standards are introduced.

Student Learning Outcome(s):

1. Students will utilize proper safety equipment when spraying compliant coatings. 2. Students will ascertain and utilize the various types of safety equipment when spray painting. 3. Students will mix and formulate compliant coatings to Industry standards. 4. Students will practice spraying spot and panel repairs. 5. Students will detail vehicles for delivery to customers.

AUTOCOR 149 ESTIMATING BODY DAMAGE (3)

Lecture: 1 hour / Lab: 6 hours

Students are taught body repair and computerized estimating collision

Student Learning Outcome(s):

1. Students will acquire supervisor skills relating to city, state, and national rules and regulations in regards to hazardous materials and employee safety. 2. Students will acquire certification for writing estimates using Mitchell UltraMate Estimating Software. 3.Students will properly identify vehicles. 4. Students will be able to demonstrate proper analysis of structural and non structural vehicle damage. 5. Students will be able to recognize and illustrate accident reconstruction. 6. Students will be able to create damage reports using Mitchell UltraMate and CCC Pathways. 7. Students will be able to negotiate proper repair procedures with the customer, insurance adjuster, and the technician. 8. Students will be able to oversee proper repairs of vehicles to safe OEM standards.

AUTOCOR 185 DIRECTED STUDY - AUTOMOTIVE COLLISION REPAIR (1)

Lecture: 1 hour

This course allows students to pursue a directed study in Automotive Collision Repair on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive Collision Repair.

AUTOCOR 226 COLLISION REPAIR I (3)

Lecture: 1 hour / Lab: 6 hours

This course introduces students to MIG welding, aluminum welding, and resistance welding. Students will learn to repair and replace body panels on unibody and full-frame vehicles. Repairing and replacing structural panels made of High Strength Steel (HSS), Advanced High Strength Steel (AHSS), and Ultra High Strength Steel (UHSS) are incorporated into this course. Students will learn aluminum welding techniques and panel bonding for both aluminum and steels. Students will understand the proper techniques of body/structural sectioning and anti-corrosion protection. Students will repair vehicles to industry standards.

Student Learning Outcome(s):

1. Students will utilize proper safety equipment when working in the lab. 2. Students will properly remove and replace body panels to OEM specifications. 3. Students will properly set up the Squeeze-type resistance spot welding machine. 4. Students will properly create spot welds to factory specifications. 5. Students will properly repair steel body panels. 6. Students will properly repair aluminum body panels. 7. Students will be able to repair and replace complete and partial full-frame sections made of HSS, AHSS, and UHSS. 8. Students will be able to take corrosion precautions and apply corrosion preventing materials where needed. 9. Students will be able to evaluate the effects of impact forces through full-frame and unibody construction by measuring with specific gauge type measuring equipment and comparing the measurements to OEM specification measurements found in Body Dimension Charts. 10. Students will be able to utilize various types of unibody and full-frame straightening equipment to include in-floor straightening equipment, portable body and frame pullers, rack straightening systems and bench straightening systems.

AUTOCOR 227 AUTO BODY AND FENDER II (3)

Lecture: 1 hour / Lab: 6 hours

This course offers advanced training in refinishing, color mixing and matching of OEM (Original Equipment manufacturer) color codes. Proper paint gun operation and use of air pressure and spray patterns are emphasized, as well as VOC (Volatile Organic Compounds) log calculation systems. Students will learn to repair/repaint as required to I-CAR and industry standards. This course will emphasize on the STAR Training Program whose goal is to train technicians to reduce material consumption costs and pollution through increased spray efficiency.

Student Learning Outcome(s):

1. Students will utilize proper safety equipment when spraying compliant coatings. 2. Students will learn how to use the sandpaper grading system. 3. Students will understand proper techniques of preparing panels. 4. Students will learn the proper operating and maintenance procedures for HVLP spray equipment. 5. Students will learn proper mixing techniques. 6. Students will properly apply DuPont compliant sealers, waterborne basecoats and clears. 7. Students will learn the proper operating and maintenance procedures for Laser Touch spray system.

AUTOCOR 248 AUTO CUSTOM PAINTING (3)

Lecture: 1 hour/Lab: 6 hours

Students receive instruction in the types and properties of paint, solvent and spot painting. Cause and effect relationships of paint and surface blemishes, paint application problems, repairs and final detailing as required to I-CAR and industry standards are introduced.

Student Learning Outcome(s):

1. Students will utilize proper safety equipment when spraying compliant coatings. 2. Students will ascertain and utilize the various types of safety equipment when spray painting. 3. Students will practice spraying spot and panel repairs.

AUTOCOR 285 DIRECTED STUDY - AUTOMOTIVE COLLISION REPAIR (2)

Lecture: 2 hours

This course allows students to pursue a directed study in Automotive Collision Repair on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive Collision Repair.

AUTOCOR 385 DIRECTED STUDY - AUTOMOTIVE COLLISION REPAIR (3)

Lecture: 3 hours

This course allows students to pursue a directed study in Automotive Collision Repair on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive Collision Repair.

AUTOCOR 921 COOPERATIVE EDUCATION - AUTOMOTIVE COLLISION REPAIR (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in an Automotive Collision Repair course or successfully completed an Automotive Collision Repair course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

AUTOCOR 931 COOPERATIVE EDUCATION - AUTOMOTIVE COLLISION REPAIR (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in an Automotive Collision Repair course or successfully completed an Automotive Collision Repair course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

AUTOCOR 941 COOPERATIVE EDUCATION - AUTOMOTIVE COLLISION REPAIR (4)

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

AUTOMOTIVE AND RELATED TECHNOLOGY

AUTORTK 100 HEATING AND AIR CONDITIONING SYSTEMS THEORY, INSPECTION & RPR (REPAIR) (3)

Lecture: 1 hour / Lab: 6 hours

Instruction is offered in the area of (HVAC) heating, ventilation & air conditioning systems, with emphasis on function & testing of heater controls, heater cores, air conditioning compressors, clutch & controls.

Student Learning Outcome(s):

1. The students will be able to inspect and diagnose air conditioning components for damage, ware and performance using proper procedures and equipment. 2. The student will be able to install an air conditioning manifold gage set and analyze pressure readings to determine system performance. 3. The students will be able to operate various automotive scanners to communicate with air conditioning controllers (ECM ,PCM, BCM Etc;) retrieving repair codes to diagnose various components and sensors. 4. The students will be able to rebuild, repair, or replace as necessary various air conditioning components using proper equipment and procedures.

AUTORTK 113 DRIVE TRAIN COMPONENTS PRINCIPLES AND PRACTICES (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction is offered in the, principles of operation, function and testing of manual/automatic transmissions and transaxles. Emphasis is placed on, power train systems, torque converter & planetary gear operation, gears & gear reduction. Laboratory instruction is offered in servicing of manual/ automatic transmissions including, electronic shift controls, hydraulic fundamentals, fluids and sealing, clutches, and differentials.

Student Learning Outcome(s):

1. The student will trace, explain and demonstrate how various types of planetary gear sets work. 2. The student will disassemble/ reassemble various automatic/manual transmissions sub assembles and explain their operation. 3. The student will disassemble various automatic/manual transmissions, reassemble, make all required adjustments and test for proper operation.

AUTORTK 114 STEERING,SUSPENSION,BRAKES,PRINCIPLES AND PRACTICES (3) CSU

Lecture: 1 hour / Lab: 6 hours

This course provides instruction in the theory, design, principles, diagnostics, and proper system service of automotive brake, suspension, and steering systems.

Student Learning Outcome(s):

Identify, diagnose, troubleshoot and repair all components of various automotive braking systems Identify, diagnose, troubleshoot and repair all components of various automotive steering and suspension systems Perform wheel alignment.

AUTORTK 121 BASIC ENGINE THEORY INSPECTION AND REPAIR (3) CSU

Lecture: 1 hour / Lab: 6 hours

This course offers instruction in the types of operating principles and performance characteristics of automotive engines. Applied mathematics and related physics are emphasized throughout the course. Students will disassemble and assemble a complete engine and apply related theory to factory procedures.

Student Learning Outcome(s):

Define and explain the engine related components theory / operation and systematical method of troubleshooting system failures within the engine performance environment. Identify and describe component location / function and operation within their perspective systems. Identify the difference between component failure and lack of maintenance problems associated with engine related service, troubleshoot, test and repair. Charge a Battery and perform a load test to determine the condition of the Battery.. Perform basic engine condition diagnosis and define basic principles of troubleshooting engine problems. Perform cranking vacuum, running vacuum, snap acceleration, exhaust restriction tests, power balance test, dry / wet compression test, and cylinder leakage test , Perform cooling system pressure test and dye leakage test.Perform oil pressure test. Perform Fuel System Pressure and Volume Test on a Fuel Delivery System, determine the state of system and compare test results to manufacturers specifications and make the correct recommendations. Identify fuel injection system components describe basic theory and operation, and methods of testing and repair of components. Perform a fuel injection system tests, diagnose and service components and interpret the results.Identify basic fuel injection components and explain basic theory and operation of input and output

devices. Identify common automotive tools and equipment used in fuel injection troubleshooting and repair. Demonstrate safe and proper use of equipment. Know and follow state, federal, EPA and OSHA guidelines and regulations. Complete a written quiz, which is similar in format to tests given by the Automotive Service Excellence (ASE) with a score of 70% or higher. Identify parts and components.Demonstrate proper tool usage and repair techniques. Practice safe methods of using hand and power tools. Remove and replace parts.Identify and use the different types and sizes of fasteners used on electrical and electronic components Read trade and equipment manuals. Practice quality assurance standards. Use common sense. The student will be able to perform an engine vacuum test, compression test, cylinder power balance test, cylinder leak down test, oil leak & pressure test and exhaust restriction test.

AUTORTK 122 ELECTRICAL/ELECTRONIC SYSTEMS THEORY, INSPECTION & REPAIR (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction on theory, inspection & repair of automotive electronic/ electrical systems and components. Emphasis is placed on charging, battery/starting & ignition systems component inspection, diagnosis & repair. This course also offers instruction on electrical wiring diagram analysis.

Student Learning Outcome(s):

1. Troubleshoot, diagnose and repair of electrical and electronic systems using the appropriate test equipment such as scanners, DVOMs (Digital Volt Ohm Meters), ETMs (Electrical Troubleshooting Manuals) and wiring skematic circuit diagrams. 2. Diagnose automotive electrical problems, to include electrical principles, use of basic electrical test equipment, and how to interpret wiring diagrams, and to gather and analyze information. 3. Diagnose and repair automotive batteries, starting, and charging, lighting systems, advanced automotive electrical systems, to include body electrical accessories, and basic computer control.

AUTORTK 123 FUEL & EMISSIONS SYSTEMS THEORY, INSPECTION & REPAIR (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction is offered on engine performance, diagnosis and repair. Emphasis is placed on ignition, fuel, and emission systems. Instruction is offered on related technologies of automotive fuel delivery systems, induction and scavenging systems. The proper use of test equipment and automotive engine evaluation procedures are stressed in this course.

Student Learning Outcome(s):

The students will complete appropriate NATEF task sheets provided in student work book accompanying text as related to fuel and ignition systems and tune-up.

AUTORTK 130 ADVANCED AUTOMOTIVE DIAGNOSIS AND REPAIR I (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction is offered on the areas of advanced engine construction & use of engine diagnostic equipment, standard transmissions & clutches, with emphasis on diagnosis and repair procedures. Shop practice is offered on most areas of automotive repairs: engine, transmissions, drivability, brakes, suspension, steering, and automotive accessories.

Student Learning Outcome(s):

1. The student will be able to perform an engine vacuum test, compression test, cylinder power balance test, cylinder leak down test, oil leak & pressure test and exhaust paper test. 2. The student will be able to use engine condition and performance data to determine necessary engine repair procedures. 3. The student will be able to use industry standard tools and equipment to perform necessary engine repair procedures.

AUTORTK 131 AUTOMOTIVE THEORY AND REPAIR II (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction is offered on the areas of advanced emission systems diagnosis, with emphasis on diagnosis & repair procedures to prepare vehicles for the State of California smog test. Shop practice is offered on most areas of automotive repairs: engine, transmissions, drivability, brakes, suspension, steering, and automotive accessories.

Student Learning Outcome(s):

1. The students will be able to inspect and diagnose emission components for damage, ware and performance using proper procedures and equipment. 2. The students will be able to operate DSO'S/DMM'S to analyze electrical emisson control circuits for correct electrical signals and performance using proper procedures. 3. The students will be able to operate various automotive scanners to communicate with emission system controllers (ECM and PCM) retrieving repair codes to diagnose various components and sensors. 4. The students will be able to repair, or replace as necessary various emission control components using proper equipment and procedures.

AUTORTK 135 COMPUTER CONTROL AND FUEL INJECTION (3) CSU

Lecture: 1 hour / Lab: 6 hours

Instruction is offered in Automotive Computer Control and Fuel Injection Systems. Emphasis is placed on computer control electronic and fuel systems construction, function, inspection, component theory and operation, troubleshooting principles and engine condition diagnosis, testing,

Student Learning Outcome(s):

1. Students will utilize an automotive scan tool to retrive Diagnostic Trouble Codes (DTC), and engine parameters/monitors. 2. Students will troubleshoot, service, and repair automotive fuel systems.

AUTORTK 140 ADVANCED AUTOMOTIVE DIAGNOSIS AND REPAIR IV (3) CSU

Lecture: 1 hour / Lab: 6 hours

Classroom lecture is offered in the areas of brake systems, front suspension systems, batteries, starting and charging systems, with emphasis on diagnosis and repair procedures. Shop practice is offered in most areas of automotive repairs: engine, transmissions, tune up, brakes, suspension, steering, and automotive accessories, and various other repairs using available vehicles.

Student Learning Outcome(s):

1. The students will be able to inspect and diagnose braking, suspension/ steering and battery/starter components for damage, ware and performance using proper procedures and equipment. 2. The students will be able to operate DSO'S/DMM'S to analyze electrical braking, suspension/steering and battery/starter circuits for correct electrical signals and performance using proper procedures. 3. The students will be able to operate various automotive scanners to communicate with brake, suspension/steering, and battery/starter controllers retrieving repair codes to diagnose various components and sensors. 4. The students will be able to repair, rebuild or replace as necessary various brake, suspension/steering, and battery/starter components using proper equipment and procedures.

AUTORTK 141 ADVANCED AUTOMOTIVE DIAGNOSIS AND REPAIR V (3) CSU

Lecture: 1 hour / Lab: 6 hours

Advanced instruction in theory, diagnosis, service and repair of electrical systems, charging systems and computer controlled systems. Instruction is offered on, the use of electrical diagnostic equipment, interpretation of wiring diagrams, engine computer controls and charging systems. Shop practice is offered on most areas of automotive repairs: engine, transmissions, drivability, brakes, suspension, steering, and automotive accessories.

Student Learning Outcome(s):

1. The students will be able to inspect and diagnose charging, ignition and computer control components for damage, ware and performance using proper procedures and equipment. 2. The students will be able to operate DSO'S/DMM'S to analyze electrical charging, ignition and computer control circuits for correct electrical signals and performance using proper procedures. 3. The students will be able to operate various automotive scanners to communicate with charging, ignition, and engine controllers (ECM ,PCM, BCM Etc;) retrieving repair codes to diagnose various components and sensors. 4. The students will be able to repair, or replace as necessary various charging, ignition, and computer control components using proper equipment and procedures.

AUTORTK 142 ADVANCED AUTOMOTIVE DIAGNOSIS AND REPAIR VI (3) CSU

Lecture: 1 hour / Lab: 6 hours

Advanced instruction in theory, diagnosis, service and repair of fuel injection, automatic transmission & heating, ventilation & air conditioning systems.

Student Learning Outcome(s):

1. The students will be able to inspect and diagnose fuel injection, automatic transmissions and air conditioning system components for damage, ware and performance using proper procedures and equipment. 2. The students will be able to operate DSO'S/DMM'S to analyze electrical fuel injection, automatic transmission and air conditioning circuits for correct electrical signals and performance using proper procedures. 3. The students will be able to operate various automotive scanners to communicate with fuel injection, automatic transmission and air conditioning controllers retrieving repair codes to diagnose various components and sensors. 4. The students will be able to repair, rebuild or replace as necessary various fuel injection, automatic transmission and air conditioning components using proper equipment and procedures.

AUTORTK 144 CALIFORNIA STATE BUREAU OF AUTOMOTIVE REPAIR CLEAN AIR CAR (3)

Lecture: 1 hour / Lab: 6 hours

The course is designed to upgrade knowledge of the students who are currently employed in the automotive field. This course also prepares students for employment and licensing in the California State Smog Check Program and prepares them for the California State Smog License Examination. Materials and content comply with Bureau of Automotive Repair requirements.

Student Learning Outcome(s):

Level One Engine and Emission Control Training Components: Level Two Smog Check Training Inspection Procedures.

AUTORTK 146 CALIFORNIA STATE BUREAU OF AUTOMOTIVE REPAIR SPECIFIED DIAGNOSIS AND REPAIR (3)

Lecture: 1 hour / Lab: 6 hours

BAR Specified Diagnostic and Repair Training is intended to provide students a high level of competency in the diagnosis and repair of Smog Check failures. This training focuses on the areas of electrical/electronic systems and engine and emission control performance. Students with at least two years of engine performance repair experience and who successfully complete this training may qualify for the state licensing examination for the Smog Check Repair Technician License.

Student Learning Outcome(s):

1. Students will be able to troubleshoot, diagnose and repair of electrical and electronic systems using the appropriate test equipment such as scanners, DVOMs (Digital Volt Ohm Meters), ETMs (Electrical Troubleshooting Manuals) and wiring schematic circuit diagrams.

2. Students will be able to describe theory, purpose, design and operation of emission control systems, including, but not limited to, crankcase controls, fuel evaporative controls, air injection, exhaust gas recirculation, catalyst and other exhaust gas after treatment systems, and integrated emission control management strategies, such as spark control and variable valve timing.

3. Students will be able to identify root or underlying causes of engine and emission control malfunctions and differentiate between mechanical, electrical/electronic and fuel system problems and determine appropriate repairs.

AUTORTK 185 DIRECTED STUDY - AUTOMOTIVE AND RELATED TECHNOLOGY (1)

Lecture: 1 hour

This course allows students to pursue a directed study in Automotive and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive and Related Technology.

AUTORTK 285 DIRECTED STUDY - AUTOMOTIVE AND RELATED TECHNOLOGY (2)

Lecture: 2 hours

This course allows students to pursue a directed study in Automotive and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive and Related Technology.

AUTORTK 385 DIRECTED STUDY - AUTOMOTIVE AND RELATED TECHNOLOGY (3)

Lecture: 3 hours

This course allows students to pursue a directed study in Automotive and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Automotive and Related Technology.

AUTORTK 921 COOPERATIVE EDUCATION - AUTOMOTIVE AND RELATED TECHNOLOGY (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in an Automotive Technology course or successfully completed an Automotive Technology course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

1.The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

AUTORTK 931 COOPERATIVE EDUCATION - AUTOMOTIVE AND RELATED TECHNOLOGY (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in an Automotive Technology course or successfully completed an Automotive Technology course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

1.The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

AUTORTK 941 COOPERATIVE EDUCATION - AUTOMOTIVE AND RELATED TECHNOLOGY (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/occupational goals of the student.

BAKING, PROFESSIONAL

PROFBKG 112 BAKING PROCESSES AND THEORY OF INGREDIENTS (4)

Lecture: 2 hours / Lab: 6 hours

Corequisite: Culinary Arts 112.

Course Covers the production of quick breads, introduction to puff pastry, laminated dough, and cookies with a emphasis placed on mixing methods. The role of leavening agents, starches, chemical reactions of ingredients and the effect on heat and cold on products. Recipe and menu development, including ingredient selection will be discussed.

Student Learning Outcome(s):

Student will identify beginning baking terminology and bakers math. Student will practice various baking methods of preparation. Student will evaluate and critique finished product.

PROFBKG 121 BEGINNING YEAST BREADS AND QUICKBREADS (6)

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Professional Baking 112 and Culinary Arts 112.

Class introduces student to volume lean & rich yeast bread and quick bread production with an emphasis on flour usage, chemical and natural leavening agents, as well as fat and sugar ingredient identification. Speed, accuracy, and increased productivity are stressed along with preparation of a variety of bread products up to industry standards.

Student Learning Outcome(s):

Identify a wide variety of baking procedures. Demonstrate and apply methods of preparation for yeast, laminated and quick-breads. Compare and Contrast the various preparations and evaluate finished product.

PROFBKG 122 ARTESIAN BREADS, SPECIALTY BREADS (6)

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Professional Baking 112 , 121 and Culinary Arts 112.

Recognize formulas and demonstrate the ability to alter formulas in yeast, rolled-in, and quick bread formulas central to this class. View bread baking from an artisanâ€™s prospective. Explore the fundamentals of baking science: How a formula works including changes of yields and altering percentages of ingredients in formulas to produce desired results are stressed. Work on increasing productivity, speed and accuracy is continued in this class.

Student Learning Outcome(s):

Identify advanced yeast/artisanal bread procedure and methods. Prepare various yeast bread formulas. Assess completed products. Reviseformula and procedure based on completed product and industry standard.

PROFBKG 131 PLATED RESAURANT STYLE DESSERTS (6)

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Professional Baking 112; Professional Baking 121; Professional Baking 122; Culinary Arts 112 ;

The course covers a wide range of baking techniques and topics with concentration on the composition of restaurant style plated desserts made up of a number of components.

Student Learning Outcome(s):

Differentiate various baking preparation of doughs, cakes, fillings, sauces and garnishes. Demonstrate said preparations within a professional bakery setting. Assess finished products according to industry standard.

PROFBKG 132 MULTI-COMPONENT DESSERTS AND PASTRIES (6)

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Professional Baking 112; Professional Baking 121; Professional Baking 122; Professional Baking 131 and Culinary Arts 112 ;

Students will discuss and demonstrate contemporary style multi-component plated restaurant style desserts. Topics include traditional composed desserts, modern menu fusion, international/ethnic and classical dessert combinations.

Student Learning Outcome(s):

Identify multi-component plated desserts used in the modern restaurant. Demonstrate preparation of multi-component plated desserts. Evaluate multi-component plated desserts.

PROFBKG 141 ADVANCED BAKING CENTERPIECE AND DECORATING TECHNIQUES (6)

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Professional Baking 112; Professional Baking 121; Professional Baking 122; Professional Baking 131; Professional Baking 132; Culinary Arts 111; Culinary Arts 112 ;

This class applies procedures and techniques for preparing advanced decorative bakery items for display in a professional food service facility. Students will prepare and demonstrate various advanced techniques including: Molded and tempered chocolate show pieces, marzipan, nougatine, pastillage,pulled and molded sugar, wedding and other occasional cakes, rolled and poured fondant, and gum paste will be prepared and evaluated.

Student Learning Outcome(s):

Student will recognize and demonstrate preparation of advanced bakery techniques and procedures. Student will demonstrate knowledge of completed products per class and industry standard.

PROFBKG 941 COOPERATIVE EDUCATION - BAKING, PROFESSIONAL (4)

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Professional Baking course or successfully completed a Professional Baking course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

BARBERING

BAR 113 FRESHMAN BARBERING I (6)

Lecture: 3 hours / Lab: 9 hours

The beginning course includes sanitation, client protection, scalp treatments, shampooing, hair cutting, finger waves, curl constructions, and manicuring.

Student Learning Outcome(s):

1. Student will be able to perform basic hair designs. 2. Students will be able to perform hair sculpting procedures and practice industry safety and sanitation standards.

BAR 114 FRESHMAN BARBERING II (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 113.

Beginning course with plain facials, permanent waving techniques, hair cutting with a razor and clippers and thermal texture hair styling.

Student Learning Outcome(s):

1. Students will be to perform a plain facial using massage manipulations. 2. Student will be able to demonstrate a plain straight back permanent wave. 3. Student will be able to perform a variety of hair sculpting using the shears and clipper. 4. Student will be able to demonstrate shaving techniques using the razor.

BAR 123 BARBERING JR. SALON I (6)
Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 114.

The students will be exposed to intermediate instructions in chemical straightening, thermal straightening and curling,permanent waving, skin and hair care, with instructions of hair cutting.

Student Learning Outcome(s):

1. Students will be able to demonstrate application of chemical relaxers. 2. Students will be able to identify chemical compounds for chemical services. 3. Students will be able to demonstrate a resting facial. 4. Students will be able to perform hair sculpting procedures using shears, razor and clippers.

BAR 124 BARBERING JR SALON II (6)
Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 123.

The students are instructed in advanced permanent waving, soft permanent wave, men hairpieces, thermal straightening and curling, hair cutting, clipper cutting and electricity.

Student Learning Outcome(s):

1. Students will be able to perform advanced cold waving, soft permanent waving. 2. Students will be able to perform chemical straightening. 3. Students will demonstrate competence in hair cutting. 4. Students will be able to demonstrate proper use of electricity.

BAR 133 BARBERING JR. SALON III (6)
Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 124.

The course will cover basic, intermediate, and advance hair coloring, bleaching, lighteners, facial hair color, and color correction techniques. Course will cover shaving techniques and soft perm waving. The subjects mentioned will be discussed.

Student Learning Outcome(s):

1. The students will be able to apply law of color in identifying and demonstrating the applications of basic and intermediate hair coloring, bleaching and toning. 2. Students will be able to apply shaving and hair sculpting Student will be able to apply permanent/soft waving techniques.

BAR 134 BARBERING JR. SALON IV (6)
Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 133;

The course will cover basic, intermediate, and advanced hair coloring, bleaching, lighteners, facial hair color, and color correction techniques.

Student Learning Outcome(s):

1. Students will be able to describe the benefits of facial massage. 2. Students will be able to identify the 14 shaving areas of the face. 3. Students will be able to discuss, identify, and name the sections of the head as applied to hair cutting.

BAR 143 BARBERING SR. SALON I (6)
Lecture: 3 hours / Lab: 9 hours
Prerequisite: Barbering 134.

The students will review all areas of cosmetology. Theory is focused on what is required by State Board and practical assignments related to services provided. There will be emphasis on communication, customer service, time management, booking of appointments and proper sales attitude.

Student Learning Outcome(s):

1. Student will be able to perform a chemical straightener. 2. Student will be able to demonstrate a resting facial. 3. Student will be able to list and describe the properties of the hair and scalp.

BAR 144 BARBERING SR. SALON II (6)
Lecture: 3 hours / Lab: 9 hours

Prerequisite: Barbering 143.

The students will be introduced to clinic floor practicum and advanced client services. Mock State Board procedures for licensure will be employed. Business practices include: client services, effective communication, job search skills, networking, strategies for building a clientale, selling techniques, starting and operation a business.

Student Learning Outcome(s):

1. Student will model industry standard business practices including customer rapport, service planning, professional communication, client retention, referrals, marketing and cooperation with co-workers. 2. Student will review individual competency requirements, both skill and theory, and passing a mock examination, student will demonstrate readiness to pass the state certification exam.

BAR 145 CROSSOVER COSMETOLOGY TO BARBERING (6)
Lecture: 3 hour(s) / Lab: 9 hours

The licensed cosmetologist will be introduced to the advanced services in the barbering industry. Mock State Board procedures for barbering licensure will be employed. The course will cover all the basic for barbering that include: Shaving techniques, facial shave skin preparations, resting facials, scalp manipulations, haircuts using clippers, and clipper shaving.

Student Learning Outcome(s):

1. Students perform a razor shave using the 14 shaving techniques. 2. Student will perform shaving and hair cutting techniques using clippers.

BIOLOGY

BIOLOGY 003 INTRODUCTION TO BIOLOGY (4) UC/CSU
Lecture: 3 hours / Lab: 3 hours

This is an introductory course dealing with the fundamental properties of living things. The structure and physiology of plants and animals, with emphasis on humans, are covered. Relationships between biological communities, genetics, and evolution are stressed.

Student Learning Outcome(s):

1. Be able to explain the cell theory, and discuss the structure and function of cell organelles and basic cell division processes. 2. Explain mechanisms of evolutionary changes. 3. Discuss the consequences of the evolutionary processes on biological diversity and adaptation patterns. 4. Describe patterns and processes of heredity (with emphasis on humans) using both classical and molecular genetics. 5. Relate the structure of organs and organ systems of multicellular organisms to their specific functions. 6. Discuss factors that affect the structure of biological communities and ecosystems. 7. Use basic biological (ecological) principles to analyze major environmental issues.

BIOLOGY 005 INTRODUCTION TO HUMAN BIOLOGY (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

The course includes basic biological principles as they apply to humans. The course will provide a foundation for advanced courses in Human Anatomy, Physiology, and Microbiology. Topics include chemical principles, the cell, heredity, human anatomy and physiology, microbiology, pathology, ecology, and bioethics.

Student Learning Outcome(s):

1. Student will apply the scientific method to understand biological principles. 2. Student will describe basic principles in human biology such as biochemistry and the cell. 3. Student will describe different types of bacteria, their staining methods, and how they cause disease. 4. Student will describe the anatomy and physiology of human organ systems.

BIOLOGY 006 GENERAL BIOLOGY I (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Chemistry 101

This is the first of a sequence of two General Biology courses designed for life science and pre-med majors. It deals with basic cellular processes within and between cells, metabolism, genetics and recombinant DNA technology.

Student Learning Outcome(s):

1. Discuss the cell theory. 2. Discuss how cell structure is related to its function. 3. Discuss metabolism, cell communication and cell division processes. 4. Describe patterns of inheritance and discuss processes of heredity using concepts in Mendelian and molecular genetics. 5. Solve genetic problems involving Mendelian traits 6. Discuss basic principles and applications of DNA technology.

BIOLOGY 007 GENERAL BIOLOGY II (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Prerequisite: Biology 6;

This is the second of a sequence of two General Biology courses designed for life science and pre-med majors. It deals with basic concepts in evolution, systematics, anatomy, physiology and ecology of organisms.

Student Learning Outcome(s):

1. Explain mechanisms of evolutionary change. 2. Discuss consequences of evolution on biological diversity and adaptation patterns. 3. Reconstruct phylogeny and explain principles of phylogenetic reconstruction using morphological and molecular data. 4. Identify and classify major taxa using phylogenetic systematics and explain the basis of classification. 5. Describe the most important events in the history of life on earth. 6. Relate the structure of organs of multicellular eukaryotes (with emphasis on plants and animals) to their functions. 7. Discuss how abiotic and biotic factors affect individuals, populations, communities and ecosystems. 8. Use ecological principles to analyze human impact on environment.

BIOTECHNOLOGY

BIOTECH 010 INTRODUCTION TO BIOMANUFACTURING I (4) CSU

Lecture: 3 hours / Lab: 3 hours

This course offers an introduction to the concepts and laboratory skills used in biomanufacturing. The process of biomanufacturing is explored. Students will investigate practices, facilities and techniques used by companies in producing biomanufactured products such as drugs.

Student Learning Outcome(s):

1. Students will demonstrate an understanding of the purpose, fundamentals and regulations of biomanufacturing. 2. Students will understand the science underlying biomanufacturing. 3. Students will apply techniques and procedures applicable to biomanufacturing.

BIOTECH 012 INTRODUCTION TO BIOMANUFACTURING II (4) CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: BIOTECHNOLOGY 010

This course expands on concepts from Introduction to Biomanufacturing I. It focuses on cell cultures, proteins and separation techniques as it applies to manufacturing products. The course also emphasizes environmental control in the industry. Laboratory focuses on applying techniques in molecular biology and chemistry to produce and assess a final product.

Student Learning Outcome(s):

1. Students will explain relevant biology and chemistry concepts as it applies to biomanufacturing. 2. Students will apply techniques and procedures used in biomanufacturing to produce and assess a final product. 3. Students will demonstrate an understanding of the lab environment and current good manufacturing practices.

BUILDING CONSTRUCTION TECHNIQUES

BLDGCTQ 002 PRE-EMPLOYMENT -APPLIED TRADES CALCULATIONS AND MEASUREMENTS (3)

Lecture: 3 hours

This is an entry level course in applied calculations and measurements with special emphasis on application problems encountered in the utility, manufacturing, and construction industries.

Student Learning Outcome(s):

1. Student will add, subtract, multiply, and divide whole numbers, with and without a calculator. 2. Student will use a standard ruler, a metric ruler, and a measuring 3. Student will recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.

BLDGCTQ 007 WEATHERIZATION - PRACTICAL ENERGY EFFICIENCY TECHNIQUES (3)

Lecture: 3 hours

This course provides expertise advice on various techniques that can be used to weatherize homes and other structures. The course is suitable for application by a professional home or energy inspector. Homeowners would also benefit from the knowledge and application of the simpler techniques. Efficiency techniques related to: Energy basics, sealing, insulating, window replacement/installation, environmental air, water, appliance energy efficiency, and lighting are just some of the areas that will be covered.

Student Learning Outcome(s):

Students pass Basic Weatherization test.

BLDGCTQ 008 WEALTHERIZATION-ENERGY EFFICIENCY PRACTICES (1)

Lab: 3 hours

This course provides laboratory exercises to build skills necessary for the effective application of energy techniques that can be used to weatherize homes and other structures. Course is suitable for application by a professional weatherization contractor training entry level workers or a homeowner looking to improve their own home. Efficiency practices related to: Energy basics, sealing, insulating, window replacement/installation, environmental air, water, appliance energy efficiency, and lighting are just some of the areas that will be covered.

Student Learning Outcome(s):

Students install the 6 basic weatherization measures: Attic insulation, caulking gaps, window repair and glass cutting, door weatherstripping, water heater blanket, and low flow shower head.

BLDGCTQ 009 ENERGY AUDITOR - RESIDENTIAL (3)

Lecture: 3 hours

A course focusing on residential energy requirements, loss and efficiency. How energy is used and lost will be discussed, along with the testing techniques and approaches to measure the amount of energy lost. Students will learn the components of an energy audit report and complete necessary forms.

Student Learning Outcome(s):

Students complete an energy audit form from testing data and take national certification test.

BLDGCTQ 010 ENERGY AND UTILITY INDUSTRY CAREERS (3)

Lecture: 3 hours

This course reviews the hot jobs in the energy and utility industry. and outlines a method for the student to decide on their career path. Hiring process and interview skills will be explored. Fitness for duty and other physical and physiological characteristics will be discussed. An A to Z guide to private, State, Federal, and international career opportunities will be presented.

Student Learning Outcome(s):

1. List career opportunities. 2. Develop a self-career map/plan.

BLDGCTQ 011 CADD FOR SUSTAINABLE LANDSCAPE DESIGN (4)

Lecture: 3 hours / Lab: 3 hours

This course covers the use of computer Aided Design/Drafting (CADD) applications specific to landscape professionals, including the introduction to CADD skills, block functions, Internet applications, three-dimensional design, presentation drawings, building systems, working drawings, and working drawing coordination.

Student Learning Outcome(s):

Students will complete a set of Three Dimensional Models with Libraries, Meta tags and Information using CAD MEP as the drawing tool for a sustainable landscape design project.

BLDGCTQ 012 ENERGY AUDITOR - RESIDENTIAL PRACTICES (1)

Lab: 3 hours

A course focusing on the practical application of residential energy requirements, loss and effeciency. Testing techniques and measurement the amount of energy lost. Students will perform actual energy audits of simulated structures and complete necessary forms.

Student Learning Outcome(s):

Perform building measurements for an energy audit to include, Combustion analysis, draft test, blower door test and duct test.

BLDGCTQ 014 CARPENTRY AND CONSTRUCTION FOR RENEWABLE ENERGY INSTALLERS (4)

Lecture: 3 hours / Lab: 3 hours

This course covers the roof structure principles necessary for installation of solar panels. Construction techniques and principles of roof framing and construction will be emphasized. Roof covering and flashing will also be a focus of the course. The installation and mounting of different panel mounting systems will also be demonstrated and covered in class.

Student Learning Outcome(s):

Students construct and prepare a roof for Solar Panel installation.

BLDGCTQ 101 CONTRACT'S LICENSE LAW (3) CSU

Lecture: 3 hours

Contractor's License Law is designed to prepare personnel in the construction industry on the California Law requirements for attaining a California State Contractor's License. Topics covered are License Law, Mechanic's Lien Law, Employment Regulations, Worker's Compensation, Safety in Employment and Business Management.

Student Learning Outcome(s):

SLO #1: Complete a mock contractor's license examination. SLO #2: Identify and interpret various Contractor's Licensure regulations SLO #3: Identify and interpret mechanics lean laws and regulations.

BLDGCTQ 102 O.S.H.A. BASED SAFETY STANDARDS: CONSTRUCTION & INDUSTRY (2) RPT 3

Lecture: 2 hours

(Same as Electrical Construction Maintenance 100).

This course provides instruction on industry safety and health rules as it applies to workers and employers within the construction industry. Topics such as fall protection, lock out tag out procedures, PPE, excavations, etc. are covered. Participants that meet the required hourly attendance and successfully pass the final exam will be eligible to receive their OSHA (30 hr) safety-training certificate.

Student Learning Outcome(s):

1. Recognize appropriate training requirements and training methods. 2. Define OSHA specific construction terms such as; competent person, construction work, confined space, working space, general duty clause. 3. Select situational appropriate PPE.

BLDGCTQ 215 SMALL WIND ENERGY SYSTEMS PRINCIPLES AND PRACTICES (3)

Lab: 6 hours

This course is designed for individuals that have the basic electrical and mechanical skills of an energy technician or electrician and are looking to expand into the small wind energy field. This class will help one to develop the fundamental knowledge and skill sets typically required for small wind system practitioners and to help ensure safety, quality and consumer acceptance of small wind installations.

Student Learning Outcome(s):

1. Discuss the history and development of wind energy. 2. List the regions of the globe where wind is a renewable option. 3. Install the components needed for various wind renewable energy sources.

BLDGCTQ 600 GREEN JOBS FOR THE AEC INDUSTRY CLUSTER (3) CSU

Lab: 7 hours

This is an Architecture, Engineering and Construction Industry Cluster (AEC) course. Students learn the interconnection of all phases for the life cycle of green buildings, infrastructure and smart cities. This course is a comprehensive framework generating professionals going into the green jobs for the architecture, engineering, construction management, product manufacturing, environmental design and assistants for project administration, document control, safety supervision, cost estimating, labor compliance and quality controls. Through interactive dialog, students learn from experts' speakers in the fields. During the course students obtain industry certifications on Computer Aided Design/Drafting (CAD), Building Information Modeling (BIM), Construction Specification Institute CSI and Geographical Information System (GIS). Development of personal soft skills, resume and portfolio is also covered in this class. Students become workforce asset for archiving the Sustainable Design Goals and 'just transition projects.

Student Learning Outcome(s):

1. Students will be able to conduct industry research, that includes finding case studies, regarding the life cycle of a green building or smart city.
2. Students can read, view, print, query BIM/CAD/Revit models for buildings and products towards a specific task in the AEC Industry including compliance and standards.
3. Students can develop business a data enterprise solution for a green development that addresses performance, procedure, natural resources, human resources.
4. Students will be able to market themselves effectively to prospective employers in the green industry (through
5. portfolio development, written documents, online presence, and skillful interviews)

BLDGCTQ 911 COOPERATIVE EDUCATION - BUILDING CONSTRUCTION TECHNIQUES (1)

Lecture: 1 hour

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least (3) learning objectives to be accomplished on the job. 2. The objective will be related to the educational/ occupational goals of the student.

BLDGCTQ 921 COOPERATIVE EDUCATION - BUILDING CONSTRUCTION TECHNIQUES (2) RPT 3

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least (3) learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

BLDGCTQ 931 COOPERATIVE EDUCATION - BUILDING CONSTRUCTION TECHNIQUES (3) RPT 3

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

BLDGCTQ 941 COOPERATIVE EDUCATION - BUILDING CONSTRUCTION TECHNIQUES (4) CSU RPT 3

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

BUSINESS

BUS 001 INTRODUCTION TO BUSINESS (3) UC/CSU

Lecture: 3 hours

Special emphasis is placed on the meaning and purpose of business in our society, the historical development of business, the general economic setting for business today, and the following business areas: forms of business organization, manufacturing, marketing, human relations, financing, accounting, budgeting, reports, government-based relations and the social responsibilities of people in business.

Student Learning Outcome(s):

Students will be able to explain and analyze different legal forms of business. Students will be able to identify various core concepts and tools of marketing, management, finance and accounting to develop and operate a business.

BUS 005 BUSINESS LAW I (3) UC/CSU

Lecture: 3 hours

Introductory course in civil law emphasizing laws relating to contracts, agency, personal property, business organizations, partnerships, corporations, security transactions, and torts. Students also explore logical reasoning and the application of rules of law to everyday business affairs.

Student Learning Outcome(s):

1. Identify laws, rules, and regulations that bound the exchange of goods and services between producers and consumers in the marketplace. 2. Assess consumer's or producer's rights pursuant to a claim for compensation for harm incurred as a result of another's civil or criminal violation in the marketplace.

BUS 006 BUSINESS LAW II (3) UC/CSU

Lecture: 3 hours

This course presents the legal aspect of business relationships and transactions. Topics included are Alternative Dispute Resolution; Ethics; Intellectual Property; Internet Law, Social Media and Privacy concerns; Formation, Performance and Breach of Sales and Lease Contracts under the UCC; Warranties and Products Liability; Negotiable Instruments; Insurance, Wills and Trusts; Secured Transactions; Creditors' Rights and Bankruptcy; Personal Property and Bailments; Real Property & Landlord and Tenant laws. Practice in the application of the legal principles and concepts to various business transactions are provided.

Student Learning Outcome(s):

1. Students will identify and apply general laws, rules and regulations to fact patterns that pertain to the UCC and the sale of goods between merchants. 2. Students will identify the legal issues and the duties and obligations of parties in disputes pertaining to Property, Wills and Trusts, Negotiable Instruments and Creditor Rights including the different types of Bankruptcy proceedings.

BUS 014 ORAL COMMUNICATIONS FOR CUSTOMER SERVICE (3)

Lecture: 3 hours

Instruction will focus on the key issues of positive and productive customer service communications, identifying customer needs and problems and finding viable solutions.

Student Learning Outcome(s):

1. Student will be able to relate customer service behaviors to profits and customer retention. 2. Student will be able to demonstrate positive customer service language and behaviors, and active listening techniques.

BUS 022 THE BUSINESS OF ELECTRONIC COMMERCE (3) CSU

Lecture: 3 hours

This comprehensive course emphasizes emerging online technologies and future trends with respect to e-commerce. In addition to the early development of e-commerce, strategies for e-commerce success, e-marketing, online payment methods, spamming, phishing, identity theft, and other e-commerce components will be explored.

Student Learning Outcome(s):

Students will be able to explore, research, analyze and critique electronic commerce business models.

BUS 032 BUSINESS COMMUNICATIONS (3) CSU

Lecture: 2 hours / Lab: 2 hours

The course emphasizes the concepts of successful written and oral communication skills in business in order to write effective business communications including letters, electronic communications, and short reports. This course also helps students develop the ability to create and present oral presentations.

Student Learning Outcome(s):

1. Students will become effective communicators to today's changing workplace. 2. Students will learn the writing process as it applies to e-mail messages and memorandums.

BUS 033 TECHNICAL REPORT WRITING (3) CSU

Lecture: 3 hours

Advisory: English 67.

This course provides student with technical communication skills that help in finding and using information to share with others in the workplace. It also provides techniques that communicators use to analyze an audience and purpose, to create and find the best information on a subject, to arrange the information skillfully to meet the audience's needs and preferences, and to deliver the information effectively using the most appropriate software application.

Student Learning Outcome(s):

1. Students will plan and draft documents using templates and style in microsoft application. 2. Student will learn how to write collaboratively in an office environment.

BUS 038 BUSINESS COMPUTATIONS (3) CSU

Lecture: 3 hours

This course provides the principles of mathematics, financial accounting and general business problems that include the following: Bank services including checking account and credit card account activity, payroll calculations, cash and trade discounts merchandise mark-up and inventory valuation, simple and compound interest, annuities, stock and bond transactions, business consumer loans, taxes and insurance, depreciation, financial statements,ratios, and business statistics.

Student Learning Outcome(s):

1. Students will demonstrate speed and accuracy in analyzing the fundamental processes of mathematics commonly used in making business calculations. 2. 3. Students will demonstrate an understanding of mathematical skills required in other business subjects such as accounting, management, marketing, and computer operations. 4. Students will demonstrate an understanding of budgeting with respect to planning and the balanced scorecard. 5. Students will produce projected pro-forma financial statements and make forecasts based upon the data.

BUS 040 BUSINESS PROJECT MANAGEMENT (3) CSU

Lecture: 2 hours / Lab: 2 hours

This course will identify all phases of project management. Students will learn the tools for completing projects on time and within budget. Specific topics will include project life cycles, setting objectives, identifying activities and resources, work breakdown structures, work-flow, network analysis, contingency planning, scheduling, budgeting, work in progress and reporting. Special emphasis will be placed on MS project.

Student Learning Outcome(s):

Students will be able to develope project proposals in regards to identifying project scope, developing project schedules while utilizing effieceint resources, determining cost in respect to project risk and effectively closing the proposed project while building strong relationships with customers and partners.

BUS 185 DIRECTED STUDY - BUSINESS (3) CSU

Lecture: 1 hours

This non-traditional course provides for challenging educational engagement through in-depth study and practice on an approved project-based or service-based topic within the business discipline under the direction of a supervising instructor. One purpose of this course is to assist the individual student or cohort of students to develop and enhance discipline-specific intellectual skills. The nature of directed study coursework is one of applied conceptualization and its level of rigor, intensity, and difficulty is commensurate with this expectation. The proposed project/subject matter may be contextualized within a specific industry and must have prior approval before commencing work under the instructor's direction.

Student Learning Outcome(s):

Student will demonstrate the ability to conceptualize, plan, initiate and execute an special project related to Business.

BUS 285 DIRECTED STUDY - BUSINESS (2) CSU

Lecture: 2 hours

This non-traditional course provides for challenging educational engagement through in-depth study and practice on an approved project-based or service-based topic within the business discipline under the direction of a supervising instructor. One purpose of this course is to assist the individual student or cohort of students to develop and enhance discipline-specific intellectual skills. The nature of directed study coursework is one of applied conceptualization and its level of rigor, intensity, and difficulty is commensurate with this expectation. The proposed project/subject matter may be contextualized within a specific industry and must have prior approval before commencing work under the instructor's direction.

Student Learning Outcome(s):

Student will demonstrate the ability to conceptualize, plan, initiate and execute an special project related to Business.

BUS 385 DIRECTED STUDY - BUSINESS (3) CSU

Lecture: 3 hours

This non-traditional course provides for challenging educational engagement through in-depth study and practice on an approved project-based or service-based topic within the business discipline under the direction of a supervising instructor. One purpose of this course is to assist the individual student or cohort of students to develop and enhance discipline-specific intellectual skills. The nature of directed study coursework is one of applied conceptualization and its level of rigor, intensity, and difficulty is commensurate with this expectation. The proposed project/subject matter may be contextualized within a specific industry and must have prior approval before commencing work under the instructor's direction.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Business.

BUS 941 COOPERATIVE EDUCATION - BUSINESS (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

CARPENTRY

CRPNTRY 105 CALCULATIONS AND MEASUREMENT FOR WOODWORKING STUDENTS I (3)

Lecture: 3 hours

This course covers the basic math skills needed to perform in the construction field. Emphasis is placed on the basic operations and how they are applied to carpentry. Measurement calculations will be performed in both standard and metric measurements.

Student Learning Outcome(s):

Students complete national certification test for Introduction to Construction Math.

CRPNTRY 111 CONSTRUCTION I (7) CSU

Lecture: 3 hours / Lab: 12 hours

This course covers use and operation of hand tools, machine tools, and portable electric tools commonly used in the construction trades. Fundamentals of residential foundation and wall construction, use of rough and finish hardware, glues and adhesives, federal, state, and local building codes and ordinances are studied

Student Learning Outcome(s):

1. Students will use common power and hand tools to perform basic framing operations. 2. The student will calculate rafter lengths and cut the rafters to size using a Skill saw. 3. The student will fasten framing members together using hand nailing techniques. 4. The student will measure and cut framing members to length using the worm drive circular saw, power miter box and radial arm saws.

CRPNTRY 111A CONSTRUCTION IA (3) CSU

Lecture: 3 hours

This course covers use and operation of hand tools, machine tools, and portable electric tools commonly used in the construction trades. Fundamentals of residential foundation and wall construction, use of rough and finish hardware, glues and adhesives, federal, state, and local building codes and ordinances are studied.

Student Learning Outcome(s):

Students identify parts of a wood framed structure and describe their purpose

CRPNTRY 111B CONSTRUCTION IB (2)

Lab: 6 hours

This is the second laboratory course in the Carpentry 111 sequence.This covers use and operation of hand tools, machine tools, and portable electric tools commonly used in the construction trades. Fundamentals of residential foundation and wall construction will be the focus of this course.

Student Learning Outcome(s):

1. Students will use common power and hand tools to perform basic framing operations. 2. The student will calculate rafter lengths and cut the rafters to size using a Skill saw. 3. The student will fasten framing members together using hand nailing techniques. 4. The student will measure and cut framing members to length using the worm drive circular saw, power miter box and radial arm saws.

CRPNTRY 111C CONSTRUCTION IC (2)

Lab: 6 hours

This course covers use and operation of hand tools, machine tools, and portable electric tools commonly used in the construction trades. Fundamentals of wall construction, roof construction, and applications of federal, state, and local building codes and ordinances are studied.

Student Learning Outcome(s):

1. Students will use common power and hand tools to perform basic framing operations. 2. The student will calculate rafter lengths and cut the rafters to size using a Skill saw. 3. The student will fasten framing members together using hand nailing techniques. 4. The student will measure and cut framing members to length using the worm drive circular saw, power miter box and radial arm saws.

CRPNTRY 114 HAND AND POWER TOOL APPLICATION (4) CSU

Lab: 10 hours

This course focuses on the safe use of hand and power tools used in the carpentry and construction industry. Operation and safety instruction will be given on both portable and stationary power tools including skill saws, table saws, jointers, planers, band saws, etc. Students will use hand and power tools to complete woodworking and carpentry projects.

Student Learning Outcome(s):

Students demonstrate knowledge of safe use of hand and power tools.

CRPNTRY 115 BASIC BLUEPRINT READING AND CORE CONSTRUCTION SKILLS (3) CSU

Lab: 7 hours

Students will be familiarized with the basic terms for construction drawings, components, and symbols. Emphasis is placed on the different types of drawings and how to interpret and use the Information. Students will also complete core construction training in safety, hand tools, power tools, communications, materials handling, and material handling. Successful completion can lead to NCCER Core certification.

Student Learning Outcome(s):

1. Students identify information from blueprints such as dimensions, symbols and location. 2. Students complete 8 NCCER certification tests on Basic Safety, Introduction to Construction Math, Introduction to Hand tools, Introduction to Power Tools, Introduction to Construction Drawings, Basic Communication Skills, Basic Employability Skills, Introduction to Material Handling.

CRPNTRY 117 CONSTRUCTION MATERIALS (2)

Lab: 4 hours

This course focuses on building materials such as concrete, steel and a variety of woods used for exterior and interior carpentry finish; insulation, flashing, roof covering, interior and exterior wall covering, wood trim and other finish materials in residential construction; rough and finish hardware such as nails, screws, bolts, timber fasteners, gang nailing, power fastening, powder actuated fasteners, joist hangers, clips, etc.; methods of installation.

Student Learning Outcome(s):

Students identify basic construction materials including framing, finishing, millwork and wood materials

CRPNTRY 123 BASIC HOUSE CONSTRUCTION (6) CSU

Lab: 14 hours

This course covers the basic framing operations involved in residential construction. students will complete the framing process using large scale models. Basic construction tool operations, and processes will be emphasized and tested.

Student Learning Outcome(s):

1. Students will use common power and hand tools to perform basic framing operations. 2. The student will calculate rafter lengths and cut the rafters to size using a Skill saw. 3. The student will fasten framing members together using hand nailing techniques. 4. The student will measure and cut framing members to length using the worm drive circular saw, power miter box and radial arm saws.

CRPNTRY 124 BLUEPRINT READING AND ESTIMATING I (3)
Lab: 7 hours

Students will learn blueprint reading through the process of estimation. Material take offs, detail methods, labor calculations, profit, overhead and bid procedures will be examined.

Student Learning Outcome(s):

Complete framing material take-off Caculate concrete requirements for a slab foundation

CRPNTRY 126 CONSTRUCTION II (6)
Lab: 12 hours

The course focuses on principles of estimating, quantity take-off, materials and labor costs, bidding procedures,for new construction, renovation for both residential and commercial construction.

Student Learning Outcome(s):

Students calculate construction materials, labor and business costs for a residential structure from a set of plans.

CRPNTRY 130 CALCULATIONS AND MEASUREMENT FOR WOODWORKING STUDENTS II (3)
Lecture: 3 hours

Students complete common woodworking and construction calculations with an emphasis on percentage, area and volume calculations, algebra, geometry and trigonometry as they apply to the carpentry and woodworking trades. Students calculate concrete volume, lumber requirements and material quantities, as well as perform length and size calculations.

Student Learning Outcome(s):

Students will apply basic mathematical operations to construction calculations such as area, volume diagonal length and roof angles.

CRPNTRY 132 APPLIED BLUEPRINT READING (3) CSU
Lab: 7 hours

This course focuses on construction documents used in the construction of residential and light commercial projects.Emphasis is placed on the interpretation of drawings, standards, specifications, and symbols used in construction. Gathering information for material requirements and estimates will be major component of the course.

Student Learning Outcome(s):

Identify architectural items, quantities, and specifications from construction drawings.

CRPNTRY 133 ADVANCED RESIDENTIAL ESTIMATING (3) CSU
Lecture: 3 hours

Students complete a comprehensive residential estimation project including materials, labor, overheads costs and expenses. Students perform materials take off using detailed and unit methods. Students estimate concrete and rebar requirements, lumber needs for floor, wall and roof construction as well as interior and exterior finishing materials. Labor costs are also calculated for common construction jobs. At the end of the course students will complete a comprehensive estimate for a residential construction project.

Student Learning Outcome(s):

Prepare a takeoff estimate of materials using a set of architectural plans.

CRPNTRY 134 ADVANCED RESIDENTIAL CONSTRUCTION (4) CSU
Lecture: 3 hours / Lab: 4 hours

This course is a continuation of Basic Construction, Students will complete framing operations involving floor, wall, ceiling and roof construction. In addition, this course goes into greater depth in the areas of rough in for the preparation of electrical, plumbing, heating and ventilation.

Student Learning Outcome(s):

Students will detail wall plates off architectural plans that includes layout for all holdowns, posts, windows, doors, channels, shear panels, studs and anchor bolts.

CRPNTRY 135 CONCRETE CONSTRUCTION (2) CSU
Lab: 4 hours

Students explore and experience concrete concepts and forming. Emphasis will be placed on slab on grade forms and construction and stem forming. Students will use leveling instruments to square, level and layout buildings and forms.

Student Learning Outcome(s):

Estimating cubic yardage of concrete for footings, foundations walls and slabs from architectural drawings.

CRPNTRY 144 RESIDENTIAL EXTERIOR FINISH (4) CSU
Lab: 10 hours

In this course, students will learn the tools, techniques, and principles of residential exterior finish. Students will install exterior finish materials such as siding, stucco and shingles. An emphasis will be placed on installation of roofing materials such as asphalt shingles.

Student Learning Outcome(s):

Students will assemble and install a door jamb, hang a door and install door stop.

CRPNTRY 145 RESIDENTIAL INTERIOR FINISH (5) CSU
Lab: 11 hours

The course will focus on the materials, practices, and principles of interior finish work for residential construction. Emphasis will be placed on drywall installation and finishing, installation of interior door, installation of door hardware. Students will also install door and window casing, baseboard, and crown molding. Stair layout and construction will also be reviewed.

Student Learning Outcome(s):

Students complete door installation including the installation of lock set, casing, weatherstripping, threshold and door shoe.

CRPNTRY 148 COMPUTER ASSISTED ESTIMATING I (3)
Lab: 6 hours

Students receive instruction in using specialized software to generate 2D and 3D plans for residential construction. Emphasis will be placed on using the developed plans to generate estimation information including material and cut lists.

Student Learning Outcome(s):

Students create a complete set of building documents including material lists.

CRPNTRY 149 COMPUTER ASSISTED ESTIMATING II (3) CSU

Lab: 6 hours

This course includes instruction in advanced computer assisted estimating techniques. students will learn to make design projects with emphasis on material applications, structural design, framing lumber, concrete reinforcement, producing a cost break down and bidding procedures.

Student Learning Outcome(s):

Students will prepare complete cost estimates using software, including cost of materials and labor from outside sources.

CRPNTRY 170 INTRODUCTION TO CNC WOODWORKING MACHINING AND PROGRAMMING CSU (3)

Lab: 6 hours

This course presents an introduction to the use of a CNC router. Topics include safety, feed speeds, spindle speeds, tooling , setups and programming to include related attachments and accessories for the machine.

Student Learning Outcome(s):

Create a name plate with the CNC Router using MaterCam.

CRPNTRY 185 DIRECTED STUDY - CARPENTRY (1)

Lecture: 1 hour

This course allows students to pursue directed study in Carpentry on a contract basis under the direction of a supervising instructor. Students must be enrolled in at least one carpentry course to take this class.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a project based on a topic in Carpentry and related topics.

CRPNTRY 240 BUILDING CONSTRUCTION SPECIALTIES (4)

Lecture: 3 hours / Lab: 4 hours

This course is a continuation of Basic Construction, Students will complete framing operations involving floor, wall, ceiling and roof construction. In addition, this course goes into greater depth in the areas of rough in for the preparation of electrical, plumbing, heating and ventilation.

Student Learning Outcome(s):

Students will detail wall plates off architectural plans that includes layout for all holdowns, posts, windows, doors, channels, shear panels, studs and anchor bolts.

CRPNTRY 241 BLUEPRINT READING AND ESTIMATING (3)

Lecture: 3 hours

Students will learn blueprint reading through the process of estimation. Material take offs, detail methods, labor calculations, profit, overhead and bid procedures will be examined.

Student Learning Outcome(s):

Prepare a takeoff estimate of materials using a set of architectural plans.

CRPNTRY 243 BUILDING ESTIMATING I (3) CSU

Lecture: 3 hours

This course introduces the process of construction estimation. Students will learn the estimation process of individual systems as well as the whole structure. Students complete building data sheets and materials price sheet. They will gain experience through a complete materials estimate of a structure.

Student Learning Outcome(s):

Students complete a material take-off for a construction project from blueprints.

CRPNTRY 247 BUILDING ESTIMATING II (3)

Lecture: 3 hours

Students complete a comprehensive residential estimation project including materials, labor, overheads costs and expenses. Students perform materials take off using detailed and unit methods. Students estimate concrete and rebar requirements, lumber needs for floor, wall and roof construction as well as interior and exterior finishing materials. Labor costs are also calculated for common construction jobs. At the end of the course students will complete a comprehensive estimate for a residential construction project.

Student Learning Outcome(s):

Prepare a takeoff estimate of materials using a set of architectural plans.

CRPNTRY 251 BUILDING CODES I: INTERNATIONAL RESIDENTIAL CODE (IRC) (3) CSU

Lecture: 3 hours

This class will examine the most current version of the International Residential Code. Topics will include administration and planning, and the structure, logic and layout of the code. It will then take up relevant code sections for all phases of residential construction. Namely, foundation, floor, wall, roof/ceiling, electrical, plumbing and mechanical, lighting distribution and fixtures, appliance installation and swimming pools. Study materials will be aligned with the most current ICC publications.

Student Learning Outcome(s):

Student will provide the code section and installation locations for smoke detectors

CRPNTRY 252 BUILDING CODES II: INTERNATIONAL RESIDENTIAL CODE (IRC) (3) CSU

Lecture: 3 hours

This course provides the most updated international building codes.Â Topics to be covered are Administration, Use and Occupancy Classifications, types of Construction, General Heights and Areas, Fire and Smoke Protection features and Systems, Means of Egress, Accessibility, Detailed Occupancy Requirements, Exterior Wall Coverings, Roofs, and Foundations, Special Inspections, Concrete, Masonry and Wood, Interior Finishes, Interior Environment, Gypsum Board, Elevators, and Glazing.

Student Learning Outcome(s):

Student will provide code sections for Means of Egress code provisions.

CRPNTRY 285 DIRECTED STUDY - CARPENTRY (2)

Lecture: 2 hours

This course allows students to pursue directed study in Carpentry on a contract basis under the direction of a supervising instructor. Students must be enrolled in at least one Carpentry course to take this class.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a project based on a topic in Carpentry and related topics.

CRPNTRY 385 DIRECTED STUDY - CARPENTRY (3)

Lecture: 3 hours

This course allows students to pursue directed study in Carpentry on a contract basis under the direction of a supervising instructor. Students must be enrolled in at least one Carpentry course to take this class.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a project based on a topic in Carpentry and related topics.

CRPNTRY 941 COOPERATIVE EDUCATION - CARPENTRY (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

CHEMICAL TECHNOLOGY

CHEM T 111 APPLIED CHEMISTRY I (5) CSU

Lecture: 3 hours / Lab: 6 hours

This course is dedicated to students majoring specifically in chemical, process plant, bio-manufacturing and biotechnology career options. Students will study the principles and concepts of chemistry and laboratory techniques including an introduction to physical methods of analysis involving the use of separation, equipment and instrumental methods used in the chemical, process plant and biotechnology industries.

Student Learning Outcome(s):

1.Students will identify chemical, process plant, bio-manufacturing industry skills/concepts and safety requirements 2. Students will perform dimensional analysis, density and temperature calculations 3.Students will identify physical and chemical properties and changes.

CHEM T 113 APPLIED CHEMISTRY MATHEMATICS I (2)

Lecture: 2 hours

This course will offer basic applications from mathematical operations to problem-solving strategies in the chemical industry required of chemical technicians working in the chemical industry.

Student Learning Outcome(s):

1. Student will apply basic mathematical skills to solve chemical laboratory technology problems. 2. Students will evaluate and determine the correct calculation(s) for a given mathematical problem 3. Student will calculate mathematical problems providing the correct significant figures as a result.

CHEM T 121 APPLIED CHEMISTRY II (5) CSU

Lecture: 3 hours / Lab: 6 hours

This course covers the principles as applied to aqueous solutions, energy and chemical reactions, modern atomic theory, chemical bonding, gases, chemical equilibrium, acids and bases, nuclear chemistry, and introduction to organic chemistry. Laboratory studies include qualitative and quantitative analysis of common anions and cations and introduction to instrumental analysis. The skills learned will be those required for employment in the waste water treatment, chemical, process operations, biotechnology and bio-manufacturing career options.

Student Learning Outcome(s):

1. Students will demonstrate knowledge of chemical behavior in quantum theory. 2. Student will demonstrate knowledge of principle energy levels. 3. Student will demonstrate knowledge wavelengths and frequency concepts.

CHEM T 123 APPLIED CHEMISTRY MATHEMATICS II (2)

Lecture: 2 hours

This course covers further applications of mathematical techniques in chemical technology including techniques used in chemistry, physics and technical mathematics. The emphasis includes further topics in units, concentration, graphs, equilibrium, thermodynamics, and oxidation-reduction and industry related methods.

Student Learning Outcome(s):

1. Student will discuss and explain the concept of average mass and explore how counting can be done by weighing. 2. Student will discuss and calculate solution preparation problems molarity and standard deviation. 3. Student will explain and calculate pH and pOH.

CHEM T 131 INDUSTRIAL PROCESSES (3)

Lecture: 1 hour / Lab: 6 hours

Instruction is given in the fundamental theories of chemical and physical processes used in various manufacturing industries. Also, instruction is given in operation of equipment including the introduction of concepts of quality control validation as it relates to manufacturing in regulated industries.

Student Learning Outcome(s):

1. Apply GLP and GMP techniques Perform the synthesis of lab samples. 2. Analyze unknown lab samples. 3. Perform and evaluate all lab procedures in a final team project. 4. Apply computer applications necessary for data acquisitions.

CHEM T 132 QUANTITATIVE AND INSTRUMENTAL ANALYSIS I (5) CSU

This course covers principles and applications of sample and data collection, statistical error analysis, data interpretation, and chemical analysis techniques. Laboratory emphasis on accuracy and precision measurements utilizing analytical techniques and instrumentation including spectrophotometry, chromatography, titration and gravimetric analysis.

Student Learning Outcome(s):

1. Apply Good Lab Practices (GLP) and Good Manufacturing Practices (GMP) and techniques. 2. Perform the synthesis of lab samples. 3. Analyze unknown lab samples.

CHEM T 133 ORGANIC CHEMISTRY I (4) CSU

Lecture: 2 hours / Lab: 6 hours

This course includes systematic study of hydrocarbons including nomenclature,physical and chemical properties, occurrances, synthesis, and reactions of alkanes, alkenes, and alkynes. Laboratory studies include distillations, liquid-liquid extractions, and chromatographic techniques and IR spectroscopy.

Student Learning Outcome(s):

The student will be able to recognise and name aliphatic hydrocarbons applying the IUPAC nomenclature rules.

CHEM T 140 MICROBIOLOGY LABORATORY TECHNIQUES FOR TECHNICIANS (1)

Lab: 3 hours

This course studies techniques and procedures used regularly in microbiology laboratories. It includes laboratory safety and aseptic techniques, media preparation, handling and maintaining cultures and the use and care of lab equipment, especially microscopes. The course is designed specifically for chemical, process and biomanufacturing technicians.

Student Learning Outcome(s):

1. Demonstrate knowledge of lab safety techniques and standards and use them appropriately in the laboratory. 2. Isolate and transfer pure cultures of bacteria under aseptic conditions. 3. Demonstrate knowledge of bacteria and fungi commonly found in microbiology laboratories. 4. Prepare and observe under brightfield microscope stained bacterial smear. 5. Determine bacterial population density using standard plate count and turbidimetric techniques. 6. Prepare different types of liquid and solid culture media. 7. Prepare and properly store stock bacterial cultures. 8. Evaluate effects of physical and chemical agents on microbial growth. 9. Identify the scientific name of an unknown pure cultures of microbe using standard microbiological techniques.

CHEM T 141 BASIC EMPLOYMENT INFORMATION (1)

Lecture: 1 hour

Instruction covers safety precautions, professional ethics, health habits, responsibilities to the customer and management, personal appearance, employment trends and professional organizations. The course also includes writing resources and cover letters, and job search techniques.

Student Learning Outcome(s):

1. Student will compose a resume using current employment formats. 2. Student will construct a cover letter and thank you note. 3. Student will demonstrate the ability successfully interview for an employment opportunity. 4. Student will create and present power point presentations covering employment criteria.

CHEM T 142 QUANTITATIVE AND INSTRUMENTAL ANALYSIS II (5)

Lecture: 3 hours / Lab: 6 hours

This course is a continuation of Quantitative and Instrumental Analysis I. It is an advanced course covering the theory and application of modern instrumentation and techniques for the analysis of chemical systems such as fuels, waste water, food and beverages, pharmaceuticals, metal etc. It also includes interpretative spectroscopy and computer-assigned experimentation.

Student Learning Outcome(s):

1. Apply GLP and techniques. 2. Perform the synthesis of lab samples1. 3. Analyze unknown lab samples. 4. Evaluate basic flowcharts in instrumentation. 5. Evaluate and quantify the sample composition and concentration.

CHEM T 143 ORGANIC CHEMISTRY II (4) CSU

Lecture: 2 hours / Lab: 6 hours

This course addresses IUPAC nomenclature, physical and chemical properties, occurrences,synthesis,reactions and industrial applications of aldehydes and ketones, alcohols, ethers including cyclic and crown ethers,aromatic compounds, esters, amino acids, peptides, proteins,carbohydrates synthetic and natural polymers, polarimetry, IR,UV/VIS, NMR spectroscopy, and mass spectrometry.

Student Learning Outcome(s):

The student will be able to elucidate the structure of complex organic molecules by analyzing and interpreting the nmr spectrum of such compounds.

CHEM T 168 CHEMICAL QUALITY CONTROL I (2)

Lab: 6 hours

This course provides Introduction to quantitative and qualitative analysis of common anions and cations in aqueous solution.

Student Learning Outcome(s):

The student will be able to assign oxidation states to individual atoms in molecules and ions and balance redox equations under acidic and basic conditions.

CHEMISTRY

CHEM 051 FUNDAMENTALS OF CHEMISTRY I (5) UC/CSU

Lecture: 4 hours / Lab: 3 hours

Prerequisite: Mathematics 114 or Mathematics 115;

This course with laboratory emphasizes the principles of inorganic chemistry and introduces elementary organic chemistry. It is planned primarily for health science majors, as a preparatory course for higher-level chemistry courses, and for non-science majors requiring a one-semester course with laboratory. High school students may obtain both: high school and college credit for this course. UC/CSU systems limit Chem 51/ Chem 65 credit to one course.

Student Learning Outcome(s):

1. Students will apply basic chemistry concepts to solve problems using the scientific method: a) Categorize matter according to its physical state and according to its chemical composition b) Describe the atom in terms of subatomic particles and their properties c) Name inorganic compounds d) Classify, balance and perform calculations with chemical reactions e) Explain properties of matter in terms of electron configurations f) Calculate concentration of solutions g) Solve acid-base, redox, and radioactivity problems h) Recognize simple organic compounds 2. Students will perform quantitative experiments and relate experimental data to concepts learned in class.

CHEM 070 INTRODUCTORY ORGANIC AND BIOCHEMISTRY (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: Chemistry 51 or Chemistry 65 or Chemistry 101.

This course studies the structure, physical properties and nomenclature of organic compounds and biomolecules. Simple chemical reactions are introduced. Students use physical and chemical properties of compounds to characterize them in the laboratory. It is strongly recommended to take this course before taking chemistry 211. This course provides credit towards the Associate of Sciences degree in Chemistry

Student Learning Outcome(s):

1. Students are able to name small organic compounds; alkanes, alkenes, aromatics, alkynes, alcohols, aldehydes, ketones, carboxylic acids, esters, amides and amines. 2. Students will describe the structure and chemistry of small organic compounds. 3. Students will classify constitutional and optical stereoisomers. 4. Students will describe and identify the physical and chemical properties of carbohydrates, lipids, proteins and nucleic acids. 5. Students will use the physical and chemical properties of compounds to characterize them in the laboratory.

CHEM 101 GENERAL CHEMISTRY I (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Mathematics 125

In lectures students learn nomenclature, atomic structure, quantum theory, bonding theories and molecular geometry, chemical equations, stoichiometry, thermochemistry, solid, liquid and gaseous states and related forces, gas laws, solutions and colligative properties, periodic relationships, and acid base theories. Laboratory exercises are quantitative in nature and are related to the lecture topics. This is the first semester of a one-year course in chemistry intended for majors in the natural sciences (chemistry, biochemistry, biology, physics, pre-medicine), mathematics, and engineering.

Student Learning Outcome(s):

1. Students will apply fundamental principles of chemistry to identify problems, propose solutions and demonstrate concepts. a) Students will use the Scientific method to solve problems using the proper units, precision and significant figures. b) Interpret the law of conservation of mass c) Calculate molar mass of compounds and molarity of solutions d) Analyze atomic theory, subatomic particles and isotopes e) Translate a word equation into a chemical equation, balance it and use it for stoichiometric calculations. f) Analyze precipitation, acid base, oxidation-reduction, equations g) Illustrate kinetic theory of ideal gases h) Analyze the units of energy and express a thermochemical equation i) Illustrate the concept of enthalpy and enthalpy change j) Use quantum numbers to define electrons. k) Illustrate the building up principle with the periodic table relating periodic properties to electron configuration. l) Describe ionic and covalent bonds m) Use Lewis formulas to illustrate the concepts of resonance, the octet rule and formal charge n) Relate bond lengths and bond orders to bond energies. o) Describe phase diagrams and properties of the solid, liquid and gaseous states of matter and relate their properties to intermolecular forces. p) Express concentration of solutions and analyze colligative properties of solutions. 2. Students will perform experiments and draw conclusions form experimental data

CHEM 102 GENERAL CHEMISTRY II (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Chemistry 101;

In lectures students receive the theory and application of chemical kinetics, general and aqueous equilibria, thermodynamics, electrochemistry, nuclear chemistry, descriptive chemistry, structure and bonding in transition metal complexes and carbon compounds. In the laboratory students put into practice what is learned in lecture to experiments in reaction kinetics, chemical qualitative analysis, chemical and spectroscopic quantitative analysis, titration techniques, and electrochemistry.

Student Learning Outcome(s):

1. Students will describe kinetic, equilibrium and redox concepts for inorganic reactions and apply radioactivity principles a) Relate rates of reactions to mechanisms a) Evaluate rates of reactions and their dependence on concentration and temperature b) Illustrate and evaluate dynamic equilibrium and effect of catalysts the effect of catalysis c) Interpret the Arrhenius, Brosnted-Lowry and Lewis concepts of acids and bases, analyze relative strength of acids and base and relationship of molecular structure to acid strength d) Define and determine the pH of solutions d) Describe and analyze acid base equilibria e) Assess the properties of salt solution and buffer solutions and perform acid base titrations f) Define the solubility product Ksp and apply it to calculate solubility of compunds g) State the first, second and third laws of thermodynamics and perform calculations for phase transitions and chemical changes h) Relate free energy to equilibrium constants and temperature i) Balance redox reactions and illustrate their applications. j) Define radioactivity, formulate nuclear equations and evaluate nuclear stability k) Identify, describe and interpret the properties of main-group elements, transition elements and coordination compounds 2. Students will perform experiments to illustrate these concepts following safety practices in the laboratory.

CHEM 185 DIRECTED STUDY - CHEMISTRY (1) CSU

Lecture: 1 hour

This course allows students to pursue directed study in Chemistry on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The student will formulate a research project based on a specific chemistry topic, interpret the current chemical research literature on that topic and write a report about it.

CHEM 211 ORGANIC CHEMISTRY FOR SCIENCE MAJORS I (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Chemistry 102.

This is the first part of a two-course sequence presenting the structure, equilibrium, nomenclature including conformational analysis, potential energy plots, hybridization, stereochemistry, preparation and mechanisms of reactions of aliphatic hydrocarbons and related functionalites. A mechanistic approach to reactions and a focus on multi-step synthesis is emphasized throughout the course. The laboratory presents the techniques of preparation, isolation, and analysis of organic compounds employing standard and modern instrumental methods.

Student Learning Outcome(s):

1. Students will describe structure dynamics and equilibrium of organic compounds i.e Hydrocarbons, haloalkanes, alcohols, thiols, ethers, sulfides and epoxides a) Describe bonding and structure of functional groups in organic compounds. b) Name them according to the IUPAC system. c) Relate their physical properties to structure. d) Inspect conformations of alkanes and cycloalkanes. e) Describe chirality, optical activity and inspect properties of stereoisomers. f) Evaluate acidity of organic compounds and illustrate the thermochemistry of acid-base reactions. g) Describe preparation and reactions of organic compounds including mechanisms, reaction intermediates and potential energy diagrams. h) Employ multi-step organic synthesis and rethrosynthesis to produce the functional groups learned in class 2. Students will employ modern synthetic and chromatographic techniques to characterize organic synthesis.

CHEM 212 ORGANIC CHEMISTRY FOR SCIENCE MAJORS II (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Chemistry 211;

Continuing studies of organic molecules started in chemistry 211 with emphasis on carbonyl containing compounds, macromolecules and naturally occurring nitrogen and oxygen-containing compounds. Non-covalent interactions and catalyst. A mechanistic approach to reactions and a focus on multi-step synthesis is emphasized throughout the course. This course is part of the transfer sequence for careers in the physical, biological, and health sciences and a requirement for the Associate of Sciences degree in Chemistry.

Student Learning Outcome(s):

1. Students will describe structure dynamics and equilibrium of organic compounds; organolithium, organomagnesium compounds, diorganocopper reagent, carbenes, carbenoids, aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, dinenes, amines and benzene as well as other aromatic compounds. a) Describe bonding and structure of the functional groups in organic compounds. b) Name according to the IUPAC system. c) Relate physical properties to structure and inspect chirality. d) Apply spectroscopic techniques to characterize organic compounds. e) Describe preparation and reactions of organic compounds including mechanisms, reaction intermediates and potential energy diagrams. f) Examine stability of organic compounds g) Employ multi-step organic synthesis and rethrosynthesis to produce the functional groups learned in class 2. Students will employ modern synthetic, chromatographic and spectroscopic techniques to prepare and characterize them. 3. Students will perform multi-step synthesis and draw conclusions form experimental data.

CHEM 221 BIOCHEMISTRY FOR SCIENCE MAJORS (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Chemistry 211;

This course introduces structure, thermodynamics and metabolism of biologically important molecules. Students use modern techniques for purification, structure and function characterization including chromatography, gel electrophoresis, spectroscopy and molecular modeling. This course is part of the transfer sequence for careers in the physical biological and health sciences and a requirement for the Associate of Sciences degree in Chemistry: Concentration biochemistry.

Student Learning Outcome(s):

1. Describe how atoms and molecules in living cells function and interact chemically. a) Describe the relationship of thermodynamics to living systems. b) Analyze acid base titration curves and describe buffer systems. c) Interpret characteristics of amino acids in terms of structure. d) Assess how the structure of proteins determine their function. e) Describe methods of protein isolation and characterization. f) Illustrate the differences between kinetic and thermodynamic aspects of reactions. g) Employ enzyme kinetic data to determine competitive or noncompetitive inhibition. h) Discuss how allosteric enzymes are regulated. i) Differentiate between the concerted and sequential models for allosteric enzymes i) Relate events at the active site to reaction mechanisms. j) Identify and distinguish between primary structure, secondary structure, tertiary structure, and the quaternary structure of proteins. k) Describe lipids and related molecules to Illustrate models of membrane structure and their function. l) Describe levels of structure in nucleic acids and the flow of genetic information in the cell. m) Describe the techniques used in nucleic acid research. n) Discuss ways to study DNA-protein interactions and use bioinformatics to study genomics and proteonomics. o) Assess the thermodynamics of metabolism. p) Describe the overall pathway of glycolysis and the production of energy. q) Explain the formation and break down of glycogen and the production of glucose from pyruvate r) Explain the regulation of the pentose phosphate pathway. h) Assess the role of the citric acid cycle and electron transport in the production of energy. 2. Students will use techniques for the purification, characterization, structure determination and function of biomolecules.

CHEM 285 DIRECTED STUDY - CHEMISTRY (2) CSU

Lecture: 2 hours

This course allows students to pursue directed study in Chemistry on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The student will formulate a research project based on a specific chemistry topic, interpret the current chemical research literature on that topic and write a report about it.

CHEM 385 DIRECTED STUDY - CHEMISTRY (3) CSU

Lecture: 3 hours

This course allows students to pursue directed study in Chemistry on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The student will formulate a research project based on a specific chemistry topic, interpret the current chemical research literature on that topic and write a report about it.

CHILD DEVELOPMENT

CH DEV 001 CHILD GROWTH AND DEVELOPMENT (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

Student Learning Outcome(s):

1. Describe development of children from conception through adolescence in the physical, social, emotional, and cognitive domains. 2. Identify cultural, economic, political, historical contexts that impact children's development. 3. Apply knowledge of development and major theoretical frameworks to child observations.

CH DEV 002 EARLY CHILDHOOD: PRINCIPLES AND PRACTICES (3) CSU

Lecture: 3 hours

TB clearance required. Prerequisite: Child Development 1.

An examination of the underlying theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for all children. This course includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and professional identity.

Student Learning Outcome(s):

Upon Completion of this course students will be able to: 1. Compare and contrast historical and current early childhood education perspectives, theories, and program types and philosophies. 2. Describe the role of the early childhood educator, including ethical conduct, and professional pathways. 3. Identify quality in early childhood programs related to environment, curriculum, and teaching strategies.

CH DEV 007 INTRODUCTION TO CURRICULUM IN EARLY CHILDHOOD EDUCATION (3) CSU

Lecture: 3 hours

Prerequisites: Child Development 1; Child Development 2.

This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and engagement for all young children. This course provides strategies for developmentally-appropriate practice based on observation and assessments across the curriculum, including 1) academic content areas, 2) play, art, and creativity, and 3) development of social-emotional, communication, and cognitive skills.

Student Learning Outcome(s):

Upon completion of this course students will be able to: 1. Differentiate between various curriculum models, approaches, environments, and standards for early learning including indicators of quality. 2. Identify the teacher's role in early childhood programs, including planning, implementing and evaluating activities and environments. 3. Select and apply developmentally appropriate teaching strategies and theories to curriculum and environment design.

CH DEV 008 CURRICULUM IN EARLY CHILDHOOD EDUCATION (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1; Child Development 2 and Child Development 7.

Students design and evaluate developmentally appropriate curriculum and environments for young children from birth to age 8. Based on the value of play, students demonstrate the teacher's role in applying theory to practice in supporting children's concept development. Preparing and assessing the implementation of curriculum will include but not be limited to: language and literacy, social studies, art and creativity, music and rhythm, perceptual motor development, mathematics, natural and physical sciences.

Student Learning Outcome(s):

Demonstrate and design the active implementation of an integrated curriculum.

CH DEV 010 HEALTH, SAFETY AND NUTRITION (3) CSU

Lecture: 3 hours

Advisory: English 21.

Students are required to participate in and pass the American Red Cross Infant/Child CPR and First Aid Course.

This course introduces the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health, safety, and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. This course also focuses on integrating the concepts into everyday planning and program development for all children. Students are required to participate in and pass the American Red Cross Infant/Child CPR and First Aid course.

Student Learning Outcome(s):

Upon Completion of the Course students will be able to: 1. Describe strategies used to promote health, safety and nutrition of children and adults in early childhood settings. 2. Evaluate environments for both positive and negative impacts on children's health and safety. 3. Identify regulations, standards, policies, and procedures related to health, safety and nutrition in early childhood settings.

CH DEV 011 CHILD, FAMILY AND COMMUNITY (3) CSU

Lecture: 3 hours

Advisory: English 21.

An examination of the developing child in a societal context focusing on the interrelationship of family, school and community and emphasizes historical and socio-cultural factors. The processes of socialization and identity development will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower families.

Student Learning Outcome(s):

Upon Completion of this course students will be able to: 1. Describe socialization of the child focusing on the interrelationship of family, school, and community. 2. Identify the educational, political an socioeconomic impacts on children and families. 3. Describe strategies that empower families and encourage family involvement in children's development.

CH DEV 022 PRACTICUM IN CHILD DEVELOPMENT I (4) CSU

Lecture: 2 hours / Lab: 6 hours

Prerequisite: Child Development 1; and Child Development 2 and Child Development 7 and Child Development 11.

Students are required to complete 108 hours at an approved field site. Must be available between 8:00 a.m. and noon.

In this course the student will practice and demonstrate developmentally appropriate early childhood program planning and teaching competencies under the supervision of ECE/CD faculty and other qualified early education professionals. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment; and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children.

Student Learning Outcome(s):

Upon completion of this course students will be able to: 1. Apply a variety of effective approaches, strategies and techniques for teaching in an early childhood classroom. 2. Design, implement and evaluate curriculum and environments based on observation and assessment of young children. 3. Analyze personal teaching experiences to guide and inform practice.

CH DEV 023 PRACTICUM IN CHILD DEVELOPMENT II (4) CSU

Lecture: 2 hours / Lab: 6 hours

Prerequisite: Child Development 22. Students are required to complete 108 hours at an approved field site. Must be available between 8:00 a.m. and noon.

This course provides an advanced practicum experience. Students apply assessment strategies to plan, implement, and evaluate developmentally appropriate activities. Techniques that promote partnerships between teachers and families are developed. Educational philosophy statement, a resume and a professional portfolio are created. State law requires a TB test (Mantoux Test) or chest x-ray, Dtap, MMR and flu vaccinations. In addition to the seminar class, students are required to complete a minimum of 108 hours at an APPROVED field site.

Student Learning Outcome(s):

1. Design and implement curriculum activities for preschool age children.
2. Critically assess one's own teaching experience to guide and inform practice.

CH DEV 030 INFANT/TODDLER DEVELOPMENT (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1.

This course provides an in-depth study of cognitive/language, social/emotional and perceptual/motor developmental domains and milestones of infants from birth to 36 months. As well as, an overview of major theories including attachment, brain development, the value of play, early intervention and relationship-based care in the context of family systems: culture, home language, and traditions. Students will be introduced to the laws and regulations of safe healthy environments and the rights of all infants and toddlers including children at-risk for disabilities. Class instruction includes objective observations of infants and toddlers in diverse settings.

Student Learning Outcome(s):

Recognize major developmental milestones in infants and toddlers and explain the stages and characteristics of infants/toddlers' physical, cognitive and social and emotional development.

CH DEV 031 INFANT/TODDLER CARE AND EDUCATION (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1 and Child Development 30.

This course implements the principles of inclusive, respectful care-giving for infants and toddlers within a variety of program designs, routines and schedules. Topics cover typical and atypical development, principles of early intervention, design, implementation and assessment of developmentally appropriate curriculum and environment; health, safety and licensing issues. Coursework includes documentation of learning through observation, guidance towards self-regulation, family communications and community resources. Current research within the context of home language, culture and traditions will be addressed.

Student Learning Outcome(s):

Students will evaluate principles of respectful care focusing on routines and schedules.

CH DEV 034 OBSERVING AND RECORDING CHILDREN'S BEHAVIOR (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1.

This course focuses on the appropriate use of a variety of assessment and observation strategies to document child development, growth, behaviors, play and learning, and to join with families and professionals in promoting children's success. Recording strategies, rating systems, portfolios, and multiple assessment tools are explored. Child observations will be conducted and analyzed.

Student Learning Outcome(s):

Upon completion of this course students will be able to: 1. Evaluate the characteristics, strengths, limitations, and applications of contemporary observation and assessment tools. 2. Complete systematic observations and assessment using a variety of methods of data collection to inform environment design, interactions and curriculum. 3. Discuss the role of partnership with families and other professionals in utilizing interpretations of observational assessment data.

CH DEV 036 LITERATURE FOR EARLY CHILDHOOD (1) CSU

Lecture: 1 hour

A survey of literature suited for children up to 8 years old with emphasis on techniques for selection and presentation. Storytelling, acquaintance with literature particularly suited for young children, and the early development of desirable attitudes toward reading will be stressed. Recommended for early childhood and primary grade teachers and parents.

Student Learning Outcome(s):

1. Students will select a developmentally appropriate book and technique for a young child that go well together.

CH DEV 037 LITERATURE FOR SCHOOL AGE CHILDREN (2) CSU

Lecture: 2 hours

Survey of literature suitable for children in school settings, beginning with Pre-Kindergarten. Emphasis given to selection, preparation and presentation of literature utilizing a variety of genres and as well as methods of presentation. Recommended for early childhood and primary school teachers and parents.

Student Learning Outcome(s):

1. Students will be able to differentiate and list various literary works by genres and appropriate age group of school age children.

CH DEV 038 ADMINISTRATION & SUPERVISION OF EARLY CHILDHOOD PROGRAMS I (3) CSU

Lecture: 3 hours

Prerequisites: Child Development 1; Child Development 2; Child Development 10; Child Development 11.

This course examines administrative principles and practices for Early Childhood Programs. Topics covered include: licensing regulations,leadership skills, budget preparation and analysis, personnel management,parent involvement programs and community resources. Professionalism and quality standard are emphasized. Partially fulfills licensing requirement for the director.

Student Learning Outcome(s):

Students will incorporate licensing guidelines to design an early childhood space that meets the needs of children, staff members and parents within a reasonable budget.

CH DEV 039 ADMINISTRATION II: PERSONNEL AND LEADERSHIP IN EARLY CHILDHOOD EDUCATION (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 38.

Effective strategies for personnel management and leadership in early care and education settings. Includes legal and ethical responsibilities, supervision techniques, professional development, and reflective practices for a diverse and inclusive early care and education program.

Student Learning Outcome(s):

1. Demonstrate effective practices for managing and leading staff and administering early care and education program. 2. Compose a grant proposal that illustrates professional relationships and facilitates collaboration and communication among colleagues, families and stakeholders. 3. Create ongoing professional development plans based on evaluation of staff and administrator.

CH DEV 042 TEACHING IN A DIVERSE SOCIETY (3) CSU

Lecture: 3 hours

This course will examine the development of social identities in diverse societies including theoretical and practical implications affecting young children, families, programs, teaching, education and schooling. Various classroom strategies will be explored emphasizing culturally relevant and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Course includes examination on issues related to social identity, stereotypes and bias, social and educational access, media and schooling. Course also involves self-reflection of one's own understanding of educational principles in integrating anti-goals in order to better inform teaching practices and/or program development.

Student Learning Outcome(s):

Upon Completion o this course students will be able to: 1. Examine the impact of various societal influences on the development of children's social identity. 2. Evaluate the ways that developmentally appropriate, inclusive and anti-bias approaches support learning and development. 3. Evaluate the influence of teachers' experiences on teaching approaches and interactions with children and families.

CH DEV 044 EARLY INTERVENTION FOR CHILDREN WITH SPECIAL NEEDS (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1 & 30

This course is designed for students interested in specializing in or working with young children with special needs and their families. Instruction focuses on accommodating and adapting the physical environment, instructional strategies and curriculum to meet the needs of differently able children from birth through preschool.

Student Learning Outcome(s):

Students will recognize the needs of a family with a young exceptional child and propose an intervention approach that is appropriate for their needs.

CH DEV 045 PROGRAMS FOR CHILDREN WITH SPECIAL NEEDS (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1 and 2.

This course is an overview of programs providing special education services for children with special needs focusing on preschool through school age. It will include a study of various programs, legislation, characteristics of exceptionalities and educational implications. Observation in schools will be required.

Student Learning Outcome(s):

Students will assess characteristics of a quality special education class/ program and services necessary for children with special needs.

CH DEV 046 SCHOOL AGE PROGRAMS I (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 1.

The students will be introduced to the care of school age children. This course is designed for those currently working, or planning to work in before and after school child care. Students will develop age-appropriate curriculum, learn how to support the family and make use of community resources.

Student Learning Outcome(s):

1. Students will compare diverse models of school age care to assess how programs meet the needs of school age children. 2. They will apply their understanding of developmental needs by preparing curriculum activities to suport children's growth and development.

CH DEV 047 SCHOOL AGE PROGRAMS II (3) CSU

Lecture: 3 hours

Prerequisite: Child Development 46.

Introduction to before and after school age programs. Topics covered are guidance of child behavior, the child in context of the family, community and administration of programs. Hiring and supervision of staff, working with parents and marketing and advertising the school age program will be also covered.

Student Learning Outcome(s):

Students will learn how to evaluate a quality school age program.

CH DEV 048 POSITIVE GUIDANCE IN EARLY CHILDHOOD SETTINGS (3) CSU

Lecture: 3 hour(s)

Prerequisite: Child Development 001

This course is an exploration of developmentally appropriate management techniques for children in early childhood settings. Emphasis is on developing culturally sensitive individualized plans for behavior management of children with traditional and special needs.

Student Learning Outcome(s):

Students will be able to develop an effective behavior management plan.

CH DEV 055 HOME VISITATION PROGRAMS (3) CSU

Lecture: 3 hour(s)

Prerequisite: Child Development 044

Examines the emerging field of home visitation as it relates to programs offering in home support and intervention services. Prepares the student to conduct home visitations in a variety of contexts including early intervention, family support systems, gerontology and publicly funded early childhood programs.

Student Learning Outcome(s):

Analyze the role of the home visitor within the diverse scope of programs offering this service to children, families and the elderly.

CH DEV 060 INTRODUCTION TO FAMILY CHILD CARE I (1) CSU

Lecture: 1 hour

Designed for family childcare providers and persons entering the profession. Focuses on high quality physical environments in a home setting, age-appropriate activities for mixed age groups, communication with parents, and community resources. Includes review of the Family Child Care Environmental Rating Scale, state licensing regulations and policies and procedures necessary to operate a home family childcare business.

Student Learning Outcome(s):

1 Students will be able to formulate a parent handbook with a philosophy, and forms relating to their small business that will reflect both Developmentally Appropriate Practices in Early Childhood Education and support successful entrepreneurship.

CH DEV 063 CREATIVE CURRICULUM IN A FAMILY CHILDCARE SETTING (2) CSU

Lecture: 2 hours

Designed for family childcare providers and persons entering the profession. Emphasis is on play and creative experiences in the home setting for children. Course includes dramatic play, music, art, and cooking.

Student Learning Outcome(s):

1 Students will be able to design and create a weekly activity plan and an activity for mixed ages of children in one curricular area.

CH DEV 065 ADULT SUPERVISION/EARLY CHILDHOOD MENTORING (2) CSU

Lecture: 2 hours

Corequisite: Child Development 23 or Child Development 39.

The class focuses on the principles and practices of supervision and evaluation of staff in Early Childhood Programs. Emphasis is placed on the role of experienced teachers who mentor or supervise new teachers and student teachers. This meets supervision requirement for the Child Development Permit.

Student Learning Outcome(s):

Students will be able to demonstrate ability to evaluate a preschool classroom based on developmentally appropriate guidelines and to facilitate positive interaction between adults in the center/classroom environment.

CH DEV 941 COOPERATIVE EDUCATION - CHILD DEVELOPMENT (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/occupational goals of the student.

COMMUNICATION STUDIES

COMM 101 PUBLIC SPEAKING (3) UC/CSU

Lecture: 3 hours

Advisory: English 028

This introductory speech course emphasizes techniques of public speaking including writing and delivery of speeches to inform and persuade. Students refine critical thinking, research, organizational, and time management skills. They learn to adapt a message to any audience and occasion

Student Learning Outcome(s):

1. 1. Student will draft and deliver in front of a live audience and well-organized speech: 2. Student will deliver both informative and persuasive speeches: 3. Students will identify and evaluate evidence in support of claims used in both informative and persuasive speeches.

COMMUNITY PLANNING/ ECONOMIC DEVELOPMENT

COMPLAN 001 INTRODUCTION TO COMMUNITY ECONOMIC DEVELOPMENT (3) CSU

Lecture: 3 hours

This course is an introduction to the theory, history, and practice of community development. The course covers: neighborhood development and community building strategies; land use and real estate development; and business and labor force development strategies used to revitalize urban neighborhoods. Students will produce a neighborhood plan using e-planning tools including: asset maps, a housing plan and a workforce development plan. The course is also offered as three modules that run concurrently with the full course.

Student Learning Outcome(s):

Students will create a neighborhood revitalization plan that will include a needs assessment, a community engagement process and economic development strategy to increase jobs, income and assets.

COMPLAN 002 INTRODUCTION TO COMMUNITY ORGANIZING (3) CSU

Lecture: 3 hours

This course focuses on community organizing efforts by people working together to improve their neighborhoods and cities. The course prepares students to become professional organizers, community developers, and effective citizen leaders. The course explores the history, theory, and different approaches to grassroots community organizing. Students will analyze the current context for organizing, the impact of social change theories, organizing strategies, tools and new methodologies used in community organizing.

Student Learning Outcome(s):

Students will develop a community organizing plan to address critical conditions in a low income community.

COMPLAN 003 AFFORDABLE HOUSING DEVELOPMENT (3) CSU

Lecture: 3 hours

Develop real estate development skills needed to build multi-family affordable housing projects. Through project-based learning, you will recognize the stages of the development process; analyze the feasibility of a project, including neighborhood, site and financial analyses; and identify sources and uses of financing and project management, marketing and operations.

Student Learning Outcome(s):

Students will formulate an affordable housing plan targeting problems faced by low-income residents of the city.

COMPLAN 005 SECTOR DEVELOPMENT AND EMPLOYMENT STRATEGIES (3) CSU

Lecture: 3 hours

This course will focus on how a strong understanding of industry sectors can be linked to viable job creation and employment strategies. Particular attention will be devoted to sector initiatives and training programs in the greater Los Angeles region.

Student Learning Outcome(s):

Students will examine and evaluate a workforce development plan in the community economic development sector.

COMPLAN 006 MANAGING NON-PROFIT AND PUBLIC ORGANIZATIONS (3) CSU

Lecture: 3 hours

This course deals with the organizational opportunities and challenges faced by directors and managers of non-profit and public service organizations. Students will gain an understanding of the roles and accountabilities of non-profit directors and managers and learn to work effectively within such organizations by recognizing and applying knowledge about different governance structures and the functional domains common to most public benefit organizations including strategic and operational planning, fund development and community engagement.

Student Learning Outcome(s):

Students will create a non profit program plan to include:analysis oc immunity resources, fundamental actions, multiple strategies in forming nonprofit programs

COMPLAN 007 CONTEMPORARY ISSUES AND STRATEGIES IN POPULAR EDUCATION AND ORGANIZING (3) CSU

Lecture: 3 hours

This course will explore current issues of land use, housing, workers' rights, environmental justice and the fight for jobs in Los Angeles by utilizing field research and direct interaction with local non-profit organizations working to make change in these sectors.

Student Learning Outcome(s):

Students will examine contemporary social justice issues and campaigns in order to formulate arguments to support the need for reform.

COMPLAN 009 COMMERCIAL REAL ESTATE DEVELOPMENT (3) CSU

Lecture: 3 hours

This course will teach students how to develop commercial real estate projects with a specific focus on retail and inner city development. The introductory course builds skills and competencies in land development, developing financing, marketing and leasing of small and mid size commercial projects. Through case studies, simulations and project-based learning, students recognize development strategies and tools used by public, private and non-profit organizations.

Student Learning Outcome(s):

Students will assess the commercial real estate needs of a low-income community and develop a commercial development strategy designed to stimulate the local economy and physically revitalize a designed targeted community.

COMPLAN 010 COMPREHENSIVE COMMUNITY VIOLENCE PREVENTION (3) CSU

Lecture: 3 hours

The course provides students an overview of the larger issues of violence prevention and its impact on community development. The course prepares students for work in the field of community violence prevention.

Student Learning Outcome(s):

Students will create a community violence prevention plan to address the root causes of community violence through a community development lens.

COMPLAN 011 PROFESSIONAL DEVELOPMENT SKILLS/ ISSUES IN COMMUNITY DEV (3) CSU

Lecture: 3 hours

Students will learn to identify and understand a variety of personal, professional development strategies, writing and communication skills and industry networks/language used by professionals in community development corporations, community-organizing networks and community-based non-profit organizations.

Student Learning Outcome(s):

Students will develop a professional development plan that supports their employment in the Community and Economic Development field.

COMPLAN 012 FUNDRAISING BASICS FOR NONPROFIT ORGANIZATIONS (1) CSU

Lecture: 1 hour

This course provides students with a basic understanding of fundraising and grant development concepts, strategies and tools applicable to non-profit organizations.

Student Learning Outcome(s):

Students will formulate a fund development plan that is tailored to the needs of an organization.

COMPLAN 015 INTRODUCTION TO THE COMMUNITY DEVELOPMENT INDUSTRY & CAREERS (1) CSU

Lecture: 1 hour

Learn about the field of community development by exploring historical and current trends. Explore the range and scope of organizations working in the field, leadership, issues, community served and approaches to community based solutions.

Student Learning Outcome(s):

Students will describe a career pathway in the community development through a career development plan.

COMPLAN 017 LEADERSHIP DEVELOPMENT AND SKILL BUILDING (3)

Lecture: 3 hours

In this course students will learn to define leadership models in which all members of society play pivotal roles in change. Students will demonstrate multicultural appreciation and have the confidence to see themselves as community change agents.

Student Learning Outcome(s):

Students will be able to develop a personal leadership development plan for their future.

COMPLAN 022 SOCIAL MEDIA, FOR ORGANIZING AND CIVIC ENGAGEMENT (2) CSU

Lecture: 2 hours

This course will cover effective media strategies for community organizing campaigns, effective messaging that reflects the values of the community and an introduction to using media tools such as social media, self-generated radio and press events.

Student Learning Outcome(s):

Students will compose a communications strategy plan that utilizes digital and social media in a political or community organizing campaign.

COMPLAN 030 MARKET RESEARCH TOOLS FOR THE ECONOMIC DEVELOPMENT PROCESS (3) CSU

Lecture: 3 hours

This course is specifically designed for professionals in community economic development organizations that provide technical assistance to small businesses. This hands-on course will provide professionals with the tools needed to assess client needs and develop and implement effective market resarch and marketing plans for small buseinsses. This is a hybrid course, utilizing a combination of in-class and on-line/web-based instruction. The content of this course is geared towards individuals with 2-3 years of professional experience and whose organizations provide assistance to small businesses.

Student Learning Outcome(s):

Students will be able to develop a community engagement marketing plan for small businesses to reach the community.

COMPLAN 032 COMMUNITY BUILDING PRINCIPLES AND STRATEGIES (1) CSU

Lecture: 1 hour

This course provides students with a basic understanding of community building principles, strategies and tools for community and economic development.

Student Learning Outcome(s):

Students will be able to formulate a plan based on their understanding of Community Building principles, steps in the Community Building process, Interpret community needs and assets, analyze social issues via multiple methods, apply social analysis to decisionmaking methods to create a community building plan.

COMPLAN 033 COMMUNITY ENGAGEMENT PRINCIPLES AND STRATEGIES (1)

Lecture: 1 hour

This course provides students with a basic understanding of community engagement principles, strategies and tools for community and economic development.

Student Learning Outcome(s):

Students will be able to formulate a community engagement plan.

COMPLAN 035 HEALTH LEADERSHIP AND COMMUNITY DEVELOPMENT (3) CSU

Lecture: 3 hours

This course provides students with a basic understanding of the health disparities and conditions affecting low-income, inner-city communities and the leadership skills required to improve them.

Student Learning Outcome(s):

Students will be able to a Formulate plan to improve public health systems that affect health determinants of low income inner city neighborhoods.

COMPLAN 036 INTRODUCTION TO COMMUNITY BASED RESEARCH AND ORGANIZING METHODS (3) CSU

Lecture: 3 hours

This course provides students with a basic understanding of community-based research principles, tools and strategies. The course is taught in a training/workshop format where students will work in small groups to apply classroom lessons to investigate local community issues, such as transportation, environment and economic health. Topics covered include participatory action research theory and methodology, history of Los Angeles, mobility issues in urban settings, sources and impacts of pollution and income and wealth inequality.

Student Learning Outcome(s):

To conduct a participatory action research survey targeting a specific community.

COMPLAN 038 DEVELOPING SOCIAL NETWORKS FOR COMMUNITY BUILDING (1) CSU

Lecture: 1 hour

The course examines the value of developing social networks in the process of community building. The course examines strategies for collaboration, collective problem solving, identification of neighborhood assets and developing support mechanisms across sectors of development.

Student Learning Outcome(s):

Students will formulate a digital relationship building plan.

COMPLAN 040 NON-PROFIT PROGRAM DESIGN AND DEVELOPMENT (2) CSU

Lecture: 2 hours

This course guides students to design and develop non-profit programs that are highly integrated into a non-profit service organization's mission, vision and values. Topics include identifying conditions, research and problem analysis, program goal development, outcome creation, implementation strategies and evaluation of impact..

Student Learning Outcome(s):

Students will be able to create a non-profit logic model to serve community serving programs targeting problems facing low-income residents.

COMPLAN 042 SUSTAINING SOCIAL JUSTICE CAMPAIGN VICTORIES AND ORGANIZATION (1)

Lecture: 1 hour

This course will introduce students to current models for sustaining a social justice organization including evaluating the non-profit, social entrepreneurship and self-help models to support community revitalization and empowerment.

Student Learning Outcome(s):

1. Identify and compare three different types of social movement organizational models. 2. Compare and contrast the opportunities, challenges and successes of these models. 3. Identify funding and sustainability opportunities for various organizations fitting the various models.

COMPLAN 065 COMMUNITY-BASED HEALTH POLICY ADVOCACY (3) CSU

Lecture: 3 hours

This course will provide a foundational basis for skills to engage the community in grassroots health promotion and policy advocacy.

Student Learning Outcome(s):

Students will formulate a Policy Analysis Memo that addresses a social determinant of health.

COMPLAN 100 HISTORY OF COMMUNITY DEVELOPMENT IN LOS ANGELES (2) CSU

Lecture: 2 hours

History of Community Development in Los Angeles explores the historic development of Los Angeles from the early settlements to the rise of industrialization, neighborhood development, demographic transitions and the intersection between race, class, politics and power.

Student Learning Outcome(s):

Students will compose an equity solution and plan that currently affects a Los Angeles neighborhood.

COMPLAN 101 HISTORY OF SOCIAL JUSTICE MOVEMENT THEORY, IDEOLOGY AND PRACTICE IN AMERICA (2) CSU

Lecture: 2 hours

The course provides students with a historical foundation of social movements based in the United States. Students will analyze the guiding principles and work of key organizations that have fought for justice along intersectional issues of race, class and gender and will apply theories to projects that seek to solve current day problems.

Student Learning Outcome(s):

Students will compose an equity solution that addresses a current social justice issue that incorporates equity building concepts.

COMPLAN 102 CULTIVATING CONSCIOUSNESS: REFLECTION OF THE SELF IN COMMUNITY AS AN ORGANIZER (1)

Lecture: 1 hour

Community organizers will explore issues of race, class and privilege and its impact on the self and communities. Students will learn skills and knowledge related to group dynamics, sustainability, self analysis and macro and micro issues related to the role of community organizers.

Student Learning Outcome(s):

Students will identify an indicator of racism and create a policy recommendation for addressing inequities in communities of color.

COMPLAN 105 INTERNATIONAL MODELS OF COMMUNITY ORGANIZING (1)

Lecture: 1 hour

Students will learn about international models of community organizing and the connection between local and international issues.

Student Learning Outcome(s):

1. Understand the impact of globalization and neoliberalism on local and national systems and economies. 2. Illustrate the contribution of organizing efforts and the United Nations in rebuilding communities all over the world. 3. Distinguish between strategies, tools and systems in international organizing efforts.

COMPLAN 106 ELECTIONS, COMMUNITY, POWER AND SYSTEMS REFORM IN COMMUNITY DEVELOPMENT (1)

Lecture: 1 hour

Students will learn about local and national efforts for elections and systems reform for social change including evaluating successful electoral campaigns

Student Learning Outcome(s):

1. Compare strengths and challenges in utilizing electoral and system reform campaigns especially in the state of California. 2. Analyze history of electoral campaigns and their impact on positive social change. 3. Identify key components of developing a successful movement-building electoral campaign.

COMPLAN 200 STRATEGIC PLANNING & MANAGEMENT TRAINING FOR ECONOMIC DEVELOPMENT (3)

Lecture: 3 hours

This course is focused on the fundamentals of strategic and business planning for organizational staff and will provide tools and opportunities to practice for the organizations.

Student Learning Outcome(s):

Students will formulate an organizational strategic plan to address critical conditions in a low income community.

COMPLAN 201 FINANCIAL MANAGEMENT ASSISTANCE FOR SMALL BUSINESS FOR ECONOMIC DEVELOPMENT PROFESSIONAL (3)

Lecture: 3 hours

This course is focused on the fundamentals of financial management for nonprofit staff and will provide tools and opportunities to practice for the organizations.

Student Learning Outcome(s):

Students will formulate a financial management plan that will sustain a nonprofit organization.

COMPLAN 202 EFFECTIVE HUMAN RESOURCES MANAGEMENT FOR SMALL BUSINESS ASSISTANCE (3)

Lecture: 3 hours

This course examines the evolving human resources function within today's nonprofit organizations.

Student Learning Outcome(s):

Students will formulate a human resources management plan.

COMPLAN 203 MARKETING AND COMMUNICATIONS PLANNING FOR COMMUNITY ORGANIZATIONS (3) CSU

Lecture: 3 hours

Fundamentals of communications and marketing planning for nonprofit organizational staff. Course will provide tools and opportunities to practice.

Student Learning Outcome(s):

Students will formulate a one year PR plan for a nonprofit organization.

COMPUTER APPLICATIONS OFFICE TECHNOLOGIES

CAOT 001 COMPUTER KEYBOARDING AND DOCUMENT APPLICATIONS I (3) CSU

Lecture: 2 hours / Lab: 3 hours

Fundamentals of keyboarding and letter writing.

Student Learning Outcome(s):

1. Students will be able to touch type the keyboard with speed and accuracy at 25-40 words per minute. 2. Students will create simple reports and block style letters.

CAOT 002 COMPUTER KEYBOARDING AND DOCUMENT APPLICATIONS II (3) CSU

Lecture: 2 hours / Lab: 3 hours

Increase computer keyboarding skills and improve business and legal document development in MS Word.

Student Learning Outcome(s):

1. Students will create a formal report using advanced word-processing commands and features. 2. Students are expected to type a minimum of 50 words-per-minute (wpm).

CAOT 007 MACHINE TRANSCRIPTION (3)

Lecture: 2 hours / Lab: 2 hours

Advisory: CAOT 1 & 31

This course is designed to provide instruction in the use of modern language of dictating and transcribing professional documents using current transcribing software. Emphasis is placed on using effective dictation and transcription techniques when composing original documents, employing acceptable formats, and transcribing business correspondence and reports in final form. Students will review English fundamentals, strengthen keyboarding and proofreading skills.

Student Learning Outcome(s):

1. Students will transcribe "Block Letter" and Modified Block letters with mixed punctuations, demonstrating correct transcription techniques. 2. Students will transcribe financial, bank, and insurance forms through transcribing and dictation. 3. Students will transcribe a two-page business letter and address an envelope from a taped dictation.

CAOT 020 MEDICAL OFFICE PROCEDURES (5) CSU

Lecture: 4 hours / Lab: 2 hours

Student will become proficient in keying medical correspondence, case histories, insurance forms, and reports. Telephone techniques, medical record keeping, filing and Internet activities are taught. Students will learn to perform the duties of the administrative medical assistant under realistic conditions requiring them to organize work and set priorities.

Student Learning Outcome(s):

When provided with a medical office scenario, the student will assess the situation and describe what actions in writing they would take to serve the client(s) and evaluate the effectiveness of the services provided.

CAOT 030 OFFICE PROCEDURES (3) CSU

Lecture: 2 hours / Lab: 2 hours

Advisory: CAOT 1

This course provides skills needed to meet the challenges of the constantly changing workforce. It emphasizes the importance of developing an effective professional image, appropriate self-management, and the importance of working successfully in teams. It stresses development of essential administrative professional skills including written and verbal communications, global communications, paper and electronic records management, personal finance and investment strategies, event planning, travel arrangements, workplace mail and copying, and job search and advancement. Emphasis is also placed on the development of soft skills such as etiquette, self-management, teamwork, ethics, leadership, and customer service.

Student Learning Outcome(s):

1. Students will apply knowledge in office procedures and techniques for entry level positions in business offices. 2. Students will write an indirect letter, assuming the role of an administrative assistant in a mock business.

CAOT 031 BUSINESS ENGLISH (3) CSU

Lecture: 3 hours

This course provides language fundamentals needed to communicate effectively in today's workplace. These fundamentals include grammar, usage, punctuation, capitalization, number style, proofreading, and spelling. It develops business vocabulary as well as English skills necessary for business industry. Because business people must express their ideas clearly and correctly, language fundamentals are critical.

Student Learning Outcome(s):

1. Students will construct a well-formatted business letter utilizing standard English grammar and punctuation. 2. Student will create a procedures manual as a class project.

CAOT 033 RECORDS MANAGEMENT AND FILING (2)

Lecture: 1 hour / Lab: 2 hours

This course will provide an overview of the field of records management; alphabetic, subject, numeric, and geographic storage and retrieval systems; records management technology; and records control. Class includes records management theory using Microsoft Access.

Student Learning Outcome(s):

Complete a Records Management Simulation showing competence in alphabetic, subject consecutive numeric, terminal-digit numeric, and geographic filing systems.

CAOT 034 BUSINESS TERMINOLOGY (2) CSU

Lecture: 2 hours

The course is designed to develop spelling ability and vocabulary enrichment with application for business use. It develops an understanding of common business and technology terms, as well as emphasizing vocabulary development and expansion.

Student Learning Outcome(s):

Students will compose and edit text that correctly incorporate common business and technology terms as well as new general vocabulary.

CAOT 035 CONCEPTS IN INFORMATION SYSTEMS (3) UC/CSU

Lecture: 3 hours

This course provides an introduction to the basic concepts of microcomputers and information systems with the notion of understanding computer components. Understanding computer components includes application software, system software, input/output devices, communications, files and databases.

Student Learning Outcome(s):

1. Students will understand how to communicate by using web resources. 2. Students will understand how to operate system and application software.

CAOT 044 MEDICAL BILLING AND CODING I (3) CSU

Formerly: Medical Terminology (2)
Lecture: 3 hours

Students will learn the practice of coding diagnoses and procedures from case studies and sample reports. Students will research local coverage determinations, process general insurance billing claims, and learn the Medicare eligibility guidelines.

Student Learning Outcome(s):

1. Students will assign CPT codes to procedures and services projects.

CAOT 046 MEDICAL TRANSCRIPTION (3)

Lecture: 2 hours / Lab: 2 hours

Advisory: CAOT 2, 31, & 44

Students will transcribe medical office and hospital dictation using transcribing software. Students will develops appropriate formats for transcribing medical reports; and specialized rules of grammar and punctuation peculiar to dictated medical reports. Students will be welled versed in correct transcription procedures and in transcribing medical materials. Production is the beginning of recorded material stressing terminology from medical reports, diagnoses, and case histories. Correct spelling of medical terms are critical in learning this course.

Student Learning Outcome(s):

1. Students will recognize medical Latin root terms and phrases. 2. Students will transcribe medical reports.

CAOT 067 MICROSOFT OUTLOOK FOR THE OFFICE (2) CSU

Lecture: 1 hour(s) / Lab: 2 hours

Students learn to use the features of Microsoft Outlook in the business setting. This course includes sending and receiving e-mail messages as well as managing contacts and mail. It allows students to learn and use (1) Outlook's Calendar for scheduling appointments, planning meetings, and scheduling events; (2) Outlook's Tasks feature; and (3) Outlook's Notes feature.

Student Learning Outcome(s):

1. Use the E-mail features of Microsoft Outlook to write and manage e-mail, create and edit the Address Book, and use an AutoSignature hyperlink. 2. Schedule appointments and group meetings with Outlook Calendar; evaluate and update the calendar to include recurring, changed, or deleted items or tasks. 3.. Set up, organize, and edit the Tasks folder.

CAOT 082 MICROCOMPUTER SOFTWARE SURVEY IN THE OFFICE (3) CSU

Lecture: 2 hours / Lab: 3 hours

This course is an introduction to office information systems and computer literacy by incorporating group discussions, research, and hands-on-experience in a variety of Windows applications. The software used in this course includes word processing, spreadsheets, databases, communications, graphics and operating systems, scheduling, and the Internet.

Student Learning Outcome(s):

1. Students will be able to create a resume with associated cover letter, envelope, and a web page with frames and themes. 2. Students will be able to design and modify the structure of, create and add records to an Access database, and then to use it to generate reports. 3. Students will be able to integrate Word, PowerPoint, Excel and Access into a real business model.

CAOT 084 MICROCOMPUTER OFFICE APPLICATIONS: WORD PROCESSING (3) CSU

Lecture: 2 hours / Lab: 3 hours

Advisory: CAOT 1.

This course provides instructions on Microsoft Word applications using introductory, intermediate, and advanced commands to create, format, edit, save, and print documents including letters, research papers, title papers, tables, reports, and merge documents. The application also utilizes publishing features that includes creating newsletters, brochures, fliers, and resumes on the web and through cloud computing.

Student Learning Outcome(s):

1. Students will demonstrate knowledge of word-processing terminology and the comprehensive capabilities of Microsoft Word. 2. Students will integrate word and excel by linking a excel worksheet to a word document using charts and edit link objects.

CAOT 085 MICROCOMPUTER OFFICE APPLICATIONS: SPREADSHEET (3) CSU

Lecture: 1 hour / Lab: 4 hours

This course prepares students to apply practical business analysis concepts and techniques using the Microsoft Excel spreadsheet. Students learn to create professional and powerful worksheets with emphasis of What-if-analysis and business functions; complex problem-solving; auditing, scenario manager; data validation; importing external data; Web queries; creating templates; consolidating workbooks and/or worksheets; goal seeking; and integration features. The business applications include those used by office employees, accountants, management, and marketing personnel.

Student Learning Outcome(s):

1. Students will calculate formulas on large worksheets. 2. Students will create, sort, and query worksheet databases using computed, compound, and advanced criteria.

CAOT 086 MICROCOMPUTER OFFICE APPLICATIONS: DATABASE (3) CSU

Lecture: 2 hours / Lab: 3 hours

Advisory: CAOT 082.

This course provides instructions on office database applications using a relational database program, such as, Microsoft Access. Covers records design, file creation and maintenance, and data manipulation and presentation. Emphasizes office applications such as records for personnel, inventory, and sales. Integrates a word processing program to produce automated mailings.

Student Learning Outcome(s):

1. Students will create working databases using Access 2013 professional use. 2. Students will produce queries by setting criteria in professional databases. 3. Student acquire the ability to maintain databases for professional use.

CAOT 088 MICROCOMPUTER OFFICE APPLICATIONS: DESKTOP PUBLISHING (3) CSU

Lecture: 2 hours / Lab: 3 hours

This course provides hands-on training using a personal computer, a printer and desktop publishing software. Includes producing camera ready, near typeset quality publications, newsletters, tri-fold brochures, business information sets, merging publication data, creating an interactive websites and linking and embedding objects.

Student Learning Outcome(s):

Students will produce a variety of professional looking business publications, such as, newsletters, flyers, brochures, business cards, letterhead, event programs, and a wide range of other business documents.

CAOT 093 LEGAL DOCUMENT PRODUCTION (2) CSU

Lecture: 2 hours

Advisory: CAOT 84.

This course prepares students to produce legal documents within the law firm setting, including briefs, memos, pleadings and all other legal documents. Recommended for paralegal students and required for legal administrative assistants.

Student Learning Outcome(s):

Students will have the ability to work with a variety of legal templates to key documents, such as, comprehensive legal documents for the courts, wills and trusts and to key many different contracts.

CAOT 098 MICROCOMPUTER OFFICE APPLICATIONS: DISCOVERING COMPUTERS: DIGITAL LITERACY (3)

Lecture: 2 hours / Lab: 3 hours

This course is designed to prepare students to operate a computer in the Windows environment. This course covers elements of Windows including: Windows operation, disk and file management, modification and customization of the Windows environment, and application of Windows accessories. This class requires both on campus and online work.

Student Learning Outcome(s):

Students will be able to demonstrate their digital literacy in reference to smart technology, network systems,security, ethics and computer privacy.

CAOT 101 HANDS-ON INTERNET (1)

Lecture: 0.5 hours / Lab: 1.5 hours

This course provides hands-on introduction to the World Wide Web and its components with emphasis on using traditional Internet services, downloading programs, sharing files, using e-mail, extending browser capabilities and increasing Web security.

Student Learning Outcome(s):

Students will complete a project to show their understanding of how the Internet is used in a technological environment.

COMPUTER INFORMATION SYSTEMS

CIS 101 INTRODUCTION TO COMPUTERS AND THEIR USES (3) CSU

Lecture: 2 hours / Lab: 2 hours

Students learn to use common productivity applications and will describe the uses, concepts, techniques and terminology of computing. Students will discover the possibilities and problems of computer use in historical, economic and social contexts. Students develop college-level and workplace skills in word processing, spreadsheets and presentation graphics in a practical lab environment, along with a conceptual view of databases and Internet methods and procedures.

Student Learning Outcome(s):

- Describe computer parts, the Internet, and differences between application and system software.
- Use Microsoft Office to create elaborate Word documents, Excel workbooks, and PowerPoint presentations.

CIS 102 COMPUTER CONCEPTS (3) CSU

Formerly: CO INFO 700 Computer Concepts

Lecture: 2 hours / Lab: 2 hours

Advisory: Mathematics 105 and English 21;

This course provides an overview of Information Technology concepts that explore the aspects of computer hardware and software, operating systems and networking, programming, and the Internet. Class lectures cover prevailing industry terminologies and the latest breakthroughs in the field of Information Technology that span the convergent branches of hardware, software, and the Internet – as evident in today's social media wherein online human interaction is mediated by advanced hardware/software technologies, and the so-called 'Internet of Things' where all digital devices known to humankind are connected – and how they affect modern society. This course is designed for students with minimal or no previous computer background and those who need to refresh their knowledge with the latest terms and trends in Information Technology.

Student Learning Outcome(s):

Demonstrate, discuss and illustrate knowledge of essential textbook Information Technology concepts from the hardware/software components and programming and the system development cycle to the Internet, E-mail, and social media.

CIS 104 MICROCOMPUTER APPLICATION SOFTWARE (4) UC/CSU

Formerly: CO INFO 701 Introduction to Computers and Their Uses (3)

Lecture: 2 hours / Lab: 2 hours

The students will be introduced to computer applications using Microsoft Office. Word, Excel, Access are covered. Also, the students will learn to integrate different applications, and understand the fundamentals of the Windows operating system.

Student Learning Outcome(s):

Use the most common business systems - text processing, spreadsheets, database systems - and the basic functionalists of the operating system.

CIS 112 OPERATING SYSTEMS – BEGINNING LINUX (3) UC/CSU

Formerly: CO INFO 734 Operating Systems

Lecture: 2 hours / Lab: 2 hours

This course provides students a solid foundation in the basics of the open-source Linux operating system that currently powers a majority of network servers the world over due to its robust features from security to efficiency, reliability, and its modest cost-of-ownership. Unix/Linux powers a greater segment of the Internet than Microsoft. Topics included are An Overview of the Linux Architecture, The Kernel and Shell, File System, Users and Groups Management, Permission and Ownership Management, Services and Processes Management. Students gain system-level experience through problem-solving hands-on lab exercises at the command line and in the graphical user interface.

Student Learning Outcome(s):

1. Identify and describe the essential components of the Linux system from its architecture to its constituent administrative level functions and interfaces.

2. Apply and demonstrate fundamental concepts in graphical user and command line interface operation, and associated concepts in system and network security administration in a systematic manner. Install and deploy a Linux system.

3. Apply and demonstrate concepts in system and network security administration.

CIS 120 INTRODUCTION TO DATABASES (3) CSU

Formerly: CO INFO 733 Microcomputer Database Programming

Lecture: 2 hours / Lab: 2 hours

This course provides instruction and hands-on training in the following computer information systems concepts: Basic security principles, methods of establishing security baselines, and the most recent attack and defense techniques and technologies. It will also help prepare for CompTIA's examination and professional security certification. Course covers an overview of current network security tools, specific skills and related topics, and insight into future trends and issues in network security.

Student Learning Outcome(s):

1. Student Learning Outcomes (SLO) Students will be able to explain basic security measures for networks, servers and workstations. 2. Students will also be able to describe information security in more details and able to understand techniques to protect workstations, servers and networks from malware and various attacks. 3. Students are expected to set appropriate securities for network information systems. 4. Students are expected to secure data and understand data privacy and data integrity. 5. Students are expected to identify challenges for information security management. 6. Students are expected to comprehend various cryptographic standards in the information security industry.

CIS 126 ADOBE DREAMWEAVER (3) CSU

Formerly: CO INFO 750 Dreamweaver Concepts and Techniques

Lecture: 2 hours / Lab: 2 hours

Advisory: CO INFO 757

The course covers concepts and techniques of the Dreamweaver system. It consists of projects that provide experience in the methods used to produce and modify documents for the World Wide Web.

Student Learning Outcome(s):

Utilize Web development concepts and use Dreamweaver to create and enhance websites and webpages.

CIS 146 INTRODUCTION TO WEB PAGE DESIGN (3) CSU

Formerly: CO INFO 035 Multimedia Presentations for the Internet I

Lecture: 2 hours / Lab: 2 hours

This course examines the power of using the Internet as a presentation tool and includes Internet History, simple document conversion for the World Wide Web, use of FrontPage, PowerPoint and Producer. Student will prepare presentations for the Internet by assembling ready-made digital audio, video, and images.

Student Learning Outcome(s):

1. Students in this course will demonstrate the ability to use multimedia elements to organize, design, and develop and procedure a multimedia project for the Internet.

2. Organizing, designing, and producing multimedia projects.

CIS 148 INTRODUCTION TO WEB DEVELOPMENT XHTML5 & CSS (3) CSU

Formerly: CO INFO 575 XHTML Programming and Applications
Lecture: 2 hours / Lab: 2 hours

The course covers the fundamental operations of the eXtensible HyperText Markup Language (XHTML) system. It consists of projects that provide experience in the methods used to produce and modify documents for the World Wide Web.

Student Learning Outcome(s):

- Design and evaluate Websites, and include the most recent multimedia elements, using XHTML markup language and its latest elements along with CSS.

CIS 149 WEB DEVELOPMENT USING PHP-MYSQL (3) CSU

Formerly: CO INFO 742

Lecture: 3 hours

Advisory: Computer Information Systems 701;

This class provides an intermediate-level course in E-commerce using the PHP scripting language and the MySQL database platform to develop robust and secure dynamic websites with special emphasis on object-oriented programming and the application of real-world website features such as Secure Socket Layer (SSL), shopping carts, and payment systems.

Student Learning Outcome(s):

Student will learn the fundamentals of website development and E-commerce using PHP-MySQL.

CIS 165 PRICIPLES OF INFORMATION SECURITY (3) CSU

Formerly: CO INFO 012 Web Security

Lecture: 2 hours / Lab: 2 hours

Advisory: CO INFO 701

This course is designed to educate users in the technologies, terms, and processes related to Internet Security. Methods for testing security and implementing proper defense measures are covered for both Linux and Windows Operating Systems.

Student Learning Outcome(s):

Understand and describe Web security concepts including, software and network vulnerabilities, security risks, various types of attacks and counter measurements against them, encryption algorithms, intrusion detection, and benefits and legal concerns of security testing.

CIS 192 INTRODUCTION TO CLOUD COMPUTING (3) CSU

Lecture: 2 hours / Lab: 2 hours

This course introduces the fundamentals of cloud computing including the different cloud computing models; Infrastructure as a Service, Platform as a Service and Software as a Service on the Amazon Web Services platform. This course reviews the basic concepts of server, networking, and storage virtualization. We will go over what the current industry trend of computing, storage and application migration to cloud computing are. The course will cover the advantages and disadvantages of cloud computing. Students will also study cloud careers and discusses industry demand for cloud computing skills.

Student Learning Outcome(s):

1. Describe cloud services offered by different cloud Services provider

2. Implement cloud services offered by a Cloud Services provider

CIS 193 DATABASE ESSENTIALS IN AMAZON WEB SERVICES (3) CSU

Lecture: 2 hours / Lab: 2 hours

This course introduces Amazon Web Services data storage services. The course will cover both an introduction of AWS database technologies and AWS block and object-based storage services. A range of AWS SQL and NoSQL database technologies will be covered, including the principles of database design and management. In addition, AWS block and object-based storage options will be introduced, which includes the principles of block and object-based storage options and the various use case scenario for AWS data storage services.

Student Learning Outcome(s):

1. Explain the differences between file-based, hierarchical, network, relational, and object-oriented databases and the many design principles that reduce redundancy and increase performance.

2. Apply database management system language and concepts to design and create tables, populate them with data, retrieve data, create indexes, and create programs that manipulate data.

CIS 194 COMPUTER ENGINES IN AMAZON WEB SERVICES (3) CSU

Lecture: 2 hours / Lab: 2 hours

This course introduces Amazon Web Services computing related services. Students will learn the core computing technologies offered by Amazon Web Services. The computing services students will learn will follow the computing models: Infrastructure as a Service, Platform as a Service, Function as a Service or Micro-services. You will learn how to set up and manage computing services, auto scale computing services and configure computing load balancing. You will also learn how to code auto deployment scripts for the AWS infrastructure.

Student Learning Outcome(s):

1. Design, create and deploy applications using the AWS Console and Elastic Beanstalk.

2. Launch and monitor EC2 instances with the AWS Console.

CIS 195 SECURITY IN THE CLOUD (3)

Lecture: 2 hours / Lab: 2 hours

This course explores Amazon Web Services security at both the AWS services layer and Amazon data center infrastructure layer. This course will go over how Amazon Web Services implemented security measures in their global data center infrastructure. The course will also look at the AWS security shared responsibility model and how to use Amazon security and monitoring tool to ensure security in an AWS cloud infrastructure. The course will provide an understanding of how AWS security tools can provide hardware, service, network and user activity monitoring, key management services, server and application firewall services and an introduction to implementing private and public subnets.

Student Learning Outcome(s):

1. Deliver secure, resilient products that incorporate security principles into the design of their applications.

2. Identify important security principles that web services applications must meet when deployed.

CIS 210 INTRODUCTIO TO COMPUTER NETWORKING (3) CSU

Formerly: CO INFO 787 Network Essentials

Lecture: 2 hours / Lab: 2 hours

Prerequisite: Computer Information Systems 701;

The purpose of this course is to provide a baseline level of knowledge for success in industry and preparation for networking certifications. Students are exposed to new industry topics and get hands on experience networking the lab and configuring the network. Local area and Wide area networks are covered.

Student Learning Outcome(s):

1. Student Learning Outcomes (SLO) Students will be able to explain LAN and WAN networking concept and terminology. 2. Students will be able to explain internetwork for networks, servers and workstations. 3. Students will also be able to describe OSI model in details and able to understand interoperability of level of OSI model. 4. Students will be able to explain techniques to protect workstations, servers and networks.

CIS 215 NETWORK SECURITY FUNDAMENTALS (3) CSU

Formerly: CO INFO 011 Network Security Fundamentals
Lecture: 2 hours / Lab: 2 hours

This course provides instruction and hands-on training in the following computer information systems concepts: Basic security principles, methods of establishing security baselines, and the most recent attack and defense techniques and technologies. It will also help prepare for CompTIA's examination and professional security certification. Course covers an overview of current network security tools, specific skills and related topics, and insight into future trends and issues in network security.

Student Learning Outcome(s):

1. Explain basic security measures for networks, servers and workstations and techniques to protect workstations, servers and networks from malware and various attacks.

2. Set appropriate securities, through information security management, for network information systems in order to secure data integrity and privacy.

COMPUTER SCIENCE

CS 111 PROGRAMMING IN VISUAL BASIC (3) UC/CSU

Formerly: CO INFO 709 Visual Basic Programming
Lecture: 2 hours / Lab: 2 hours

The primary topic of this class is the structure and methods of the Visual Basic programming system. This system is widely used to create computer applications that include interaction with a user and is called object-oriented programming.

Student Learning Outcome(s):

- Explain and use the syntax and grammar of the Visual Basic programming system to create programs that are representative of commonly used business and engineering procedures.

CS 112 PROGRAMMING IN JAVASCRIPT (3) CSU

Formerly: CO INFO 762 Introduction to JavaScript Programming
Lecture: 2 hours / Lab: 2 hours

This class provides an introduction to the use of the JavaScript programming system. It emphasizes the syntax and grammar of its coding language and it is embedded into the Web page structure. The method of instruction is projects which include the design and implementation of calculations and related actions into a Web page.

Student Learning Outcome(s):

- Use the syntax of JavaScript programming system to create client-side scripts to interact with the user, control the browser, and alter the displayed document content.

CS 113 PROGRAMMIN IN JAVA (3) UC/CSU

Formerly: CO INFO 790
Lecture: 2 hours / Lab: 2 hours

This course covers the fundamental operations of the Java programming system. It consists of projects that provide experience in the methods used to create Java applications and applet that will run in Internet web pages. Also to create GUI user interface screens.

Student Learning Outcome(s):

- Create Java Application programs using various problem solving techniques with proper use of variables, conditionals, repetition, methods, and classes.

CS 115 PROGRAMMING IN C# (3) UC/CSU

Formerly: CO INFO 741
Lecture: 2 hours / Lab: 2 hours

This class provides an overview of computer programming in C# (C Sharp). It emphasizes the structure and methods of object oriented programming. This consists of form design, the properties lists, and the syntax and grammar of the code language. The class also stresses problem solving methods, development of algorithms, the programming structures of sequence, selection, and loops, use of functions, arrays and strings and how different data types work.

Student Learning Outcome(s):

- Design and create applications and solve programming problems using object-oriented C# programming language's concepts and tools.

CS 116 PROGRAMMING IN C++ (3) UC/CSU

Formerly: CO INFO 739
Lecture: 2 hours / Lab: 2 hours

This class provides an introduction to the use of the C++ programming system. It emphasizes the syntax and grammar of its coding language. The method of instruction is the use of the system to implement computer application projects using the traditional programming structures of sequence, selection, and loops, use of functions, arrays and strings and how different data types work.

Student Learning Outcome(s):

- Use the syntax and grammar of the C++ programming language to create programs that are representative of commonly used business and engineering procedures.

CS 143 MOBILE APPLICATION DEVELOPMENT – ANDROID (3) CSU

Lecture: 2 hours / Lab: 2 hours

Mobile Application Development entails design, programming and development, debugging, and testing applications that run on Android, a software stack for mobile devices that includes an operating system, and middleware applications. Topics include the Android Software Development Kit (SDK), design principles, application structure, strings, graphics, user interfaces, animation, storage, employing maps, and gallery controls.

Student Learning Outcome(s):

- Use Android Studio with different layouts and Java programming logic and concepts, (including variables, sequence, conditionals, and repetition) to create Android applications.

CS 170 INTRODUCTION TO COPMUTER GAMES PROGRAMMING (3) CSU

Formerly: CO INFO 040 Beginning Level Programming / Computer Games
Lecture: 2 hours / Lab: 2 hours

This course will provide students with a basic understanding of how a game 'idea' is transformed to a marketable product, while educating them on the roles and duties of a game development team and the practices exercised within the game development industry. This course is an in-depth study of level plans for computer video games.

Student Learning Outcome(s):

1. Examine and critically discuss various levels of computer game programming.

2. Create and debug computer game programs, through gathering, identifying, analyzing, and synthesize information,

CS 171 VIDEO GAME PROGRAMMING (3) CSU

Formerly: CO INFO 042
Lecture: 2 hours / Lab: 2 hours

This hands-on course teaches the technical skills behind 3D game programming, using the latest version of Torque from GarageGames, or similar software, and provides the very best tools available to the game maker. Students will gain practical experience needed to create their own games. The class will cover the techniques behind the programming, textures, and models that go into successful game creation. Students will cover the Torque Engine and will learn how to integrate sound and music into their games.

Student Learning Outcome(s):

- Use gaming software such as GarageGames or BlitzMax to design algorithms and create and test 3D game applications.

CS 216 OBJECT ORIENTED PROGRAMMING IN C++ (3) UC/CSU

Formerly: CO INFO 743
Lecture: 2 hours / Lab: 2 hours

This course develops an understanding of Object-Oriented programming. It includes Object-oriented analysis and design. Major topics include classes, constructor, destructor, accessor and mutator functions, overloaded functions and operators, inheritance, and polymorphism.

Student Learning Outcome(s):

- Student will design and create applications, and solve programming problems using object-oriented C++ programming language's concepts and tools.

COOPERATIVE EDUCATION

COOP ED 195 WORK EXPERIENCE - GENERAL I (1) CSU

Lecture: 1 hour

Cooperative Work Experience Education (CWEE) combines on-the-job experience with regular classroom instruction. It is designed to expand students' skills and knowledge, and to improve self-understanding by integrating classroom study with supervised work experience. CWEE is based on the principle that well educated individuals develop most effectively through the incorporation of related education and work experience. By monitoring structured work experiences in business, industry, government, and human services settings, LATTC provides enrichment to college studies which enhance the student's total development. In the Cooperative Work Experience Education program, an individual student's educational objectives are carefully planned and coordinated between the College, the student, and the employer to ensure a positive and realistic employment experience. This is a program where supervised employment is intended to assist students in acquiring desirable work habits, attitudes, and career awareness. The work experience need not be related to the students' educational goals. The course may be repeated for a maximum of 16 total units, subject to a maximum of 3 units per one enrollment period in general work experience education.

Student Learning Outcome(s):

The student will develop at least 3 learning objectives to be accomplished on the job.

COOP ED 295 WORK EXPERIENCE - GENERAL I (2) CSU

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Students must be employed or volunteering/interning in order to participate in program. During the fall and spring semesters, students shall be enrolled in at least one additional course in a U.S. regionally accredited institution.

Student Learning Outcome(s):

Develop learning objectives related to educational/occupational goals to be accomplished on the job.

COOP ED 395 WORK EXPERIENCE - GENERAL I (3) CSU

Lecture: 3 hours

General Cooperative Education is a work experience program involving the employer, the student-employee, and the college to insure that the student receives on the job training and unit credit for work experience. Work experience requires that the student be employed in a paid or unpaid position and need not be related to the students educational goals.

Student Learning Outcome(s):

Develop learning objectives related to educational/occupational goals to be accomplished on the job.

COSMETOLOGY

CSMTLGY 035 SKIN THERAPY I (6)

Lecture: 3 hours / Lab: 9 hours

Students will be introduced to disinfection and sanitation procedures, manipulations for both facial cleansing and massage, steps for cleansing, performing a skin analysis, exfoliation, extractions, application of masks, toners, serums, moisturizers, sunscreen and operational procedures for using facial machines.

Student Learning Outcome(s):

Students will be able to perform facials using proper form, technique, and tools in accordance with industry professional and safety standards at the introductory level.

CSMTLGY 036 SKIN THERAPY II (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 35.

Students will be introduced to intermediate and advanced knowledge of hair removal, makeup and airbrush makeup applications, electrotherapy treatments (galvanic and high frequency), chemical peels (enzyme and fruit based alpha hydroxy acids) and microdermabrasion.

Student Learning Outcome(s):

Students will be able to perform facials using proper form, technique, and tools in accordance with industry professional and safety standards at the intermediate to advanced level.

CSMTLGY 037 SKIN THERAPY III (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 36;

Students will be introduced to aromatherapy pressure point massage, mask layering, paraffin masks, custom masks, body scrubs, hand and foot reflexology and advanced airbrush makeup techniques.

Student Learning Outcome(s):

1. Students will perform hand and foot treatments utilizing reflexology. 2. Students will demonstrate body scrubs, wraps, massage and aromatherapy treatments.

CSMTLGY 038 SKIN THERAPY IV (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 37;

Student will be introduced to clinic floor work experience, advanced facial, makeup and hair removal services, business basics, professional development and mock State Board practicums for licensure will be employed.

Student Learning Outcome(s):

Students will be able to perform all skin therapy services such as facials, advanced makeup application, arching, waxing and body treatments.

CSMTLGY 101 INTRODUCTION TO COSMETOLOGY (3) NDA

Lecture: 3 hours

Introduction to the opportunities in the field of cosmetology. Students will learn how vocabulary, math skills, and study skills are applicable to the field, and will be better prepared to enter a full-time cosmetology program.

Student Learning Outcome(s):

The student will be able to identify key concepts, define technical terminology and explore the opportunities offered in the cosmetology industry.

CSMTLGY 111 FRESHMAN COSMETOLOGY (6)

Lecture: 3 hours / Lab: 9 hours

The course covers basic manipulative skills and proper application of shampooing, scalp treatments, finger waving, curl construction, hair design, haircutting, and manicuring. Basic lecture and theory include topics on bacteriology, trichology, decontamination.

Student Learning Outcome(s):

1. Student will perform basic hair design concepts. 2. Students will demonstrate a plain manicure. 3. Students will perform hair cutting procedures and identify and practice industry safety and sanitation standards.

CSMTLGY 112 JUNIOR SALON I (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 111;

The course covers basic applications of skin care and facial massage manipulations, permanent waving, haircutting techniques, and all phases of thermal texture hair designing. Theories related to all areas mentioned above are also discussed.

Student Learning Outcome(s):

1. Students demonstrate the proper procedures for cleansing, toning and moisturizing the skin, massage manipulations, eyebrow arching and basic makeup application. 2. Students will demonstrate procedures for sectioning and wrapping a permanent wave.

CSMTLGY 121 JUNIOR SALON II (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 112;

The students are exposed to intermediate instruction in permanent waving, chemical straightening, thermal straightening and curling, skin and hair care, with instruction on the use of facials, hair cutting and nail care. Theories that are related to all areas mentioned above will be discussed.

Student Learning Outcome(s):

1. Student will demonstrate the proper procedures for waxing facial areas, applying masks, packs, scrubs and dermal lights for different skin types. 2. Students will perform thermal texture procedures utilizing the pressing comb, oven, Marcel and electrical irons.

CSMTLGY 122 JUNIOR SALON III (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 121;

The students are instructed in advanced permanent waving, soft permanent wave, chemical straightening, thermal straightening and curling, hair cutting, and electricity. Theories related to the above mentioned subjects will be discussed.

Student Learning Outcome(s):

1. Students will perform permanent waving, soft permanent waving and chemical straightening techniques as well as advanced cold waving. 2. Students will demonstrate facial techniques using chemcial compounds and electrical modalities.

CSMTLGY 131 TINTING I (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 112;

The course covers basic, intermediate and advanced hair coloring, bleaching, toning, highlighting, frosting and color correction techniques. A variety of artificial nail procedures will be demonstrated. Theories to the above mentioned subjects will be discussed.

Student Learning Outcome(s):

The students will apply the law of color in identifying and demonstrating the applications of basic and intermediate haircoloring, bleaching, and toning techniques.

CSMTLGY 132 TINTING II (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 131;

The course covers all aspects of hair coloring, bleaching, toning, 'special effect' highlighting, foiling, cap frosting and color correction. Additional subjects are: haircutting, thermal and wet hair styling, and the study and applications of artificial nail products. Theories related to the above mentioned subjects will be discussed.

Student Learning Outcome(s):

1. Students will analyze, discuss, and demonstrate the procedures for a variety of hair coloring/bleaching applications. 2. Students will demonstrate a variety of artificial nail applications.

CSMTLGY 141 SENIOR SALON I (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 122 & 132.

The course reviews all areas of cosmetology, rules, regulations and State Board requirements for licensing. Students will perform client services, conduct consultations, record services, track client appointments and tickets. Theories that are related to all areas mentioned above will be discussed.

Student Learning Outcome(s):

Students will complete all final preparations and procedures for customer service and licensure of the Cosmetology State Board Examination in haircutting, hair designing, chemical services, haircoloring and skin care.

CSMTLGY 142 SENIOR SALON II (6)

Lecture: 3 hours / Lab: 9 hours

Prerequisite: Cosmetology 141;

The student will be introduced to clinic floor practicum and advanced client services. Mock State Board procedures for licensure will be employed. Business practices include: client services, effective communication, job search skills, networking, strategies for building a clientale, selling techniques, starting and operating a business.

Student Learning Outcome(s):

1. Student will model industry standard business practices including customer rapport, service planning, professional communication, client retention, referrals, marketing and cooperation with co-workers. 2. Student will review individual competency requirements, both skill and theory, and by passing a mock examination, student will demonstrate readiness to pass the state certification exam.

CSMTLGY 210 INTRODUCTION TO HAIR COLORING (3)

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Cosmetology 112 or Barbering 114;

Students are offered an introduction to basic hair coloring categories, applications and bleaching techniques. In addition, the course will concentrate on hair cutting, hair styling, and permanent waving procedures.

Student Learning Outcome(s):

Students will be able to apply temporary and semi-permanent hair coloring and perform highlighting techniques using foils.

CSMTLGY 211 INTERMEDIATE HAIR COLORING AND STYLING (3)

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Cosmetology 112 or Barbering 114;

Students are offered an introduction to intermediate hair coloring, bleaching and toning applications and techniques. In addition, the course will concentrate on hair cutting, hair styling, and skin care procedures.

Student Learning Outcome(s):

Students will be able to identify and demonstrate the skills required for mixing and applying demi-permanent, permanent hair coloring and bleaching compounds.

CSMTLGY 214 ADVANCED HAIR COLORING AND STYLING (3)

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Cosmetology 112 or Barbering 114;

Students are offered instruction in permanent hair coloring applications, color correction techniques, zonal and block highlighting effects. In addition, the course will concentrate on hair cutting, thermal hair styling, long hair designing and nail technology.

Student Learning Outcome(s):

Students will be able to identify and demonstrate the skills required for special effects applications of hair color and bleach, while employing color correction techniques needed for industry.

CSMTLGY 215 CONTEMPORARY STYLING TECHNIQUES (3)

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Cosmetology 112 or Barbering 114;

Students receive instruction in advanced hair designing, hair coloring, hair sculpting, and chemical texture services.

Student Learning Outcome(s):

Students will be able to analyze and create contemporary hair designs utilizing wet and thermal styling techniques meeting industry standards.

CSMTLGY 217 MULTI-TEXTURE DESIGN (LEVEL 1-2) (3)

Lecture: 2 hours / Lab: 3 hours

This class teaches the basic techniques of the five most popular methods for applying hair additions: strand by strand, braiding, bonding, track and sew and netting.

Student Learning Outcome(s):

Students will be able to identify the proper procedures and application for various hair augmentation techniques and demonstrate several different braiding patterns and tension control.

CSMTLGY 218 LONG HAIR AND PERIOD HAIR DESIGN AND HAIR PIECE CONSTRUCTION (3) NDA

Lecture: 2 hours / Lab: 3 hours

The course will cover long hair styling, period hair designing and hair piece construction techniques.

Student Learning Outcome(s):

1. Students will be able to identify and perform a variety of period hairstyles from the 20's through the 90's. 2. Students will be able to create a head piece using Styrofoam, chicken wire, synthetic and human hair.

CSMTLGY 221 ADVANCED MAKEUP TECHNIQUES (3) NDA

Lecture: 2 hours / Lab: 3 hours

This course is designed to teach students makeup applications in contouring techniques, correct shaping of eyes, lips and eyebrows; makeup applications for women of all ages and ethnicities, and tool knowledge and camouflage procedures.

Student Learning Outcome(s):

Students will be able to mix and apply makeup compounds creating a variety of special effects applications.

CSMTLGY 223 HAIR SCULPTING TECHNIQUES FOR WOMEN (3)

Lecture: 2 hours / Lab: 3 hours

Basic to advanced hair cutting techniques that include shape, texture, and structure. Students will learn how to sculpt hair, understand design concepts, analyze form and use a variety of tools and cutting techniques.

Student Learning Outcome(s):

Student will perform hair sculpting techniques using razor and shears.

COUNSELING

COUNSEL 001 INTRODUCTION TO COLLEGE (1) CSU

Lecture: 1 hour

This course is designed to provide students with skills needed to succeed in college. Emphasis is placed on college policies and procedures, campus services and resources, study skills, time management and developing a student educational plan (SEP) to meet those goals. Additional topics include: Certificate, associate degree requirements, and transfer admission requirements.

Student Learning Outcome(s):

Content mastery: Utilize knowledge of basic college policies & terms, types of degrees and programs, systems of higher education, useful print and electronic media resources and campus resources in various assignments Information competency and planning skills: Prepare an educational plan that shows evidence of ability to use catalog, websites and printed materials for transfer or non-transfer goals Self management: Demonstrate student professionalism and solve typical student problems by using strategies and behaviors necessary for academic success in college.

COUNSEL 002 INTERPERSONAL RELATIONSHIPS (1) CSU

Lecture: 1 hour

This course enhances interpersonal skills for building effective communication for personal and professional growth. It utilizes group dynamics by enhancing self-esteem through self-awareness, acceptance, ability to listen and workplace habits. An honest appraisal of individual strengths and weaknesses is made in an effort to help remove barriers to social and academic growth to assist in action plans for personal and educational goals.

Student Learning Outcome(s):

1. Students will identify their personality preference and communication patterns based on the Myers Briggs Test Inventory (MBTI). 2. Students will identify social barriers (e.g. cultural, economical) to effective interpersonal relationship as well as strategies to overcome those barriers. 3. Students learn to achieve and maintain a balance in their work, school, and personal time. 4. Students will create an action plan for goals including creating or adjusting an Student Education Plan (SEP).

COUNSEL 004 CAREER PLANNING (1) CSU

Lecture: 1 hour

This is a career planning course designed to assist the student in selecting an appropriate career goal by introducing critical strategies, and information which is essential in selecting a career. The main areas covered in this course are self assessment, problem solving, discovering your strengths and weaknesses, and understanding your personality style. Some tools which will be used to help identify the areas of concern are the Myers Briggs and the COPES. Students will also learn how to prepare a functional and chronological resume, as well as a standard cover letter.

Student Learning Outcome(s):

1. Student will explain specific characteristics of at least one career they are interested in. 2. Student will prepare a resume which is appropriate to their skills, education level, abilities, and work history. 3. Student will identify the appropriate courses required for his or her career goal.

COUNSEL 005 COLLEGE SURVIVAL (2) CSU

Lecture: 2 hours

This course provides the students with information enabling him/her to succeed or survive in college program. Emphasis will be placed on development of making informed decisions, study skills, productive time management, financial planning, an understanding of college terminology and utilization os college support services.

Student Learning Outcome(s):

1. Students will be able to identify information sources and services on campus that they need to meet their academic goals. 2. Students will define personal attributes needed for college success through learning style, time management and goal setting Identify requirements for associate degree, certificate, and transfer option. 3. Students will be able to create a comprehensive Student Education Plan (SEP) to meet their educational goal.

COUNSEL 020 POST-SECONDARY EDUCATION: THE SCOPE OF CAREER PLANNING (3) UC/CSU

Lecture: 3 hours

This course introduces students to the role of higher education in society and to their role as students. Students explore personal attributes needed for college success, critical thinking and effective study strategies, relating to others in a diverse world, the career planning and decision making process, and transfer and educational planning. This course will also provide students with an overview of campus resources and policies.

Student Learning Outcome(s):

1. Choose effective study strategies and apply these strategies to educational and workplace settings. 2. Examine health issues such as stress, nutrition, and exercise that affect lifelong well-being. 3. Create effective strategies for managing time and achieving lifelong goals. 4. Define a career and describe the process and skills that are necessary for successful planning. 5. Learn effective decision making and goal setting techniques in order to develop an educational goal.

COUNSEL 020E POST-SECONDARY EDUCATION: COLLEGE SUCCESS (1) CSU

Lecture: 1 hour

College Success is a course designed to increase the opportunity for success in college by assisting the student in obtaining skills necessary to reach his/her educational objectives. Topics in this course include information about college catalog, success, self-esteem, values and beliefs, study skills, communication skills, and healthy lifestyles.

Student Learning Outcome(s):

1. Choose effective study strategies and apply these strategies to educational and workplace settings. 2. Examine health issues such as stress, nutrition, and exercise that affect lifelong well-being. 3. Create effective strategies for managing time and achieving lifelong goals. 4. Learn effective decision making and goal setting techniques in order to develop an educational goal.

COUNSEL 022 THE TRANSFER PROCESS (1) UC/CSU

Lecture: 1 hour

This course is an introduction to the transfer process. It is designed to enable students to become active participants in planning their long-term educational and career goals and will provide students with an understanding of the process and the requirements for transferring to a four-year college or university. The course will consist of lecture, use of internet resources, guest speakers and student assignments.

Student Learning Outcome(s):

1. Student will define and compare transfer systems and requirements to four-year colleges/universities. 2. Students will differentiate between UC, CSU, and private general education checklist. 3. Student will explore the Internet, visit campuses, and create a transfer plan that will meet the requirements for transfer to the desired major and school/s.

COUNSEL 040 COLLEGE SUCCESS SEMINAR (3) UC/CSU

Lecture: 3 hours

Students explore issues related to higher education that contribute to student success. Topics will include an overview of academic success skills, value and purpose of higher education, Los Angeles Trade Tech College and Los Angeles Community College District policies and procedures, ethics and responsibility, diversity in higher education, educational strategies and planning, interpersonal communication, career development, health issues, and self-assessment techniques.

Student Learning Outcome(s):

Complete an education plan for the student's identified educational goal using college catalogs, general education patterns, and articulation agreements (for transfer institutions).

CULINARY ARTS

CLN ART 111 CULINARY ARTS ORIENTATION I (4) CSU

Lecture: 2 hours / Lab: 6 hours

Prerequisite: Culinary Arts 112; Corequisite: Culinary Arts 112.

With a combination of lecture and lab practice, the students are introduced to the world of commercial food production. Students are introduced to culinary theories and develop skills in knife handling, ingredient identification, small and large equipment use, weights and measures, recipe development and cooking fundamentals

Student Learning Outcome(s):

1. Students will define basic culinary terminology, identify cooking processes and techniques, and evaluate completed products. 2. Define Cooking processes and techniques. 3. Prepare food items according to demonstration standards. 4. Evaluate food items and revise finished products as needed.

CLN ART 112 SANITATION AND SAFETY (2) CSU

Lecture: 2 hours

This class discusses sanitation and safety as it applies to the restaurant industry; HACCP protocol, preventing food borne outbreaks, introduction to microbiology and establishing 'flow of food systems' will be covered, federal, state and local legislation and employee training. National Restaurant Association Serve Safe Test will be given at conclusion of this class.

Student Learning Outcome(s):

Score a 75 % or higher on a National Restaurant Association food-handlers test (State Law).

CLN ART 120 FRONT OF HOUSE/DINING SERVICES (4)

Lecture: 2 hours / Lab: 6 hours

Front of house topics pertinent to restaurant & hospitality management, dining room management, service, staffing, use of POS system, money management, stewarding. Serve Safe "Alcohol" test will be administered at the conclusion of the course.

Student Learning Outcome(s):

1. Practice proper front of the house operations as it pertains to the food service industry. 2. Describe customer relations and service as performed in a culturally diverse arena. 3. Appraise effective service as it relates to the Hospitality industry. 4. Recognize, identify and assess guidelines of the safe, sale and service of Alcohol.

CLN ART 121 GARDE MANGER I - BAKING (6) CSU

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Culinary Arts 111 & 112.

Introduction to Garde Manger and Baking. Introduction to basic garde manger, salads, cold sauces and salad dressings dressing, baking principles including yeast and sweet doughs, laminated doughs, mixing methods, and decorating.

Student Learning Outcome(s):

1. Students will Identify cold kitchen and bakery operations and procedures. 2. Students Will demonstrate recipes and preparation. 3. Students will evaluate completed assignments and adjust as needed.

CLN ART 122 GARDE MANGER II - CHARCUTEIRE (6) CSU

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Culinary Arts 111 and Culinary Arts 112;

Students will become proficient in the historical features of the grade manger stations including planning and preparation of cold soups, hors d' oeuvres, appetizers, canape, mousse, timbale, cold sauces, relishes, force-meat, galantine, terrine, pate en croute components. Preparation and usages of specialty meats, sweetbreads, and sausage will be defined; gelee, aspic, chaud froid, glazing, marinating, curing will be practiced: and buffet presentation, the display of carved fruit and vegetable garnishes and centerpieces will be studied. Projects will include international cuisine, salt dough sculpting and ice carving.

Student Learning Outcome(s):

Students will define and identify classic Garde Manger items, design menu items, and evaluate and access finished products.

CLN ART 131 CULINARY ARTS - BREAKFAST I (6) CSU

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Culinary Arts 111; Culinary Arts 112;

Students are introduced to a la minute breakfast cookery, hot sandwiches, culinary management and supervision. Upon completion the students will be able to identify and safely use the tools and equipment used in breakfast cookery as well as egg cookery, breakfast meats, cereals, beverages, hot sandwiches, ala minute preparation, brunch items, pancakes, and waffles. Other areas covered include portion control, inventory pars, weights and measures, labor and cost control.

Student Learning Outcome(s):

1. Describe a la minute cookery, management applications, and cycle menu procedures. 2. Practice and employ a la minute and cycle menu protocol in a fast paced food service facility. 3. Compare and contrast a la minute cooking station with batch type food preparation or pre-prepared items.

CLN ART 132 CULINARY ARTS - ENTREMETIER SAUCIER (6) CSU

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Culinary Arts 111; Culinary Arts 112;

Students will examine and prepare the theory and production techniques involved in the preparation of stocks, soups, sauces, starches, and vegetables in a classical and contemporary cooking approach. Students will develop a practical understanding of the role and application of sauce pairing with the center of the plate, vegetables, starches, and dessert items.

Student Learning Outcome(s):

1. Students will identify class stock, soups, sauces, vegetable and starch cookery. 2. Prepare and assess completed product.

CLN ART 141 BUTCHERY/CENTER OF THE PLATE AND QUANTITY FOOD COOKERY (6) CSU

Lecture: 3.75 hours / Lab: 6.75 hours

Prerequisite: Culinary Arts 111; Culinary Arts 112; Culinary Arts 121, Culinary Arts 122; Culinary Arts 131; Culinary Arts 132

This course covers quantity and quality food production of meats, fish, and poultry. Students will practice center of the plate food preparation, meat identification and fabrication with an emphasis on portion control, sauce pairing and accompaniment compatibility. Students will discuss, compare and prepare various international foods.

Student Learning Outcome(s):

Students will define and practice advanced culinary skills and techniques.

CLN ART 170 CULINARY NUTRITION (2) CSU

Lecture: 2 hours

This course provides a quick overview of applied culinary nutrition. Recipe and menu development including ingredient selection and cooking techniques will be discussed. Special diet (low fat, low sodium, diabetic, and caloric intake) will be discussed. Appropriate for food service professionals who would like to work as personal chefs, with sports teams, at spas and resorts, major hospital chains, entertainment or transportation industries or in health care.

Student Learning Outcome(s):

1. Students will define nutrition principles as they apply to foodservice industry. 2. Students will utilize nutrition principles to evaluate and modify recipes. 3. Students will be able to respond knowledgeably to customers questions and needs in the foodservice industry.

CLN ART 235 MENU PLANNING AND PURCHASING (4) CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisites: Culinary Arts 111; Culinary Arts 112.

Advanced course in menu planning and purchasing using the menu as a tool for ordering, selection and procurement of food and beverage items. Menu, labor, and facility computer generated cost analysis and percentages will be addressed.

Student Learning Outcome(s):

1. Define Menu development for a professional food service facility. 2.Recognize ordering and costing procedures based on menu offered. 3. Compose a flow of food and sale price (door to table) based on the menu, menu item, and food cost. 4. Evaluate system and make changes based on outcome.

CLN ART 240 RESTAURANT SUPERVISION AND TRAINING (2) CSU

Lecture: 2 hours

Prerequisite: Culinary Arts 111; Culinary Arts 112;

Students are introduced to human resource management and supervision techniques.Students will identify the recruiting process, communication skills, leadership styles, legal issues in the workforce, employee motivation and discipline.

Student Learning Outcome(s):

1. Identify the supervisors role as a leader in a restaurant management situation. 2. Discuss the various supervisor obligation in a food service establishment. 3. Evaluate supervisors ability to make changes for their employees and themselves.

CLN ART 941 COOPERATIVE EDUCATION - CULINARY ARTS (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Culinary Arts course or successfully completed a Culinary Arts course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

DIESEL AND RELATED TECHNOLOGY

DIESLTK 112 HEAVY DUTY MAINTENANCE SHOP PRACTICES, ENGINE FUNDAMENTALS AND ELECTRICAL SYSTEMS (12) CSU

Formerly: Diesel Engine and Electrical Fundamentals (11)
Lecture: 6 hours, Lab 15 hours

This course is designed to cover the theory and operation of diesel engine components, shop safety, tools, fastening devices, use of measuring instruments, and electrical systems. The student should develop, hands-on skills, manual dexterity skills, critical thinking skills and basic employment skills.

Student Learning Outcome(s):

1 Student should be able to explain the basic principles of operation of any diesel engine and sub-assemblies

2 Student should be able to explain and test the basic principles of operation of the electrical system, charging system, starting system, and the use of a VOM.

DIESLTK 112A HEAVY DUTY MAINTENANCE SHOP PRACTICES (4) CSU

Formerly: Diesel Engine Fundamentals (5.5)
Lecture: 2 hours, La: 5 hours

This course is designed to cover the theory and operation of heavy-duty maintenance shops, shop safety, tools, fastening devices, measuring instruments.

Student Learning Outcome(s):

1 Student should be able to explain the basic principles of operation of any diesel engine and sub-assemblies.

DIESLTK 112B HEAVY DUTY ENGINE FUNDAMENTALS (4) CSU

Formerly: Electrical Fundamentals (5.5) CSU
Lecture: 2 hours, La: 5 hours

This course covers heavy duty engine fundamentals including engine components, assembly procedures, and major engine subsystems.

Student Learning Outcome(s):

1 Student should be able to explain the basic principles of operation of internal combustion engine and sub-assemblies

DIESLTK 112C HEAVY DUTY HEATING, VENTILATION AND AIR CONDITIONING (4) CSU

Lecture: 2 hours, Lab: 5 hours

This course is designed to cover the theory and operation of heavy duty electrical systems. Basic electrical including circuits, starting, and charging systems are covered.

Student Learning Outcome(s):

1 Student should be able to explain and test the basic principles of operation of the electrical system, charging system, starting system, and the use of a DVOM

DIESLTK 122 HEAVY DUTY FUEL INJECTION SYSTEMS, HYDRAULICS AND HVAC (12) CSU

Formerly: Diesel Fuel Injection Systems & Basic Hydraulics and Air (11) CSU
Lecture: 6 hours, Lab 15 hours

This course covers the principles of fuel injection systems & hydraulics and Air conditioning. Course will cover principles of fuel processing and delivery methods, including fuel sub-systems, pumps, and injectors. This course will cover basic hydraulics theory and components along with air conditioning system operation and servicing.

Student Learning Outcome(s):

1 Students will demonstrate how different types of injectors work.

2 Students will diagnose and repair an air conditioning system.

3 Students will diagnose and repair a hydraulic system

DIESLTK 122A HEAVY DUTY FUEL INJECTION SYSTEMS (4) CSU

Formerly: Diesel Fuel Injection Systems (5.5) CSU
Lecture: 2 hours, La: 5 hours

This course covers the principles of fuel injection systems. Course will cover principles of fuel processing and delivery methods, including fuel sub-systems, pumps and injectors.

Student Learning Outcome(S):

1 Students will demonstrate how different types of injectors work

DIESLTK 122B HEAVY DUTY HYDRAULICS (4) CSU

Formerly: Diesel Fuel Systems (5.5) CSU
Lecture: 2 hours, Lab: 5 hours

This course will cover basic hydraulics, theory, and component operation.

Student Learning Outcome(s):

1 Students will diagnose and repair a basic hydraulic system.

DIESLTK 122C HEAVY DUTY HEATING, VENTILATION AND AIR CONDITIONING (HVAC) (4) CSU

Lecture: 2 hours, Lab: 5 hours

This course will cover air conditioning system operation and servicing.

Student Learning Outcome(s):

1 This course will cover air conditioning system operation and servicing.

DIESLTK 132 HEAVY DUTY TRANSMISSIONS, BRAKES AND SUSPENSION (12) CSU

Formerly: Heavy Duty Drive Train & Air Brake Systems (11) CSU
Lecture: 6 hours, Lab 15 hours

This course will cover the operating principles and repair of heavy duty clutches, transmissions, drive shafts, and differentials. In addition, students will also learn the operation and repair of air systems, foundation brakes, and anti-lock brake systems.

Student Learning Outcome(s):

1 Student will be able to perform various tasks of transmission and clutch maintenance.

2 Student will use various OEM software to diagnose anti-lock brake systems.

DIESLTK 132B AIR BRAKE SYSTEMS (4) CSU

Formerly: (5.5) CSU
Lecture: 2 hours, Lab: 5 hours

The operation of electronic engine controls will be covered with an emphasis on using OEM diagnostic software in the troubleshooting of diesel engines.

Student Learning Outcome(s):

1 Student will be able to utilize various OEM software to diagnose electronic engine controls

DIESLTK 142 HEAVY DUTY ENGINE OVERHAUL, ELECTRONIC ENGINE CONTROLS AND EMISSIONS SYSTEMS (12) CSU

Formerly: Diesel Engine Overhaul & Electronic Engine Controls (11) CSU

Lecture: 6 hours / Lab: 15 hours

Prerequisite: Diesel and Related Technology 112; and Diesel and Related Technology 122;

This course covers diesel engine overhaul principles including disassembly, inspection, and reassembly as part of overhauling a diesel engine.Â
The operation of electronic engine controls will also be covered with an emphasis on using OEM diagnostic software in the troubleshooting of a diesel engine.

Student Learning Outcome(s):

1. Student will be able to perform various tasks of an engine overhaul.
2. Student will use various OEM software to diagnose electronic engine controls

DIESLTK 142A HEAVY DUTY ENGINE OVERHAUL (4) CSU

Formerly: Diesel Engine Overhaul (5.5) CSU

Lecture: 3 hours / Lab: 7.5 hours

This course covers diesel engine overhaul principles including disassembly, inspection, and reassembly as part of overhauling a diesel engine.

Student Learning Outcome(s):

Student will be able to perform various tasks of an engine overhaul.

DIESLTK 142B ELECTRONIC ENGINE CONTROLS (4) CSU

Formerly: Electronic Engine Controls (5.5) CSU

Lecture: 3 hours / Lab: 7.5 hours

The operation of electronic engine controls will be covered with an emphasis on using OEM diagnostic software in the troubleshooting of a diesel engines.

Student Learning Outcome(s):

Student will be able to utilize various OEM software to diagnose electronic engine controls.

DIESLTK 142C HEAVY DUTY EMISSIONS SYSTEMS (4) CSU

Lecture: 2 hours, Lab: 5 hours

This course will cover heavy duty engine emissions system operation, maintenance, and service.

Student Learning Outcome(s):

 Student will be able to perform service procedures on a diesel aftertreatment system

DIESLTK 185 DIRECTED STUDY - DIESEL AND RELATED TECHNOLOGY (1)

Lecture: 1 hour

This course allows students to pursue a directed study in Diesel and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in diesel and related technology.

DIESLTK 265 COMPRESSED NATURAL GAS (CNG), LIQUEFIED NATURAL GAS (LNG) FUEL & ELECTRONIC CONTROLS (4)

Lecture: 3 hours / Lab: 3 hours

This course provides an introduction to Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) fuel safety and handling, CNG/LNG fuel system layout, ignition systems, and the electronic controls that support the use of this alternative fuel.

Student Learning Outcome(s):

1. Student will identify CNG/LNG components and explain their function. 2. Student will diagnose CNG/LNG electronic controls using manufacturer diagnostic software.

DIESLTK 285 DIRECTED STUDY - DIESEL AND RELATED TECHNOLOGY (2)

Lecture: 2 hours

This course allows students to pursue a directed study in Diesel and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in diesel and related technology.

DIESLTK 301 INTRODUCTION TO ALTERNATIVE FUELS & HYBRID VEHICLE TECHNOLOGY (1)

Lecture: 1 hour

This course provides an introduction to various alternative fuel technologies being used in the automotive and heavy-duty diesel fields. Covers description and basic operation of Bio-diesel, Compressed Natural Gas (CNG), Liquefied Natural Gas (LNG), Fuel Cell and hybrid vehicle technologies.

Student Learning Outcome(s):

1. Student will be able to explain the differences between regular diesel and bio-diesel fuels. 2. Student will understand the differences between Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG

DIESLTK 302 HYBRID AND PLUG-IN ELECTRIC VEHICLE (6) CSU

Lecture: 3.5 hours / Lab: 5 hours

This course covers hybrid vehicle system fundamentals including hybrid vehicle safety, special tools, different hybrid system configurations, high voltage battery construction and maintenance, de-power procedures and basic service.

Student Learning Outcome(s):

The student will repair hybrid and electric vehicles using specialty tools and equipment in accordance with industry standards.

DIESLTK 303 ADVANCED HYBRID AND PLUG-IN ELECTRIC VEHICLES (5) CSU

Lecture: 2 hours / Lab: 6 hours

This course covers advanced hybrid vehicle system diagnostics and replacement of hybrid and plug-in electric components such as high voltage battery, electric motor, capacitors, etc. Troubleshooting of gasoline/diesel engine will also be covered.

Student Learning Outcome(s):

The student will perform complex hybrid and plug-in electric vehicle troubleshooting using manufacturer diagnostic software, schematics, and specialty tools designed for hybrid and electric vehicle repair.

DEISLTK 320 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR TRANPORTATION (3) CSU

Lecture: 2.5 hours, Lab: 2.5 hours

This course introduces applying geospatial techniques in the Transportation Industry. This includes using Geographic Information Systems (GIS) to incorporate ecological and socioeconomic forces into route planning, highway management, and traffic modeling. GIS are spatial drawings with multiple types of information associated with them; business, land use, roads, rivers, parcel maps, census, others. Students will use GIS Software (ArcGIS or similar) to analyze and solve real-world problems using cartography, computer representation of geographic data, vector and raster data models, map projections, coordinate systems, Global Positioning Systems, and spatial analysis.

Student Learning Outcomes:

1 Student understands how to create maps around their neighborhood and locates sector terminology and protocols to communicate effectively in oral, written, and multimedia formats.

2 Student learns the basic skill to obtain GIS tool Industry Certification, as he/she recognizes the role and function of professional organizations, industry associations, and organized labor in a productive society.

3 Student designs spatial information for architecture, urban planning and economic development using mathematical principles of pattern recognition.

DIESLTK 385 DIRECTED STUDY - DIESEL AND RELATED TECHNOLOGY (3)

Lecture: 3 hours

This course allows students to pursue a directed study in Diesel and Related Technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

1. The outcome will vary depending on the contract with the instructor. 2. The student will formulate a research paper based on a topic in diesel and related technology. 3. The student will assemble a fully functioning laboratory mockup based on the research determined by the contract between the instructor and student.

DIESLTK 401 RAIL SYSTEMS OVERVIEW, SAFETY, TOOLS, AND MECHANICAL PRINCIPLES (10)

Lecture: 5 hours / Lab: 16 hours

This course provides an introduction to the rail industry and the various modes of rail vehicles and their use. Rail safety, tools and mechanical principles are also covered.

Student Learning Outcome(s):

Student will perform lockout/tagout procedure according to OSHA standards. Student will assemble a gear system following a diagram to accomplish desired directional movement and torque multiplication.

DIESLTK 401A RAIL SYSTEMS OVERVIEW, SAFETY AND TOOLS (5) CSU

Lecture: 2.5 hours/Lab: 8 hours

This course provides an introduction to the rail industry and the various modes of rail vehicles and their use. Rail safety and tools are also covered.

Student Learning Outcome(s):

Student will perform lockout/tagout procedure according to OSHA standards.

DIESLTK 401B MECHANICAL PRINCIPLES (5) CSU

Lecture: 2.5 hours/Lab: 8 hours

This course provides an overview of rail mechanical principles.

Student Learning Outcome(s):

Student will assemble a gear system following a diagram to accomplish desired directional movement and torque multiplication.

DIESLTK 402 RAIL ELECTRICAL AND ELECTRONIC PRINCIPLES (10)

Lecture: 5 hours / Lab: 16 hours

This course covers electrical fundamentals, technical writing, Programable Logic Controls (PLC), and electronic principles in rail systems technology including electrical and ladder logic schematics, wires and splicing, and related diagnostic tools.

Student Learning Outcome(s):

Student will wire an electric motor following a schematic provided. Student will perform diagnostic tests on a failed electronic component to identify the problem.

DIESLTK 402A RAIL ELECTRICAL PRINCIPLES (5) CSU

Lecture: 2.5 hours/Lab: 8 hours

This course covers electrical fundamentals, technical writing, electrical and ladder logic schematics, and Programable Logic Controls (PLC).

Student Learning Outcome(s):

Student will wire an electric motor following a schematic provided.

DIESLTK 402B RAIL ELECTRONIC PRINCIPLES (5)

Lecture: 2.5 hours/Lab: 8 hours

This course covers electronic principles in rail systems technology, wires and splicing, and related diagnostic tools.

Student Learning Outcome(s):

Student will perform diagnostic tests on a failed electronic component to identify the problem.

DIESLTK 403 RAIL VEHICLE PNEUMATIC & HYDRAULIC CONTROLS AND HVAC & CAR BODY MAINTENANCE (10) CSU

Lecture: 5 hours / Lab: 16 hours

This course provides an overview of the steps for inspecting, maintaining troubleshooting, and rebuilding rail vehicle systems and system components, including propulsion, current collection, trucks and axles, dynamic braking, couplers, HVAC, car body, and communication systems.

Student Learning Outcome(s):

Student will be able to perform a brake system inspection. Student will program electronic HVAC system to manufacturers specifications.

DIESLTK 403A RAIL VEHICLE PNEUMATIC & HYDRAULIC CONTROLS (5) CSU

Lecture: 2.5 hours/Lab: 8 hours

This course provides an overview of the steps for inspecting, maintaining troubleshooting, and rebuilding rail vehicle systems and system components, including propulsion, current collection, trucks and axles, dynamic braking, and couplers.

Student Learning Outcome(s):

Student will be able to perform a brake system inspection.

DIESLTK 403B RAIL VEHICLE HVAC AND CAR BODY (5) CSU

Lecture: 2.5 hours/Lab: 8 hours

This course provides an overview of the steps for inspecting, maintaining troubleshooting, and rebuilding rail vehicle systems and system components, including HVAC, car body, and communication systems.

Student Learning Outcome(s):

Student will program electronic HVAC system to manufacturers specifications.

DIESLTK 404 RAIL DIESEL ENGINE FUNDAMENTALS AND RAIL ACCESSORY/SUPPORT SYSTEMS (10) CSU

Lecture: 5 hours / Lab: 16 hours

This course is designed to cover the theory and operation of diesel engine components and supporting systems, fastening devices, and use of measuring instruments. It also covers rail Accessory/Support Systems including Automatic Train Control (ATC)/ Automatic Train Protection (ATP).

Student Learning Outcome(s):

Student will be able to explain the basic principles of operation of diesel engines and sub-assemblies. Student will perform ATC/ATP system function check.

DIESLTK 404A RAIL DIESEL ENGINE FUNDAMENTALS (5.5) CSU

Lecture: 3 hours/Lab: 7.5 hours

This course is designed to cover the theory and operation of diesel engine components and supporting systems, fastening devices, and use of measuring instruments.

Student Learning Outcome(s):

Student will be able to explain the basic principles of operation of diesel engines and sub-assemblies.

DIESLTK 404B RAIL ACCESSORY/SUPPORT SYSTEMS (4.5) CSU

Lecture: 2 hours/Lab: 8.5 hours

This course is designed to cover rail Accessory/Support Systems including Automatic Train Control (ATC)/ Automatic Train Protection (ATP).

Student Learning Outcome(s):

Student will perform ATC/ATP system function check

DIESLTK 921 COOPERATIVE EDUCATION – DIESEL AND RELATED TECHNOLOGY (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Diesel Technology course or successfully completed a Diesel Technology course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

1.The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DIESEL 931 COOPERATIVE EDUCATION – DIESEL AND RELATED TECHNOLOGY (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Diesel Technology course or successfully completed a Diesel Technology course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

1.The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DIESLTK 941 COOPERATIVE EDUCATION - DIESEL AND RELATED TECHNOLOGY (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1. The student will develop at least three learning objectives to be accomplished on the job. 2. The objectives will be related to the educational/ occupational goals of the student.

DIGITAL MEDIA

DIGLMD 100 INTRODUCTION TO DIGITAL VIDEO (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students are introduced to the process and tools of non-linear video editing. Basic skills will be developed in editing techniques, media file formats, basic audio editing, compression types, industry terminology, development of basic still and motion graphics, and understanding key concepts of shooting for digital systems. Students will produce short video sequences that are appropriately compressed for delivery via web/Internet and various digital media.

Student Learning Outcome(s):

Students will be able to produce short video sequences that are appropriately compressed for delivery via web/internet and various digital media formats according to industry standards.

DIGLMD 101 FUNDAMENTALS OF DIGITAL MEDIA (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will survey a range of mass media fields operating today with a particular attention to the development of media in modern history. From the history of print media through radio and television up to the internet age, students will engage in analysis of the ever-changing adaptations of mass media as it relates to globalization, politics, entertainment and consumerism.

Student Learning Outcome(s):

1. Students will understand and be able to identify a variety of digital media tools and technologies. 2. Students will be able to create and share digital media content through multiple platforms.

DIGLMD 103 FUNDAMENTAL OF DIGITAL AUDIO (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students are introduced to the principles and process of digital audio recording and reproduction. Topics include such aspects as sound design, acoustics, Dolby surround sound, microphones, mixers, outboard gear, signal flow, and recording and editing audio. Further exploration will involve analog over digital formats and destructive over non-destructive editing.

Student Learning Outcome(s):

Students will be able to demonstrate sound recording, editing and design skills that meet industry standards.

DIGLMD 104 DIGITAL MEDIA ENTREPRENEURSHIP (3) CSU

Lecture: 2 hours / Lab: 2 hours

Students will develop an understanding of digital media entrepreneurship and will develop unique digital media projects that demonstrate their understanding of digital media entrepreneurship principles and best practices.

Student Learning Outcome(s):

Students will develop a comprehensive business plan for an entrepreneurial Digital Media concept that reflects industry best practices.

DIGLMD 105 VISUAL DESIGN FOR DIGITAL MEDIA (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will analyze the core principles of visual design, particularly as they relate to narrative and interactive digital media. Students will then apply those principles to the production of digital media projects.

Student Learning Outcome(s):

Students will understand the seven basic visual components and will be able to apply complex principles of design toward analyzing and creating visual structures for digital media projects.

DIGLMD 106 ESSENTIALS FOR LIVE AUDIO (3) CSU

Lecture: 2 hours / Lab: 2 hours

Advisory: DIGLMD 103

Students will learn about the equipment involved in live events, concepts of sound waves and acoustics, how to setup for various event sizes and configurations, and best practices in mixing for live audio.

Student Learning Outcome(s):

Students will be able to setup a sound system using a mixer board and PA system for various situations.

DIGLMD 107 DIGITAL AUDIO: RECORDING AND MIXING (3) CSU

Lecture: 2 hours, Lab: 2 hours

Students will learn recording techniques of a modern studio and understand the role of the engineer using Pro Tools. The course covers modern digital audio workstations using a mixer board to record multiple audio tracks simultaneously, as well as mixing recorded audio for audio balancing.

Student Learning Outcome(s):

1 Students will be able to produce a digital recording of audio through a Soundboard using multiple tracks and channels with appropriate levels and adjustments.

2 Students will be able to mix music appropriately and master a collection of founds to ensure continuity.

DIGLMD 110 VISUAL EFFECTS AND MOTION GRAPHICS (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will learn the craft of video production through hands-on producing of short digital video projects. Over the duration of the course, the students will discover planning, pre-producing, shooting, and post-production of short projects. Projects will emphasize resourcefulness, collaboration and group discourse and introduce students to the technical and creative crafts of shooting and directing digital video.

Student Learning Outcome(s):

Student will be able to create sophisticated title sequence animations, visual effects and motion graphics for a variety of media using Adobe After Effects.

DIGLMD 115 VIDEO EDITING (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will engage in film and video editing techniques on a non-linear editing platform. A series of video editing projects will explore technical non-linear editing system skills and editing tools in the service of storytelling craft. Topics covered include theme, structure, continuity, rhythm, flow, suspense, and dramatic irony.

Student Learning Outcome(s):

Students will be able to use industry standard, non-linear editing systems to effectively cut a video project that demonstrates their understanding of professional standards for editorial techniques and their understanding of the narrative editing process.

DIGLMD 116 INTRODUCTION TO WEB PAGE DESIGN (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will learn the fundamental elements of websites, theories of web design, and how to develop a basic website.

Student Learning Outcome(s):

Students will be able to develop a website with multiple pages with a consistent layout using an external style sheet.

DIGLMD 117 INTERMEDIATE WEB PAGE DESIGN (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will learn the advanced elements of developing an interactive website, dynamic concepts of web design, how to create an image gallery, and implementing a different style sheet for different devices and outputs in a flexible layout.

Student Learning Outcome(s):

Students will be able to develop a website including an image gallery with a floating layout that will be able to change per output/device and retain the compositional layout.

DIGLMD 118 IMAGE MANIPULATION FOR MULTIMEDIA (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will explore concepts and processes to enhance and alter images to develop more compelling compositions for multiple modalities in various formats. Course covers advanced Adobe Photoshop techniques that include the use of alpha channels, layers effects, and animation, as well as format changes for the various media types and aspect ratios.

Student Learning Outcome(s):

1. Students will be able to generate quality photo manipulated compositions, utilizing multiple techniques and palettes in Adobe Photoshop. 2. Students will be able to optimize for various media types of differing dimensions while maintaining the intended compositional style and readability.

DIGLMD 150 INTRODUCTION TO MOBILE APPLICATIONS (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will develop an understanding of the core principles necessary to design and create mobile applications. Course covers pre-production, interface design, asset behavior and user experience.

Student Learning Outcome(s):

Student will design and create a fully functional mobile application including file and asset management.

DIGLMD 151 INTRODUCTION TO INTERFACE DESIGN (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Prerequisite: DIGLMD 153; Advisory: VISCOM 103

Students will develop an understanding of the core principles necessary to design successful and dynamic Graphical User Interfaces. Course covers the essentials of visual design: color theory, layout and composition, as well as interface behavior and user experience.

Student Learning Outcome(s):

Student will concept and design a number of visual graphical interfaces.

DIGLMD 152 DIGITAL ART USING MOBILE APPS (3) CSU

Lecture: 2 hours, Lab 2 hours

Students will develop an understanding of the core principles of digital art and design creating using a mobile app workflow. Course covers the essentials of digital visual design using Photoshop and Illustrator: color theory, composition, software tools, photo manipulation and image creation..

Student Learning Outcome(s):

1 Student will use industry software to create visual assets for games and mobile applications.

DIGLMD 153 2D DIGITAL ANIMATION (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will develop an understanding of the core principles of digital 2D animation. Course covers the essentials of animation using Flash: drawing, key framing, betweening, and exporting animation.

Student Learning Outcome(s):

Student create an animated short using industry standard software.

DIGLMD 155 MOBILE APPLICATION PRODUCTION (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Students will develop and build a completed mobile application. Course covers pre-production, interface design, asset behavior, user experience, and publication of a finished mobile application.

Student Learning Outcome(s):

Students will develop and build a completed mobile application.

DIGLMD 199 DIGITAL MEDIA LAB (1) CSU

Lab: 2 hours

This is an open lab to offer students access to professional creative applications such as Adobe Illustrator, Flash, Dreamweaver, AfterEffects, Photoshop, Premiere, and Soundbooth, and Apple Final Cut Pro, as well as video production equipment to complete coursework in the Digital Media program.

Student Learning Outcome(s):

1. The outcome will vary depending on the needs of the student.2. The student will complete digital media related projects based on course projects.

DIGMLD 911 COOPERATIVE EDUCATION-DIGITAL MEDIA (1)

Lecture: 1 hour

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DIGMLD 921 COOPERATIVE EDUCATION 921-DIGITAL MEDIA (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DIGMLD 931 COOPERATIVE EDUCATION 931-DIGITAL MEDIA (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DIGMLD 941 COOPERATIVE EDUCATION 941-DIGITAL MEDIA (4)

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

DRAFTING

DRAFT 010 CADD FOR SUSTAINABLE LANDSCAPE DESIGN (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

Computer Aided Design/Drafting (CADD) applications and Building Information Modeling (BIM) specific to landscape professionals. Includes introduction to CADD skills, block functions, Internet applications, three-dimensional design, presentation drawings, building systems, working drawings, and working drawing coordination.

Student Learning Outcome(s):

1.- Using sustainable standards and contemporary tools like CAD/BIM 3D printing tools, the student understands and produces a set of construction documents (drawings and specification) for a sustainable landscape/ concrete building. 2.- Student coordinates, plans and locates technical information for a project using site and building restrictions imposed by various entities for a masonry/concrete building and the production of maintenance and operations manuals that address project long term sustainability and resilient requirements. 3.- Student understands and explores mathematical methods and details used to analyze simple structures, properties of materials, cost estimating, load transfer and strain-stress relationships for a masonry/concrete building.

DRAFT 062 CADD FOR ARCHITECTS (3) CSU

Lecture: 2.5 hours / Lab: 2.5 hours

his course will focus on the process of generating and managing building data during the life cycle of a building from 'cradle to cradle'. CADD and BIM drawings can create automatically consistent and dynamic views of the building, detail design and increase the productivity, transparency and accountability. CADD and BIM symbols, templates and standards are used to generate simple models from site design to finish products. Virtual information models made with CADD and BIM transform every field, as it connects data to place and space.

Student Learning Outcome(s):

1.- Student understands how to architecture drawings around their neighborhood and locates sector terminology and protocols to communicate effectively in oral, written, and multimedia formats. 2.- Student learns the basic skill to obtain Architecture CAD/BIM tool Industry Certification as he/she recognizes the role and function of professional organizations, industry associations, and organized labor in a productive society. 3.- Student designs CAD/BIM spatial information for architecture, urban planning and economic development using mathematical principles of pattern recognition.

DRAFT 063 CADD FOR BUILDING (3) CSU*Lecture: 2.5 hours/ Lab: 2.5 hours*

This course covers CAD (Computer Aided Drafting) and BIM (Building Information Model) for Mechanical, Electrical and Plumbing fundamentals, as it applies to the Architecture Field. Standards, codes, regulatory frameworks and templates are applied as per industry guidance. The student learns how to draw in digital environments and visualize multiple disciplines into a single digital model. This procedure eliminates many of the uncertainties found during the construction phase as well as clashing, scheduling conflicts, construction alignment and 'cradle to cradle' strategies.

Student Learning Outcome(s):

1.- Student understands how to create mechanical/electrical/plumbing drawings and locates sector terminology and protocols to communicate effectively in oral, written, and multimedia formats. 2.- Student learns the basic skill to obtain MEP CAD/BIM tool Industry Certification, as he/she recognizes the role and function of professional organizations, industry associations, and organized labor in a productive society. 3.- Student designs MEP CAD/BIM spatial information using mathematical principles of pattern recognition.

DRAFT 064 CADD LABORATORY (3) CSU

Lecture: 2.5 hours/Lab: 2.5 hours

This course provides assistance for the student to resolve architectural or building systems projects in an environment that uses computer aided design / drafting and Internet Work Spaces technology. Students will be able to complete assignments from other courses and expand his / her technology detail knowledge. Students will work individually or in teams and will work with the assistance of an Instructor.

Student Learning Outcome(s):

Design a portfolio demonstrating skills required in industry.

EARTH SCIENCE

EARTH 001 EARTH SCIENCE (3) UC/CSU

Lecture: 3 hours

This course surveys the science of whole Earth inquiry and thereby includes the following topics: Scientific method, Earth systems, Earth materials, internal processes, surface processes, oceans, atmosphere, Earth origins, and Earth history. Students are introduced to important contributions to the study of these topics from the fields of geography, geology, oceanography, chemistry, astronomy, physics, and biology with special attention to the cycling of elements such as Carbon through Earth systems within the organizing paradigms of contributory disciplines such as Plate Tectonic Theory, the Theory of Evolution, and the Big Bang theory.

Student Learning Outcome(s):

The student, upon completion of the course, will be able to identify rock types, and explain the internal structure of the Earth, Plate Tectonics, properties of geological formations such as mountains, phenomena such as earthquakes, properties of the atmosphere and oceans. Explain the ogigins of the Earth, cycles in the environment, and the Geologic time line since the formation of the Earth until now.

ECONOMICS

ECON 001 PRINCIPLES OF ECONOMICS I (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 115

This course provides an introductory of microeconomic analysis and their application to business situation. Emphasis is on supply and demand, elasticities, consumer choice optimization, profits, economic rent, financial environment of business, market structure, economic and social regulations, antitrust policy in a globalized economy.

Student Learning Outcome(s):

1. Student will evaluate individual, professional and government choices in terms of scarcity. 2. Student will apply the understanding of the interaction of demand and supply concept to determine the market price and market quantity of commodity that is produced and consumed. 3.Student will apply the rationing functions of prices and assess the effect of price floor related to under production and over production in the economy. 4. Student will apply the concept of economic change to career development and lifelong learning.

ECON 002 PRINCIPLES OF ECONOMICS II (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 115

This macroeconomics course concentrates on the behavior of the economy as a whole and includes such economy wide phenomena as changes in unemployment, general price level and national income. Emphasis is placed on public spending and public choice, economic fluctuations and business cycles. Other topics include fiscal and monetary policy, deficit spending and public debt, money creation, banking and central banking, policies and prospects for global economic growth, comparative advantage, international trade and contemporary economic developments.

Student Learning Outcome(s):

1. Student will evaluate individual, professional and governmental choices in terms of scarcity. 2. Student will evaluate the limitations of using GDP as a measurement of social welfare. 3. Student will assess the influence of Federal Reserve's monetary policy actions on the market interest rates. 4. Student will assess why nations can gain from specializing in production and gain from international trade and incorporate the concept for career goals and lifelong learning.

EDUCATION

EDUC 001 INTRODUCTION TO TEACHING (3) CSU

Lecture: 3 hours

This course introduces students to the field of professional education and the concepts and issues that are related to K - 8 education. Topics of this course include a basic understanding of a teacher's role and challenges in society, contemporary education issues within historical, social, philosophical, legal, and political contexts, impact of government policies on schools and children, and the various perspectives on curriculum and instruction. Students are required to complete a minimum of 45 hours of fieldwork in an approved elementary, self-contained classroom.Â TB test, finger print (live scan), and background check may be required by individual elementary school.

Student Learning Outcome(s):

At the end of this course, students will be able to: 1. Describe various major historical developments in American education and the impact they have on the public education system and describe possible solutions. 2. Analyze the implication of various philosophies and theoretical frameworks on classroom teachers' curriculum design, delivery, and assessment; classroom management; and instructional approaches. 3. Design and present a lesson plan based on your educational philosophy, utilizing the California Department of Education's curriculum standards or other state and/or professional curriculum standards.

EDUC 006 METHODS AND MATERIALS OF TUTORING (1)

Lab: 3 hours

This course trains students in individual and group tutoring and instructional techniques, group dynamics, interpersonal skills, record-keeping, organizational skills and study skills. It covers tutoring and instructional strategies that promote independent learning. This course is intended for students, paraprofessional educators, and also parents who are interested in learning, teaching, and applying effective instructional and tutoring techniques.

Student Learning Outcome(s):

1. Explain the foundational instructional knowledge and strategies needed for successful tutoring, regardless of subject matter content or academic discipline. 2. Plan, design and choose specific tutoring and instructional strategies for at least two learning styles to enhance academic success.

ELECTRONICS

ELECTRN 002 INTRODUCTION TO ELECTRONICS (3) CSU

Lecture: 3 hours

An overview of the field of applied electronics and its employment opportunities. Introduction to components, nomenclature and symbols. A familiarization of equipment, specifications and physical units. This is a broad introductory course for all students who need a survey of electronic applications and principles. Electronics as applied both historically and in today's society is investigated. Typical topics included are a study of the natural forces that make electronics possible, present applications of electronics to the fields of medicine, transportation, science, communications, industry, and the start of the digital invasion into our homes and work.

Student Learning Outcome(s):

Students will learn the basic electroncis quantities and their application in analyzing DC and AC circuits.

ELECTRICAL CONSTRUCTION AND MAINTENANCE

ECONMT 001 RESISTIVE CIRCUIT ELECTRICAL FUNDAMENTALS (3)

Lecture: 3 hours

The course covers the basic principles of D.C. electricity. Course content will center on the analysis of basic series and parallel circuits, using Ohm's law, the power equations, and Kirchoff's laws. Proper application of appropriate mathematical concepts will be stressed.

Student Learning Outcome(s):

1.Student will analyze and solve mathematical equations to resolve unknown values associated with series electrical circuits. 2.Student will analyze and solve mathematical equations to resolve unknown values associated with parallel electrical circuits. 3.Student will analyze and solve mathematical equations to resolve unknown values associated with combination circuit electrical circuits.

ECONMT 006 SECURITY AND FIRE ALARM TECHNICIAN CERTIFICATION (3) CSU

Lab: 6 hours

This course offers instruction in the installation of Fire and Security alarms. Upon successful completion of the course the student will be eligible to request and test for an installer certification by the National Alarm Association of America.

Student Learning Outcome(s):

1.Student will draw and construct coaxial patch cables. 2 Student will demonstrate knowledge of basic alarm systems.

ECONMT 007 HOME THEATER & COMMERCIAL AUDIO, VIDEO INSTALLATION THEORY(3)

Lab: 6 hours

This course offers instruction in the installation of Home Theater Video and Audio systems as well as commercial and industrial applications for audio and video technology. Upon successful completion of the course the student will have the skills to enter this area of the electrical trade.

Student Learning Outcome(s):

1. Student will demonstrate knowledge of electrical safety work practices.
2. Student will perform the tasks required to construct a CAT5 patch Cable.
3.Student will perform the tasks required to construct a Coaxial patch Cable.

ECONMT 100 (O.S.H.A.) SAFETY STANDARDS: CONSTRUCTION AND INDUSTRY (2)

Lecture: 2 hours

(Same as Building Construction Techniques 102).

This course provides instruction on industry safety and health rules as it applies to workers and employers within the construction industry. Topics such as fall protection, lock out tag out procedures, PPE, excavations, etc. are covered. Participants that meet the required hourly attendance and successfully pass the final exam will be eligible to receive their OSHA (30 hr) safety-training certificate.

Student Learning Outcome(s):

1. Recognize appropriate training requirements and training methods.
2. Define OSHA specific construction terms such as; competent person, construction work, confined space, working space, general duty clause. 3. Select situational appropriate PPE.

ECONMT 101 ELECTRICAL CRAFT HELPER (4) CSU

Lecture: 4 hours

This course is designed as entry level preparation for a student interested in careers in the electrical power industry. This introductory course covers the basic fundamentals of planning, installation and maintenance of high and low voltage electrical systems. Basic functions of generation, both hydro and steam are covered. The transmission and distribution of electrical power will be reviewed. Fundamentals of electricity, identification, function, and operation of components will be surveyed. Ohms law, safety, ropes, knots, rigging, and tools required in the trade will be reviewed. Civil service exam assistance will also be covered.

Student Learning Outcome(s):

List the types of knots utilized for common rigging operations. State the required safety regulation and practices of the power line industry. Describe the precautions and safeguards required of employees working in the power line industry.

ECONMT 105 FUNDAMENTALS OF SOLAR ELECTRICITY (3) CSU

Lecture: 3 hours

This course is designed for students interested in a career in the solar industry. The fundamental principles and functions of photo voltaic industry will be introduced. This course covers planning, installation, maintenance and all the necessary components for a photo voltaic system. The transmission and distribution of electric power will be reviewed. Basic concepts of electricity, identification, functions and operations of components will be surveyed.

Student Learning Outcome(s):

1. Describe the history of PV technology and the industry and list available markets and possible applications for PV systems. Identify types of PV systems and their application. Describe the advantage and disadvantage of each. Identify safety practices and protective equipment used to mitigate hazards in the installation and maintenance of PV systems. 2. Define basic electrical/solar terms including: energy, power, , series and parallel electrical circuits. Define basic solar terms including: irradiation, irradiance, tilt angle, latitude, longitude, azimuth angle etc. Determine series/parallel PV array arrangement based on module and inverter specifications. 3. Describe the testing standards for solar modules and identify measurement conditions for solar cells and modules. Label key points and describe effects of environmental conditions on a typical IV curve. 4. Describe the use of a digital multi-meter, pyranometer, compass, and given a declination map, differentiate true south from magnetic south. Identify parts and demonstrate the ability to use the Sun pathfinder and do shading analysis.

ECONMT 110 RENEWABLE ENERGY SYSTEMS (3) CSU

Lecture: 3 hours

This course will cover energy basics, solar basics, both active and passive, solar-thermal and solar-electric, wind, hydro-power, wave and tidal power, bio-fuel and biomass resources, geothermal power, energy storage and hydrogen fuel cells. Both large and small scale, grid interactive and stand alone systems will be discussed. Energy collection, site evaluation, design analysis of various systems, material use, and methods of construction will also be covered, along with overviews of California and US energy policy and global energy use.

Student Learning Outcome(s):

1. Discuss the history of renewable energy development. 2. List the regions of the globe where specific renewable options are most or least viable. 3. List the components needed for various renewable energy sources.

ECONMT 115 FUNDAMENTALS OF D.C. ELECTRICITY (3) CSU

Lecture: 3 hours

This course offers study in the Fundamentals of D.C. Electricity. Subjects include: Electrical safety, the basic principles of atomic structure, electrical quantities,static electricity, magnetism, induction, resistors,series circuits, parallel circuits, and combination circuits. The proceeding resistive circuits will be analyzed using Ohm's Law, The Power Equation and Kirchoff's Voltage and Current Laws.

Student Learning Outcome(s):

1.Student will analyze and solve Series Circuit problems. 2. Student will analyze and solve Parallel Circuit problems. 3. Student will analyze and solve Combination Circuit problems.

ECONMT 116 HANDTOOLS AND WIRING PRACTICES (2) CSU

Lab: 6 hours

This course covers the proper use of Hand Tools, Wiring Methods, Conductor Identification, Selection, Splicing and Termination. Trade Practices and an Introduction to the National Electrical Code.

Student Learning Outcome(s):

1.Student will construct various Knots. 2. Student will locate and interpret information in the National Electrical Code. 3. Student will demonstrate knowledge of electrical safety work practices.

ECONMT 117 ELEMENTARY CIRCUIT PRACTICES (4) CSU

Lab: 12 hours

This course offers instruction in the drawing and analysis of wiring plans, wiring diagrams, and ladder diagrams. Including the wiring of both low and high voltage circuits utilizing: push button, single pole, standard three way, coast three way, standard four way, coast four way,and master switching systems.

Student Learning Outcome(s):

1. Student will interpret and identify the components of a 4 Way Switching System. 2.Student will interpret and identify the components of a 3 Way Switching System. 3. Student will demonstrate knowledge of electrical safety work practices.

ECONMT 119 APPLIED CALCULATIONS AND MEASUREMENTS (3) CSU

Lecture: 3 hours

This is an entry level course in electrical calculations and measurements with special emphasis on the application problems encountered in the electrical construction industry.

Student Learning Outcome(s):

1. Student will interpret and solve Common Fraction problems. 2. Student will interpret and solve Decimal Fraction problems. 3.Student will interpret and solve Percent problems.

ECONMT 120 INDUSTRIAL CONTROL SYSTEMS (3) CSU

Lecture: 3 hours

Prerequisite: Electrical Construction and Maintenance 115; and Electrical Construction and Maintenance 119.

This course is a study of motors, circuits and devices used for controlling electric motors and the National Electrical Code covering motor installation.

Student Learning Outcome(s):

1. Interpret a ladder diagram of a control strategy to manually control a motor from two different locations and the ability to start or stop the motor from either location, utilizing two start/stop stations a single phase AC motor and a Contactor or magnetic motor starter. 2. Interpret a ladder diagram of a control strategy to run and stop a series universal motor from a remote location utilizing an automatic pilot device and a contactor.

ECONMT 128 INDUSTRIAL CONTROL SYSTEMS PRACTICES (3) CSU

Lab: 9 hours

Prerequisite: Electrical Construction and Maintenance 115

This course fosters the development and application of control circuitry through the use of instructional wiring panels and lab project boards. The course includes manual and electromagnetic control of motors using switches, pushbuttons, relays and starters for sequencing, jogging, reversing and timed control of motors and circuits.

Student Learning Outcome(s):

1. Interpret two ladder diagrams, each with a different strategy to control a motor. One will operate a motor automatically from a remote location. The second will control a motor manually from two separate locations. Both strategies will employ contactors.

ECONMT 128A INDUSTRIAL CONTROL SYSTEMS PRACTICES A (1) CSU

Lab: 3 hours

This course fosters the development and application of control circuitry through the use of instructional wiring panels and lab project boards. The course includes manual and electromagnetic control of motors using switches, pushbuttons, relays and starters for sequencing, jogging, reversing and timed control of motors and circuits.

Student Learning Outcome(s):

Interpret two ladder diagrams, each with a different control strategy to control a motor. One will operate a motor automatically from a remote location. The second will control a motor manually from two separate locations. Both strategies will employ contactors.

ECONMT 128B INDUSTRIAL CONTROL SYSTEMS PRACTICES B (1) CSU

Lab: 3 hours

This course is the second module of the 128 A,B,C series and continues to foster the development and application of control circuitry through the use of instructional wiring panels and lab project boards. The course includes manual and electromagnetic control of motors using switches, pushbuttons, relays and starters for sequencing, jogging, reversing and timed control of motors and circuits.

Student Learning Outcome(s):

Interpret two ladder diagrams, each with a different control strategy to control a motor. The first will operate a motor manually from two locations. The second will control a motor automatically from a remote location. Both strategies will employ contactors.

ECONMT 128C INDUSTRIAL CONTROL SYSTEMS PRACTICES C (1) CSU

Lab: 3 hours

This course is the final module of the 128 A,B,C series and finalizes the development and application of control circuitry through the use of instructional wiring panels and lab project boards. The course includes manual and electromagnetic control of motors using switches, pushbuttons, relays and starters for sequencing, jogging, reversing and timed control of motors and circuits.

Student Learning Outcome(s):

Interpret two ladder diagrams, each with a different control strategy to control a motor. One will operate a motor automatically from a remote location. The second will control a motor manually from two separate locations. Both strategies will use contactors.

ECONMT 129 FUNDAMENTALS OF ALTERNATING CURRENT (3)

Lecture: 3 hours

Prerequisite: Electrical Construction and Maintenance 115; Electrical Construction and Maintenance 119;

This course offers a study in operating principles of electrical power systems, the theory of A.C. generators and motors, load calculations, efficiencies, power factor correction, and calculations related to these theories.

Student Learning Outcome(s):

Apply appropriate Ohms laws, mathematical rules and trigonometry to solving multiple electrical calculations including: given the circuit voltage and current flowing into a motor and a wattmeter reading, the student will apply appropriate formulas and calculate the total Apparent Power, True Power, Reactive Power, Impedance, Inductive Reactance, Inductance, Phase Angle and the Power Factor of the motor circuit.

ECONMT 130 PRINCIPLES OF INDUSTRIAL ELECTRIC POWER (3)

Lecture: 3 hours

This course offers a study in operating principles and maintenance procedures and code requirements for electrical power systems. Theory of D.C. and A.C. generators and motors, load calculations, efficiency and power factor correction are also covered.

Student Learning Outcome(s):

1. Analyze drawings of control and power circuits used in industry. 2. Analyze various motor acceleration methods. The students will compare and contrast the efficiency of the different methods. 3. Calculate transformer voltage, current, and KVA ratings..

ECONMT 136 INDUSTRIAL POWER APPLICATIONS (3)

Lab: 9 hours

This course offers a practical study on shop experience in testing, servicing and repairing industrial plant electrical equipment, connection and operation of generators, as well as motors and their control systems.

Student Learning Outcome(s):

1. Connect electrical motor control equipment to single and three phase motors to National Electrical Code standards in a safe and workman-like manner using proper lock out and tag out procedures. 2. Demonstrate electrical control troubleshooting skills, and the ability to identify electrical open circuits, electrical short circuited connections and electrically grounded circuits. 3. Present finished drawings of all connections made during class.

ECONMT 137 INDUSTRIAL ELECTRONIC CONTROL SYSTEMS (3)

Lecture: 3 hours

In this course fundamental electronic and semiconductor theory as well as applications of electronic devices to industrial control systems are studied. Boolean algebra, logic circuits and numbering systems as they used in industrial controls are examined. Transducers, photoelectric limit switches and other industrial devices are studied.

Student Learning Outcome(s):

1. Students will analyze electronic control and power circuits. 2. The student will be able to identify different discrete electronic components and explain their operation in an industrial motor controller. 3. Students will reconfigure basic logic circuits to achieve alternate logical results.

ECONMT 138 APPLICATIONS OF ELECTRICAL AND ELECTRONICS DEVICES (2) CSU

Lab: 6 hours

This course studies identification and operational tests on various types of electrical and electronic equipment, including transformers, electronic motor speed control systems and other industrial control devices.

Student Learning Outcome(s):

1. Construct digital logic circuits, and analyze them using Boolean Algebra. 2. Use solid state relays to energize motors or motor starters. 3. Compare and contrast logic gates using truth tables.

ECONMT 140 CONSTRUCTION WIRING PRINCIPLES AND PRACTICES (3)

Lecture: 3 hours

Prerequisite: Electrical Construction and Maintenance 130; and Electrical Construction and Maintenance 136; Corequisite: Electrical Construction and Maintenance 167;

This class teaches the wiring of electrical systems, including: layout, construction methods, code requirements, installation standards, and best practices.

Student Learning Outcome(s):

1. Students will design wiring plans, which conform to various load and control requirements, which result in minimum material use. 2. Students will calculate the full load currents, and the appropriately sized wire and protective devices for an assigned transformer according to the current National Electrical Code.

ECONMT 142 BASIC PROGRAMMABLE LOGIC CONTROLS (PLC) (1)

Lab: 3 hours

Introduction to Basic Programmable Logic Controllers, Programming Devices, Ladder Diagrams and Designing PLC Programs for Industrial Processes.

Student Learning Outcome(s):

1. Identify the advantages of a programmable controller. 2. Identify four components of a programmable controller. 3. Identify input and output devices connected to a programmable controller.

ECONMT 150 INTRODUCTION TO THE ELECTRICAL CODES (3)

Lecture: 3 hours

Prerequisite: Electrical Construction and Maintenance 130; and Electrical Construction and Maintenance 136; Corequisite: Electrical Construction and Maintenance 140;

This is a study and interpretation of the National Electrical Code, local ordinances, and regulations covering wiring installations and principal circuit requirements.

Student Learning Outcome(s):

1. Students will calculate loads and currents for assigned industrial, commercial, and residential occupancies. 2. Students will calculate the appropriately sized wire, conduit, and protective devices for the assigned industrial, commercial, and residential occupancies according to the current National Electrical Code.

ECONMT 159 PROGRAMMABLE LOGIC CONTROLS (PLC) (4) CSU

Lecture: 3 hours / Lab: 4 hours

Programmable Logic Controller wiring, programming, and troubleshooting techniques are learned and practiced in a hands-on laboratory environment.

Student Learning Outcome(s):

Identify, illustrate, and apply PLC Input/Output components Plan, design, and construct PLC wiring diagrams Plan, design, and construct working PLC programs Troubleshoot faulty PLC hardware and software

ECONMT 164 SUSTAINABLE LIGHTING PRINCIPLES & PRACTICES (3) CSU

Lab: 6 hours

This course offers study in the design of residential and commercial lighting systems. Included, are both indoor and outdoor lighting applications,emphasizing sustainable lighting design and energy saving strategies.

Student Learning Outcome(s):

Student will analyze and interpret ballast wiring diagram and install replacement ballast.

ECONMT 167 ELECTRICAL CONSTRUCTION WIRING TECHNIQUES (3)

Lab: 9 hours

Students are taught and practice electrical rough-in methods, while emphasizing safe working methods and compliance with Electrical Codes and trade standards.

Student Learning Outcome(s):

Students will install the appropriately sized wire, conduit, and protective devices for the assigned laboratory projects. Students will correctly splice and terminate electrical building wire as part of each lab project. Student will follow Lockout/Blockout procedures and other recognized electrical workplace safety procedures at all times in lab.

ECONMT 168 INSTALLATION OF ELECTRICAL WIRING (2)

Lab: 6 hours

Students learn to, and practice, calculating and laying out interior electrical conduit and cable wiring systems, followed by practical installations, including rough-in and finishing techniques.

Student Learning Outcome(s):

Students will draw, read, and interpret electrical schematic diagrams and wiring plans. Students will analyze and troubleshoot faulty electrical wiring systems

ECONMT 169 ALTERNATING CURRENT PRACTICES (2)

Lab: 6 hours

This course offers a study in operating principles,and electrical power systems. Theory of A.C. generators and motors, load calculations, efficiencies and power factor correction, and calculations related to these theories demonstrated with projects.

Student Learning Outcome(s):

1. Student will demonstrate an understanding of various electrical meters, resistors, transformers, capacitors, rectifier diodes, and series and parallel circuits. 2. Student will demonstrate an understanding of common AC voltage systems from single phase 120/240 volt to 480 volt delta and wye.

ECONMT 171 ELECTRICAL CODES AND ORDINANCES I (3)

Lecture: 3 hours

Basic electrical codes and ordinances are the focus of this course. General codes, wiring methods and fittings, and circuit requirements specified in the various ordinances are reviewed.

Student Learning Outcome(s):

1. Students will list electrical codes by topic and article. 2. Identify topic specific electrical code requirements such as; service size, circuit protection, branch circuits, and box sizing. 3. Interpret various electrical codes applied to various electrical installation examples.

ECONMT 172 ELECTRICAL CODES AND ORDINANCES II (3)

Lecture: 3 hours

Advanced electrical codes and ordinances are the focus of this course. General codes, wiring methods and fittings, and circuit requirements specified in the various ordinances are reviewed.

Student Learning Outcome(s):

1. List electrical codes by topic and article. 2. Identify topic specific electrical code requirements such as; service size, circuit protection, branch circuits, and box sizing. 3. Interpret various electrical codes applied to various electrical installation examples.

ECONMT 173 ELECTRICAL MATHEMATICS I (3)

Lecture: 3 hours

This is an entry level course in electrical calculations and measurements with special emphasis on the application problems encountered in the electrical construction industry.

Student Learning Outcome(s):

1.Student will interpret and solve Common Fraction problems. 2.Student will interpret and solve Decimal Fraction problems. 3. Student will interpret and solve Percent problems.

ECONMT 174 ELECTRICAL MATHEMATICS II (3)

Lecture: 3 hours

Topics covered in this course are problems relating to A.C. power applications, use of the scientific calculator, percentage ratio and proportions, wire sizing, voltage drops, energy and efficiency calculations, trigonometric functions, phasor diagrams, A.C. single and poly-phase circuits, transformers, star and delta connections and mathematics for logic controls.

Student Learning Outcome(s):

1.Student will interpret and solve Signed Number problems. 2. Student will interpret and solve Ratio & Proportion problems. 3. Student will interpret and solve Algebraic problems.

ECONMT 177 ELECTRIC MOTOR CONTROL I (3)

Lecture: 3 hours

This course studies basic motor control fundamentals including the basic functions of control. Magnetic principles of D.C. and A.C. motors, types of motors, motor selection fundamentals are reviewed. Topics covered also include definitions for controller components and symbols, familiarization with N.E.M.A. standards and review of one-line, wiring and schematic diagrams.

Student Learning Outcome(s):

1. Students will interpret two schematic diagrams. One diagram contains a strategy for controlling a motor manually from two different locations. The second diagram contains a strategy for controlling a motor automatically from a remote location.

ECONMT 178 ELECTRIC MOTOR CONTROL II (3)

Lecture: 3 hours

This course focuses on a brief review of material covered in Electric Motor Control I and the selection and application of D.C. and A.C. controllers with emphasis on the A.C. devices. Study areas include manual, magnetic, across-the- line starters, as well as most forms of reduced voltage starters including the auto transformer, primary resistor, star-delta, part-winding and wound rotor type reduced voltage starters. Synchronous, multi-speed starters and the many methods of decelerating and braking and static components are discussed.

Student Learning Outcome(s):

1. Analyze drawings of control and power circuits used in industry. 2. Student will be shown two different electrical diagrams containing either magnetic motor starters and/or contactors. One diagram will involve the control of the circuit load from multiple locations. The other diagram will involve the automatic operation of the circuit load. Student must correctly identify the motor shown in each diagram.

ECONMT 181 BASIC WIRING PRACTICES (3)

Lecture: 3 hours

This course contains the study of basic electrical diagrams;such as,wiring plans,wiring diagrams,and ladder diagrams.Topics of discussion include:Architectural symbols and drawings,reading and interpreting plans and specifications,as well as the drawing of basic circuits.

Student Learning Outcome(s):

1. Student will identify the components of a Standard 3 Way Switching System and its terminations. 2. Student will identify the components of a Standard 4 Way Switching System and its terminations. 3. Student will demonstrate an understanding on the use of handtools in a safe and workmanlike manner.

ECONMT 182 BASIC DIAGRAM AND CIRCUIT PRACTICES (1)

Lab: 3 hours

This course provides practical shop practice in the wiring of signal, communication and control circuits. Connection of device mechanisms such as, lights, buzzers and relays are specifically reviewed.

Student Learning Outcome(s):

1. Student will identify the components of a Standard 3 Way Switching System and its terminations. 2. Student will identify the components of a Standard 4 Way Switching System and its terminations. 3. Student will demonstrate an understanding on the use of handtools in a safe and workmanlike manner.

ECONMT 183 RESIDENTIAL ELECTRIC WIRING (3)

Lecture: 3 hours

This Course covers the design and layout of residential electrical wiring in accordance with the National Electrical Code and recognized best trade practices.

Student Learning Outcome(s):

Students who complete this class with an aggregate score exceeding 70% will calculate feeder and service loads for residential occupancies. Students who complete this class with an aggregate score exceeding 70% will select wiring methods suitable for residential occupancies. Students who complete this class with an aggregate score exceeding 70% will design wire sizes and outlet locations suitable for residential occupancies.

ECONMT 184 MOTOR CONTROL PRINCIPLES AND PRACTICES (3)

Lab: 6 hours

This course will examine the testing, adjusting, servicing and connecting motors, generators and associated controllers. Reduced voltage starters and other motor starting techniques will be studied.

Student Learning Outcome(s):

1.Demonstrate familiarity with the theory and principles of AC single and three-phase motors, DC motors, generators and alternators. 2.Be able to install above machines by connecting power and control circuits, as well as demonstrate motor control troubleshooting skills, and the ability to identify electrical opens, shorts and ground faults. 3.Demonstrate the ability to solve motor control calculations, design and convert elementary diagrams of the advanced motor control systems from both written and oral instructions into workable wiring installations.

ECONMT 185 DIRECTED STUDY - ELECTRICAL CONSTRUCTION AND MAINTENANCE (1)

Lecture: 1 hour

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Electrical Construction & Maintenance.

ECONMT 185L DIRECTED STUDY, ELECTRICAL CONSTRUCTION AND MAINTENANCE(LAB) (1)

Lab: 3 hours

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in Electrical Construction & Maintenance.

ECONMT 186 INDUSTRIAL ELECTRICAL PRINCIPLES AND PRACTICES (3)

Lab: 6 hours

This course content includes the use of measuring instruments, connecting and testing transformer banks and connecting and testing industrial electronic control devices. This course discusses single phase and three phase transformers.

Student Learning Outcome(s):

1. Identify single phase and three transformers as well as differentiate between the two types 2. Safely connect three single phase transformers into a variety of connections for a three phase bank operation. 3. Be able to do calculations involving single phase as well as three phase transformers

ECONMT 187 ADVANCED PROGRAMMABLE CONTROLLERS (4)

Lecture: 3 hours / Lab: 4 hours

Programmable Logic Controller lecture and laboratory class, including Sequencers, Shift Registers, Analog I/O, and Subroutines, taught using RSLogix software.

Student Learning Outcome(s):

Design, construct, and develop working PLC programs using advanced PLC instructions Identify the four key elements that make up a closed loop process control system. Troubleshoot a programmable controller program.

ECONMT 190 ELECTRICAL CODE CALCULATIONS (3)

Lecture: 3 hours

Advisory: Electrical Construction and Maintenance 171.

This class covers branch circuit, feeder, tap, service, motor, and transformer calculations from the National Electrical Code in detail.

Student Learning Outcome(s):

1. Student will perform NEC Article 220 residential, commercial and industrial calculations 2. Student will perform NEC Article 240 tap rule calculations 3. Student will perform NEC motor and transformer calculations.

ECONMT 191 COMMERCIAL WIRING AND PRACTICES (2)

Lab: 6 hours

Instruction is given in installation of wiring systems such as non-metallic sheathed cable, armored cable, flexible metal conduit, electrical metallic tubing, and PVC. Emphasis is given on National Electric Code standards.

Student Learning Outcome(s):

The student will be able to wire a commercial electrical circuit following a wiring diagram using approved methods.

ECONMT 192 RESIDENTIAL WIRING AND PRACTICES (2)

Lab: 6 hours

The course content includes the installation of residential wiring materials including non-metallic sheathed cable, armored cable and flexible metal conduit for outlets, appliances and lighting.

Student Learning Outcome(s):

The student will be able to wire a residential electrical circuit following a wiring diagram using approved methods. The student will be able to take accurate voltage measurements using the meter's low impedance scale and discern between actual voltages and so called ghost or phantom voltages.

ECONMT 193 CONDUIT BENDING AND CALCULATIONS (3)

Lab: 6 hours

This class teaches bending cutting and threading of conduits: EMT (Electrical Metallic Tubing), rigid, and IMC (Intermediate Metal Conduit) and the calculations that are included in these operations. Conduit will be bent with hand and hydraulic benders.

Student Learning Outcome(s):

Students will bend stubs, saddles, offsets, and back-to-back bends to specified dimensions in EMT, IMC, and rigid conduit. Students will thread IMC and rigid conduit Students will prepare, plan, and calculate conduit bends.

ECONMT 193A CONDUIT BENDING LABORATORY (1)

Lab: 3 hours

Corequisite: Electrical Construction and Maintenance 168.

This class practices the cutting and bending of electrical conduits, and the necessary calculations included in these operations. EMT conduit will be bent with hand benders.

Student Learning Outcome(s):

Students will bend stubs, saddles, offsets, and back-to-back bends in EMT conduit.

ECONMT 195 GROUNDING: FUNDAMENTALS, APPLICATIONS AND PRACTICES (3)

Lecture: 3 hours

This course will cover the fundamentals of electrical system grounding principles of reviewing definitions, theory, and equipment installations. Application to accepted industry practices, compliance to the National Electrical Code, review of lightning protection and electronic equipment grounding will be covered.

Student Learning Outcome(s):

1. Student will differentiate between grounding and bonding and define terms associated with grounding and bonding such as; ground, grounding, grounded, bonding, bonded, ground fault current. 2. Students will state grounding and bonding requirements and identify NEC code sections for safety and compliance. 3. Students will list applicable NEC sections pertaining to grounding and bonding.

ECONMT 196 INFRASTRUCTURE WIRING PRACTICES (4)

Lecture: 3 hour / Lab: 3 hours

This course offers instruction in the installation, termination, testing and documentation of commercial infrastructure wiring including the following: Coaxial Cable, Category 3, 5, 5E, & 6 Unshielded Twisted Pair and Fiber Optics.

Student Learning Outcome(s):

1. Student will demonstrate knowledge of electrical safety work practices.
2. Student will perform the tasks required to construct a CAT5 patch Cable.
3. Student will perform the tasks required to construct a Fiber Optic patch Cable.

ECONMT 197 LOW VOLTAGE ELECTRICAL PRACTICES (3)

Lab: 6 hours

This course offers instruction in the installation, termination, testing and documentation of low voltage systems, such as lighting, communication, telephone, data, control systems, and similar low voltage applications.

Student Learning Outcome(s):

1. Student will demonstrate knowledge of electrical safety work practices.
2. Student will perform the tasks required to construct a CAT5 patch Cable.
3.Student will perform the tasks required to construct a Coaxial patch Cable.

ECONMT 199 JOURNEYMAN ELECTRICIAN EXAM PREPARATION (3)

Lab: 6 hours

This course will prepare the student for the State of California Electricians' Certification Examination. The distance education version of the class uses the Internet, World Wide Web and e-mail.

Student Learning Outcome(s):

1. Student will apply electrical calculations and measurements. 2. Student will identify trade specific electrical codes. 3. Student will pass a simulated Certification exam.

ECONMT 205 SOLAR ENERGY INSTALLATION & MAINTENANCE PRINCIPLES AND PRACTICES (2)

Lab: 6 hours

This course is designed for individuals who have the basic electrical and mechanical skills of an energy technician or electrician and are looking to expand into the renewable energy field. This is a hands on class to develop the fundamental principles and practices for installation and maintenance of solar, wind, and similar renewable energy systems. This course covers basic planning, installation, and maintenance of the necessary components for various renewable energy systems.

Student Learning Outcome(s):

1 Demonstrate the ability to use safety harnesses while working on roofs. Follow all safety rules and regulations while working on roofs, in attics and around all electrical equipment during the installation of a renewable energy system. 2. Analyze a site assessment and select the appropriate system and design. Conduct a site survey and develop a written report that accounts for shading, array orientation, mounting methods and equipment BOS locations. Perform a system installation following manufacturer's directions. 3. Adapt a systems mechanical design to conform to the individual site assessment needs taking into account ambient temperature, verify component sizes and capacities. Demonstrate and install subsystem components to an industry acceptable standard.

ECONMT 212 SIGNIFICANT CHANGES NEC - NATIONAL ELECTRICAL CODE (3) CSU

Lecture: 3 hours

Continuing education for the journeyman electrician. This course covers the changes to the National Electrical Code made during each 3 year code revision cycle. Each change to the code will be highlighted and how the change will impact the industry practices will be covered.

Student Learning Outcome(s):

1. List electrical codes by topic and article. 2. Identify topic specific electrical code changes, such as; grounding, OCP, motors, transformers, hazardous locations, healthcare facilities. 3. Interpret and discuss the trade impact of various electrical codes changes.

ECONMT 215 SMALL WIND ENERGY SYSTEMS PRINCIPLES AND PRACTICES (3)

Lecture: 2 hours / Lab: 4 hours

This course is designed for individuals that have the basic electrical and mechanical skills of an energy technician or electrician and are looking to expand into the small wind energy field. This class will help one to develop the fundamental knowledge and skill sets typically required for small wind system practitioners and to help ensure safety, quality and consumer acceptance of small wind installations.

Student Learning Outcome(s):

1. Discuss the history and development of wind energy. 2. List the regions of the globe where wind is a renewable option. 3. Install the components needed for various wind renewable energy sources.

ECONMT 285 DIRECTED STUDY - ELECTRICAL CONSTRUCTION AND MAINTENANCE (2)

Lecture: 2 hours

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Electrical Construction & Maintenance.

ECONMT 285L DIRECTED STUDY, ELECTRICAL CONSTRUCTION AND MAINTENANCE (LAB) (2)

Lab: 6 hours

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in Electrical Construction & Maintenance.

ECONMT 385 DIRECTED STUDY - ELECTRICAL CONSTRUCTION AND MAINTENANCE (3)

Lecture: 3 hours

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in Electrical Construction & Maintenance.

ECONMT 385L DIRECTED STUDY,ELECTRICAL CONSTRUCTION AND MAINTENANCE (LAB) (3)

Lab: 9 hours

This course allows students to pursue a directed study in Electrical Construction & Maintenance on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in Electrical Construction & Maintenance.

ECONMT 941 COOPERATIVE EDUCATION -ELECTRICAL CONSTRUCTION & MAINTENANCE (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

ELECTRICAL LINEMAN APPRENTICE

ELECLNM 175 UTILITY POLE CLIMBING CERTIFICATION - (175 HOURS) (4)

Lab: 10 hours

This is a practical laboratory class of 175 hour to provide training and practice for individuals that have completed the electrical line worker (600) hour course or have sufficient work experience but have not yet met the pole climbing competencies to receive a climbing certification. Special Note: Students during the course of instruction will be required to lift up to 60 lbs. with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered.

Student Learning Outcome(s):

Students will be able to climb and perform installation and maintenance operations at the top of power poles with proper technique in accordance with industry regulations and safety standards.

ELECLNM 701A ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IA (3)

Lecture: 2 hours / Lab: 2 hours

Module 1A; Instruction is given in the generation of electricity; hydro, steam, wind, the elements of electricity, static, magnetism, electric circuit, transmission lines and cables, sub-transmission lines and cables, distribution lines and cables. Students receive training in pole climbing; safe practices, installation of cross arms, insulator guys, hanging of transformer, stringing of lines, pulling cables, pole top rescue and vault rescue. Safety and first aid are emphasized.

Student Learning Outcome(s):

1. Discuss the history and development of the electric utility industry. 2. Identify specific industry tools and materials and discuss their usage. 3. Select and demonstrate proper electric utility PPE equipment.

ELECLNM 701B ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IB (3)

Lecture: 2 hours / Lab: 2 hours

This course provides instruction in the generation of electricity; hydro, steam, wind, the elements of electricity, static, magnetism, electric circuit, transmission lines and cables, sub-transmission lines and cables, distribution lines and cables. Students receive training in pole climbing; safe practices, installation of cross arms, insulator guys, hanging of transformer, stringing of lines, pulling cables, pole top rescue and vault rescue. Safety and first aid are emphasized.

Student Learning Outcome(s):

1. Discuss the history and development of the electric utility industry. 2. Identify specific industry tools and materials and discuss their usage. 3. Select and demonstrate proper electric utility PPE equipment.

ELECLNM 702A ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IIA (3)

Lecture: 2 hours / Lab: 2 hours

Instruction is given in electricity including; electrical math, series and parallel circuits, motors, induced emf, mutual and self induction, direct current, alternating current, transformers connections, transformer fusing, capacitors, voltage regulators, definitions, core loses, polarity, markings, oil insulation, cooling practices, loading and testing, and oil circuit breakers. Street light practices, circuits, utilitarian systems, lamps, sodium and mercury lights, glassware, refractors, control of streetlights, map reading, forms, test, regulators and safety in maintenance are all emphasized. in electricity including; electrical math, transformers, street light practices, map reading, and safety in maintenance.

Student Learning Outcome(s):

1. Applied calculations of measurement involved with electrical installations such as; transformer calculations, lighting loads in series, and parallel. 2. Demonstrate map reading. 3. Identify safety in general utility maintenance.

ELECLNM 702B ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IIB (3)

Lecture: 2 hours / Lab: 2 hours

Instruction is given in electricity including; electrical math, series and parallel circuits, motors, induced emf, mutual and self induction, direct current, alternating current, transformers connections, transformer fusing, capacitors, voltage regulators, definitions, core loses, polarity, markings, oil insulation, cooling practices, loading and testing, and oil circuit breakers. Street light practices, circuits, utilitarian systems, lamps, sodium and mercury lights, glassware, refractors, control of streetlights, map reading, forms, test, regulators and safety in maintenance are all emphasized.

Student Learning Outcome(s):

1. Applied calculations of measurement involved with electrical installations such as; transformer calculations, lighting loads in series, and parallel. 2. Demonstrate map reading. 3. Identify safety in general utility maintenance.

ELECLNM 703A ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IIIA (3)

Lecture: 2 hours / Lab: 2 hours

Instruction is given in the stringent use of state law G.0.095, safety orders, OSHA requirements, overhead construction standards, overhead jobs, joint pole agreement of California, and electrical service requirements. Course reviews conductor sizes, splices, stringing, dead-ending, guying, rigging, transformer fusing, circulation current, trouble shooting, street lighting and public relations, live-line maintenance using live-line tools, safety and first aid.

Student Learning Outcome(s):

1. Restate law G.0.095, safety orders, OSHA requirements. 2. Discuss the joint pole agreement of California. 3. State electrical service requirements.

ELECLNM 703B ELECTRICAL LINEMAN APPRENTICE RELATED TRAINING IIIB (3)

Lecture: 2 hours / Lab: 2 hours

Instruction is given in the stringent use of state law G.0.095, safety orders, OSHA requirements, overhead construction standards, overhead jobs, joint pole agreement of California, and electrical service requirements. Course reviews conductor sizes, splices, stringing, dead-ending, guying, rigging, transformer fusing, circulation current, trouble shooting, street lighting and public relations, live-line maintenance using live-line tools, safety and first aid.

Student Learning Outcome(s):

1. Restate law G.0.095, safety orders, and OSHA requirements. 2. Discuss the joint pole agreement of California. 3. State electrical service requirements.

ELECLNM 704A ELECTRICAL LINEMAN - APPRENTICE CABLE SPLICER MODULE A (3)

Lecture: 2 hours / Lab: 2 hours

This course provides instruction in the application of rigging principles and practices on underground installations. In addition, the installation of equipment, splicing theory, distribution circuits, oil circuit breakers, transformer characteristics, and connections will also be covered. State law requirements, safety and street lighting electrical systems will be introduced in this course.

Student Learning Outcome(s):

1. Discuss the history and development of the underground electric utility industry. 2. Identify specific underground industry tools and materials and discuss their usage. 3. Select and demonstrate proper underground electric utility PPE equipment.

ELECLNM 704B ELECTRICAL LINEMAN - APPRENTICE CABLE SPLICER MODULE B (3)

Lecture: 2 hours / Lab: 2 hours

This course provides instruction in the application of rigging principles and practices on underground installations. In addition, the installation of equipment, splicing theory, distribution circuits, oil circuit breakers, transformer characteristics, and connections will also be covered. State law requirements, safety and street lighting electrical systems will be introduced in this course.

Student Learning Outcome(s):

1. Discuss the history and development of the underground electric utility industry. 2. Identify specific underground industry tools and materials and discuss their usage. 3. Select and demonstrate proper underground electric utility PPE equipment.

ELECLNM 709 ELECT CRAFT HELPER, ELECT LINEMAN APPR RELATED TRAINING IV (4)

Lecture: 4 hours

This course is designed as entry level preparation for a student interested in careers in the electrical power industry. This introductory course covers the basic fundamentals of planning, installation and maintenance of high and low voltage electrical systems. Basic functions of generation, both hydro and steam are covered. The transmission and distribution of electrical power will be reviewed. Fundamentals of electricity, identification, function, and operation of components will be surveyed. Ohms law, safety, ropes, knots, rigging, and tools required in the trade will be reviewed. Civil service exam assistance will also be covered.

Student Learning Outcome(s):

1. Discuss industry history & development of the grid. 2. List utility industry terms and definitions. 3. State electrical utility industry careers opportunities and requirements.

ELECTRONICS TECHNOLOGY

ETNTLGY 150 SOLDERING SURFACE MOUNT TECHNOLOGY (3)

Lecture: 2 hours / Lab: 3 hours

This course provides an introduction of through hole soldering technology as well as principles of surface mount rework, show the range of specific equipment used in that process and provide a framework for learning about various rework methods. Recommended procedures for removal and replacement of surface mount chip components are also covered.

Student Learning Outcome(s):

Students will be able to solder and de-solder through-hole and surface mount components.

ETNTLGY 151 DC THEORY AND CIRCUIT FUNDAMENTALS (3)

Lecture: 3 hours

Instruction is given in basic electrical concepts, electron theory, Ohm's Law, Kirchoffs Laws, series circuits, Parallel circuits, combination circuits, principles of magnetism; and the care, use, and construction of basic meters for voltage, current, and resistance measurements. Problems illustrating accuracy necessary in measurements are given.

Student Learning Outcome(s):

Students will be able to analyze series, parallel, series-parallel, thevenin and Norton circuits.

ETNTLGY 152 DC THEORY AND CIRCUIT FUNDAMENTALS LAB (2) CSU

Lab: 6 hours

Instruction is given in constructing basic electrical circuits. Series, parallel and series/parallel circuits are constructed and troubleshot to understand the concept of troubleshooting techniques. Problems illustrating accuracy necessary in measurements are given.

Student Learning Outcome(s):

Students will use the equipment such as Digital Multimeter (DMM) and DC power supply to measure and troubleshoot various DC circuits.

ETNTLGY 153 APPLIED DC CALCULATIONS (1)

Lecture: 1 hour

This course offers a review on basic arithmetic including addition, subtraction, multiplication, division, fractions, decimals, square roots, signed numbers, powers of ten, an introduction to algebra, and problems solving Ohm's Law and power calculations. Instruction is also provided in algebra, calculators, logarithms, graphs, phasers, and basic trigonometry as used in electronics.

Student Learning Outcome(s):

Students will be able to apply mathematical problem-solving models to DC circuits.

ETNTLGY 154 AC THEORY AND CIRCUIT FUNDAMENTALS (3) CSU

Lecture: 3 hours

This course offers the Theory of AC Electronics as it applies to basic and advanced circuits found in analog electronics. The course prepares the student for more advanced studies in Communications and Digital Electronics. Subjects covered include Capacitors, Magnetic Circuits, Inductors, Sinusoidal Alternating Waveforms, Basic Elements and Phasers, Series and Parallel AC Circuits, Series-Parallel AC Networks, Methods of Analysis, Network Theorems (AC), Power (AC), Resonance, Filters and Bode Plots, Pulse waveforms, and an introduction to System Analysis. Basic algebra and trigonometry will be used as the tools for understanding the AC circuit as it applies to electronics systems.

Student Learning Outcome(s):

Students will experiment with alternating current, inductance and capacitance, time constants and filters in alalyzing and troubleshooting AC curcuits.

ETNTLGY 155 AC THEORY AND CIRCUIT FUNDAMENTALS LAB (2) CSU

Lab: 6 hours

An overview of the field in AC electronics that measures and analyzes the parameters and characteristics of AC circuits: The students studies their applications in electronic systems and becomes familiar with the various components used to make a viable circuit. In class, the students will also learn to construct and troubleshoot AC circuits.

Student Learning Outcome(s):

Students will develop and improve their abilities to follow instructions, make accurate measurements and calcluations for differenct AC circuits.

ETNTLGY 156 APPLIED AC CALCULATIONS (1)

Lecture: 1 hour

At the completion of this course, students will be able to perform mathematical functions used in AC circuit analysis. The topics include solving various algebraic equations, fractional equations, simultaneous equations, trigonometric functions, vector algebra, and logarithms. These topics will be covered with emphasis on calculations involving series, parallel, and series-parallel AC circuits.

Student Learning Outcome(s):

Students will be able to apply mathematical probelm-solving models to Ac circuits.

ETNTLGY 157 SEMICONDUCTORS DEVICES AND APPLICATIONS (3) CSU

Lecture: 3 hours

This course imparts knowledge of semiconductors, electron devices including diodes, transistors, and their application in electronic circuits such as Amplifiers, Switches, Power Supplies, Oscillators, and Integrated Circuits.

Student Learning Outcome(s):

Students will analyze and troubleshoot semiconductor circuits.

ETNTLGY 158 SEMICONDUCTORS DEVICES AND ELECTRONICS LABORATORY (3) CSU

Lab: 9 hours

This is a semiconductor devices laboratory course. It includes lab exercises using semiconductors devices including diodes, transistors, and their application in electronic circuits such as Amplifiers, Switches, Power Supplies, Oscillators, and Integrated Circuits.

Student Learning Outcome(s):

Students will build electronic circuits. Will test and troubleshoot successfully. 12 seiconductor devices circuits will be constructed.

ETNTLGY 159 DIGITAL CIRCUITS AND APPLICATIONS (3) CSU

Lecture: 3 hours

This is an introductory course in digital electronics and applications. The course covers the number systems, including the decimal, binary, octal, and hexadecimal number systems. The topics covered include the characteristics of TTL and CMOS logic families, combinational logic circuits, minimizing logic circuits, minimizing logic circuits using Boolean Operations and Karnaugh maps, encoders and decoders, sequential logic devices such as flip-flops, counters, shift registers, and memory devices.

Student Learning Outcome(s):

Students will analyze and troubleshoot combinational and sequential digital circuits.

ETNTLGY 160 DIGITAL CIRCUITS AND APPLICATIONS LAB (2) CSU

Lab: 6 hours

This course is designed to provide students with the fundamentals of digital circuits and their applications. Lab activities include the characteristics of TTL and CMOS logic families, combinational logic, minimizing logic circuits using Boolean operations and Karnaugh maps, encoders and decoders, sequential logic devices such as flip-flops, counters, shift registers, and memory devices.

Student Learning Outcome(s):

Students will construct, analyze, and troubleshoot combinational and sequential digital circuits.

ETNTLGY 161 F.C.C. RADIO OPERATOR LICENSE (3)

Lecture: 3 hours

This course provides information required by the Electronics Technician to aid in passing the F.C.C. general radiotelephone license examination. The F.C.C. rules, regulations, and theory areas are explained and sample F.C.C. type tests are given. Marine and aeronautical rules and regulations are also studied and are necessary for passing the general radiotelephone examination.

Student Learning Outcome(s):

The student will be able to pass Element 3 FCC Exam.

ETNTLGY 162 INTRODUCTION TO ELECTRONICS COMMUNICATIONS (3) CSU

Lecture: 3 hours

This course covers circuit analysis of several complete AM/FM systems. The installations of C Band, K/U Band, and DSS satellite systems, the theory of cordless phones, microwave receivers/transmitters, cell phones, and TV video are covered.

Student Learning Outcome(s):

Students will learn the principles of Electronics Communications, Amplitude Modulation, Frequency Modulation, Digital Television, Cellular Telephones, and Decibels.

ETNTLGY 163 INTRODUCTION TO ELECTRONICS COMMUNICATIONS LAB (3)

Lab: 9 hours

This course allows students direct laboratory application of the radio principles and techniques acquired in the lecture sessions. Laboratory experiments will include the construction and analysis of circuits, AM modulation, AM detection, FM modulation, frequency multiplication, limiting, FM discrimination, and the construction, testing and alignment complete AM super-heterodyne radio receiver. Microprocessor, digital and solid state troubleshooting techniques are analyzed and performed, as are system level to component level troubleshooting and repair. Basic antenna measurements, troubleshooting and repairs are made.

Student Learning Outcome(s):

The students will demonstrate the skills necessary to built an AM/FM Radio kit.

ETNTLGY 252 NETWORK CABLING SPECIALIST (3)

Lecture: 2 hours / Lab: 3 hours

This course is designed to provide students with the basic skills used in network technology. The successful completion of the course leads to a certificate in network cabling. Students will become familiar with EIA/TIA 568 Standards (Electronics Industry Alliance/ Telecommunications Association). Students will learn various cables used in network cabling industry such as CAT 5, CAT5E, and coaxial cables and correctly terminate them.

Student Learning Outcome(s):

Students will be able to construct cables and make terminations used in network cabling.

ETNTLGY 253 FIBER OPTICS (3)

Lecture: 2 hours / Lab: 3 hours

This course is designed to provide students with the knowledge and skills necessary to become entry-level technicians in the network cabling industry with a concentration in fiber optics. Successful completion of this course leads to industry certification.

Student Learning Outcome(s):

Students will be able to construct and test fiber optic cables.

ETNTLGY 254 COMPUTER APPLICATIONS FOR ELECTRONICS TECHNOLOGY (3)

Lecture: 2 hours / Lab: 3 hours

This course introduces students to computer hardware, software related technology and their uses impact on society and education; hands-on experience with applications of software, such as Excel, Word, Power Point with an emphasis on electronics applications software such as Electronic Work Bench and VISIO.

Student Learning Outcome(s):

Students will be able to utilize computer software to effectively organize and communicate their work.

ETNTLGY 255 COMPUTER-BASED ELECTRONICS I (1)

Lab: 3 hours

This course introduces the students to Electronics Workbench (MultiSim), Electronics Technology Computer-Aided Instruction (ETCAI), and MultiSim Computer-Based Training (CBT) Software Programs. This course is designed to enable students to construct and analyze circuits using Electronics Workbench. It also enables students to increase their knowledge of electronics, using CAI.

Student Learning Outcome(s):

Students will be able to utilize the Multisim software to construct and analyze different circuits.

ETNTLGY 941 COOPERATIVE EDUCATION - ELECTRONICS TECHNOLOGY (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

ENGINEER-OPERATOR/ MAINTENANCE

OPMAINT 228 STEAM PLANT OPERATION I (6)

Lecture: 6 hours

Related engineering information concerning high pressure steam plants in office buildings and industrial establishments are studied in this course. Emphasis is given to steam power plant, use of steam tables, types of boilers, construction of boilers, boiler accessories, settings for combustion equipment and heating surfaces; operation of steam boilers and the combustion of fuels.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a boiler system. SLO #2 Critically analyze and then organize information on the application of boiler devices and or systems.

OPMAINT 229 STEAM PLANT OPERATION II (6)

Lecture: 6 hours

Instruction is given in steam engines, valve operating mechanisms and governors, and operating characteristics of steam engines. Course covers steam turbines, pumps, and auxiliary power plant equipment, steam plant efficiencies, boiler water treatment, troubleshooting, and power transmission. Completion of this second course prepares trainee to take Los Angeles City examination for steam engineer's license.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a boiler system. SLO #2 Critically analyze and then organize information on the application of boiler devices and or systems.

ENGINEER-OPERATOR/ MAINTENANCE - APPRENTICE

OPMA 040 HAZWOPER (2)

Lab: 4 hours

Safety training for general site workers (such as equipment operators, general laborers and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances and health hazards. This course has a minimum of 40 hours of instruction off the site, and a minimum of three days field experience under direct supervision. This course is designed to meet the Federal OSHA HAZWOPER training requirements of 29 CFR 1910.120(e)(3)(i) for general industry and 29 CFR 1926.65(e)(3)(i) for construction. This course is also intended to meet any HAZWOPER training requirements for the EPA and State OSHA regulations. Per 29 CFR 1910.120(e)(3)(i) and 29 CFR 1926.65(e)(3)(i).

Student Learning Outcome(s):

Properly apply safety procedures and practices relating to hazardous substances and health hazards, including site characterization and analysis; personal protective equipment; containment and spill management; respiratory protection; CPC; and the selection and use of tools and monitoring devices.

OPMA AP 100 O.S.H.A. BASED SAFETY STANDARDS & FIRST AID CPR & AED (2)

Lab: 4 hours

This course provides instruction on industry safety and health rules as it applies to workers and employers within the construction industry. Topics such as fall protection, lock out tag out procedures, PPE, excavations, CPR, First Aid, AED, etc. are covered. Participants that meet the required hourly attendance and successfully pass the final exam will be eligible to receive their OSHA (30 hr) safety-training certificate and CPR first Aid card.

Student Learning Outcome(s):

1. Recognize appropriate training requirements and training methods. 2. Define OSHA specific construction terms such as; competent person, construction work, confined space, working space, general duty clause. 3. Select situational appropriate PPE.

OPMA AP 703 ENERGY MANAGEMENT (2)

Lab: 4 hours

The computer's use in the HVACR industry and the application of energy management technology in the improvement of energy efficiencies. The goal is to prepare the maintenance engineer to use of modern technology, including computers in the continuing quest for improved energy management.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of an energy management system. SLO #2 Critically analyze and then organize information on the application of a energy mangement system. SLO #3 Properly apply the English language to write an explanatory paper about rationals for using various energy mangement systems or practices. system. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 704 ELECTRIC MOTOR CONTROL I FOR APPRENTICES (2)

Lab: 4 hours

This course provides instruction in basic motor control fundamentals, including the basic function of controlling devices, review of basic motors, selection of motors and definitions. The class will discuss definitions for controller components and symbols, familiarization of N.E.M.A. standards and review of one-line, wiring and schematic diagrams. The class will also introduce the use of digital controllers for use in industry.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a motor control system. SLO #2 Critically analyze and then organize information on the application of motor control systems. SLO #3 Properly instal various motor control systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4. Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 720 HVACR I (2)

Lecture: 1 hour / Lab: 3 hours

An introduction to the Principles and practices for the installation and maintenance of residential, commercial, and industrial heating, air conditioning, ventilation, and refrigerations systems. Equipment selection, maintenance, and safety will be covered.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a HVACR system. SLO #2 Critically analyze and then organize information on the application of HVACR equipment. SLO #3 Properly instal various HVARC systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4. Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications

OPMA AP 724 FUNDAMENTALS OF ELECTRICITY (2)

Lab: 4 hours

This course covers the basic principles and practices of A/C & D/C electricity. Analyzing series, parallel and complex circuits, using Ohm's law, the power equation, Kirchoff's laws, and other applicable laws and equations.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a circuit analysis. SLO #2 Critically analyze and then organize information on the application of a circuit analysis. SLO #3 Construct various electrical ciruits. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4 Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 727 INDUSTRIAL MECHANICS FOR APPRENTICES (2)

Lab: 4 hours

Principles and practices for application of electro mechanics in environmental and manufacturing process control. The course will cover the use of devices and equipment in the control of industrial production and the maintenance of a healthy and comfortable environment in buildings.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a mechanical system installation. SLO #2 Critically analyze and then organize information on the application of a mechanical system installation. SLO #3 Construct or troubleshoot various mechanical systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4 Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 739 LOCKSMITHING AND SECURITY SYSTEMS FOR APPRENTICESHIP (2)

Lab: 4 hours

This course is for the beginner. It is designed to teach a facilities maintenance worker how to perform in house locksmithing in a realistic and practical way. Topics will include; preventative maintenance, basic locksmithing tools, keys and locking devices, parts of a key, master key systems, installing basic lock sets, 'Warded & Leer' tumbler, side bar wafer locks, electromagnetic locks, electric strikes and key coding machines.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a lock system. SLO #2 Critically analyze and then organize information on the application of locking systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 740 TENANT RELATIONS AND REPORTS FOR APPRENTICES (2)

Lab: 4 hours

The techniques used in maintaining wholesome and mutually beneficial relations with tenants and others is the primary purpose of this course. The need to understand the needs of all persons associated with a building is stressed. Instruction in the use of systems to maintain records and deliver timely and accurate reports is provided.

Student Learning Outcome(s):

SLO #1 Gather information on the various of good tenant relations. SLO #2 Critically analyze and then organize information on tenant relations. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 744 HVACR CONTROL SYSTEMS (2)

Lab: 4 hours

This course provides an introduction to the principles and practices for the installation and maintenance of residential, commercial, and industrial heating, air conditioning, ventilation, and refrigeration control systems. System control equipment selection, maintenance, and safety will be covered.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a HVACR control system. SLO #2 Critically analyze and then organize information on the application of HVACR controls equipment. SLO #3 Properly install various HVARC control systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4. Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 745 PLUMBING CODE (2)

Lab: 4 hours

Instruction in plumbing codes and ordinances that affect rough-in work city and county areas; installation of wastes, vents, clean outs, traps, gas fittings, and gas vents: water pipe requirements.

Student Learning Outcome(s):

SLO #1 Gather information on the various aspect of the international plumbing code. SLO #2 Critically analyze and then organize information on the application of the international plumbing code. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 746 MAINTENANCE PLUMBING PRINCIPLES & PRACTICES (2)

Lab: 4 hours

The course will provide instruction in plumbing principles and common practices. Theory and hands on application will be applied on various common maintenance plumbing installations and repairs operations.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a plubming system installation. SLO #2 Critically analyze and then organize information on the application of plumbing devices and code for a basic plumbing system installation. SLO #3 Construct or troubleshoot various plumbing system applications. Relates to OPMA AP Program SLO: #1 Locate information #2 Reading for information #3 Work independently & interdependently to accomplish a shared professional outcome. #4 Work Safely with Tools. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. #4 Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications

OPMA AP 747 ELECTRICAL TROUBLESHOOTING (2)

Lab: 4 hours

This course covers the basic principles and practices of electrical equipment and system troubleshooting. Proper use of tools and safety equipment will be covered.

Student Learning Outcome(s):

SLO#1 Construct and troubleshoot various applications of electrical systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. #4: Work safely with tools. Relates to CDM Department PLO's: #2. Reading for information. #4. Working safely with tools. Relates To College Core SLOs: A: Critical Thinking.

OPMA AP 748 ELECTRICAL CODES & ORDINANCES (NEC) (2)

Lab: 4 hours

This course will introduce students to basic rule for the electrical trade. General codes, wiring methods and fittings, and circuits requirements specified in the various codes and ordinances will be covered.

Student Learning Outcome(s):

SLO 1. List electrical codes by topic and article. SLO 2. Identify topic specific electrical code requirements such as; service size, circuit protection, branch circuits, and box sizing. SLO 3. Interpret various electrical codes applied to various electrical installation examples.

OPMA AP 749 HVACR II (2)

Lab: 4 hours

This course introduces advanced principles and practices for the installation and maintenance of residential, commercial, and industrial heating, air conditioning, ventilation, and refrigerations systems. Equipment selection, maintenance, and safety will be covered.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a HVACR system installation. SLO #2 Critically analyze and then organize information on the application of a HVACR system installation. SLO #3 Construct or troubleshoot various HVACR systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. #4: Work safely with tools. Relates to CDM Department PLO's: #4 Working safely with tools. Relates To College Core SLOs: A: Critical Thinking.

OPMA AP 750 INDOOR AIR QUALITY (2)

Lab: 4 hours

This course emphasizes on operation of systems to provide quality air to indoor environments. AQMD requirements and pending regulations are reviewed. Organizing and implementing maintenance programs that include indoor air quality assessment and air balancing HVAC systems are covered.

Student Learning Outcome(s):

SLO 1. Discuss the health aspects of IAQ. SLO 2. Discuss airflow as it relates to IAQ. SLO 3. Discuss chemicals that can have a negative impact on IAQ.

OPMA AP 751 PRINT READING (2)

Lab: 4 hours

This course covers instruction in basic blueprint reading including symbols identification. Various drawing types, the information contained, and the primary uses for each type of drawing will be covered.

Student Learning Outcome(s):

SLO #1 Gather information from various types of blueprints. SLO #2 Critically analyze and then organize information gathered from various types of blueprints and related documentation. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 753 BOILERS FOR APPRENTICES (2)

Lab: 4 hours

Related engineering information concerning high pressure steam plants in office buildings and industrial establishments are studied in this course. Emphasis is given to steam power plant, use of steam tables, types of boilers, construction of boilers, boiler accessories, settings for combustion equipment and heating surfaces; operation of steam boilers and the combustion of fuels.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a boiler system. SLO #2 Critically analyze and then organize information on the application of boiler devices and or systems. Relates to OPMA AP Program SLO: #3: Work independently & interdependently to accomplish a shared professional outcome. Relates to CDM Department PLO's: #1. Locating Information. #2. Reading for information. Relates To College Core SLOs: A: Critical Thinking D: Communications.

OPMA AP 760 INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS (2)

Lab: 4 hours

This course covers the minimum requirement for the periodic inspection, testing, and maintenance of water based fire protection systems, including land-based and marine applications.

Student Learning Outcome(s):

Students will be able to describe the proper processes for periodic inspection, testing, and maintenance of water based fire protection systems, including land-based and marine applications.L-Licensure Exam Mock-up.

OPMA AP 770 BUILDING OWNERS AND MANAGERS ASSOCIATION (BOMA) - TEST PREPARATION (2)

Lab: 4 hours

Building Owners and Managers Association (BOMA) certification demonstrates the abilities of highly skilled stationary engineers and building operators. To become a Certified Engineer. This course is designed to prepare a student to successfully pass the 5 part BOMA exam.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a HVAC system. SLO #2 Critically analyze and then organize information on the application of HVAC devices and or systems.

OPMA AP 780 GAS TUNGSTEN ARC & SHIELDED METAL ARC WELDING (2)

Lab: 4 hours

This course provide instruction on welding carbon steel pipe to requirements of the American Society of Manufacturing Engineers Boiler and Pressure Vessel Code- Section 9 Welding and Brazing Qualification using the Gas Tungsten Arc and the Shielded Metal Arc welding processes. The course objective requires proficiency in producing high quality welds on 6 inch diameter schedule 80 pipe in the 6G welding positions.

Student Learning Outcome(s):

1. Students will weld on carbon steel 6 inch, schedule 80 pipe using the GTAW process for the root pass, and SMAW process for the fill and cover passes in the 6G welding position. 2. Student will produce a high quality weld on carbon steel 6 inch schedule 80 pipe using the GTAW process in the 5G welding process.

ENGINEERING, ELECTRICAL

ENG ELC 101 INTRODUCTION TO ELECTRICAL ENGINEERING (3)

Lecture: 3 hours

An overview of the major fields that comprise the Electrical Engineering discipline which will inform students about the various offerings within the major. Key concepts include the fundamentals of Direct Current and Alternating Current, power systems, communication, digital logic, computers, digital signal processing and semiconductors. Students will learn the basic aspects of how to communicate effectively as a professional engineer, including the importance of working as a team to complete a project. The ethical responsibilities of professional engineers will be explored.

ENGINEERING, GENERAL

ENG GEN 101 INTRODUCTION TO SCIENCE, ENGINEERING AND TECHNOLOGY (2) UC/CSU

Lecture: 1 hour / Lab: 2 hours

Students learn about the engineering method and strategies for academic and career success in engineering. Students are introduced to mechanical, civil, electrical, and computer systems engineering through project work. The vast range disciplines and opportunities in engineering are presented. Students are allowed to work collaboratively on some course assignments and in-class design projects. Only basic mathematics skills are required.

Student Learning Outcome(s):

1. Student will identify and distinguish between different fields of engineering by researching information about them and further select one of them as a career. 2. Student will identify effective methods to study engineering and demonstrate it in a team setting. 3. Student will demonstrate the knowledge of preparing an educational plan. 4. Students will be able to discuss the importance of ethics in engineering and show awareness of professional codes of conduct. 5. Students will employ campus resources including: library, career center, learning center, counseling and financial aid to succeed in their educational road map in an engineering transfer program.

ENG GEN 122 PROGRAMMING AND PROBLEM-SOLVING IN MATLAB (3) UC/CSU

Lecture: 2 hours / Lab: 3 hours

Prerequisite: Math 265

This course utilizes the MATLAB environment to provide students with a working knowledge of computer-based problem-solving methods relevant to science and engineering. It introduces the fundamentals of procedural and object-oriented programming, numerical analysis, and data structures. Examples and assignments in the course are drawn from practical applications in engineering, physics, and mathematics.

Student Learning Outcome(s):

1. Student will create, test and debug sequential MATLAB programs, as well as programs that use object-oriented techniques, in order to achieve computational objectives. 2. Student will apply numeric techniques and computer simulations to analyze and solve engineering-related problems. 3. Student will use MATLAB effectively to analyze and visualize data.

ENG GEN 131 STATICS (3) UC/CSU

Lecture: 2 hours / Lab: 3 hours

Prerequisite: MATH 265 and PHYSICS 101

Course covers vector analysis in one, two and three dimensions. Solution of problems involving forces and moments applied to bodies in static equilibrium. Determine centroids, areas, volumes and moments of inertia. Course includes analysis of forces acting on trusses, frames, and machines. Analytic and graphic solutions are used.

Student Learning Outcome(s):

1. Student will setup a Free Body Diagram (FBD) and show all external forces, reactions, constraints and moments. 2. Student will learn how to apply the equilibrium conditions and solve statically determinant problems. 3.Student will be to calculate and show Load (Force), Shear and Moments diagrams.

ENG GEN 151 MATERIALS OF ENGINEERING (3) UC/CSU

Lecture: 3 hours

Prerequisite: Chemistry 101 and Physics 101

This course is an introduction to materials science and engineering and different types of materials used in engineering design, emphasizing the relationships between structure, properties, and processing. Topics include: Atomic structure and bonding, atomic and ionic arrangements and imperfections, crystalline structures, metals, polymers, ceramics, composites including diffusion or atom and ion movements in materials, and mechanical properties and fracture including strain hardening and annealing. An illustration of the materials' fundamental differences and their application in engineering is also covered.

Student Learning Outcome(s):

1. Student will be able to classify materials according to structure and be able to comment on how the properties of a particular class of materials are related to their atomic, micro and macro structure. 2. Student will understand how materials behave under load and to understand the technical nomenclature used for describing the empirical behavior of materials under load. 3. Student will use published materials data to choose the best material for an application and to make estimates of component size. 4. Student will understand the different forming and processing techniques that are commonly used in industry in terms of their effect on the structure of the material and the resulting influence on physical properties.

ENG GEN 220 ELECTRICAL CIRCUITS I (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: MATH 267 and PHYSICS 102; Corequisite: Math 275

This course covers electric circuit analysis in time and frequency domains, transient, and steady state solutions. Topics include linear circuit analysis techniques, Kirchhoff's Laws, Network Theorems, mesh and nodal analysis, OP amps and amplifiers, Thevenin/Norton equivalents circuits, natural-forced-complete response of RLC circuits, AC circuits, phasors, three phase power, and frequency response and resonance. The laboratory includes experimental verification of the laws of AC and DC circuits, Kirchhoff's laws, and Thevenin's theorem using instruments such as multimeter, oscilloscopes, and signal generators.

Student Learning Outcome(s):

1. Student will analyze DC & AC circuits to find current, voltage, resistance, power, and/or energy. 2. Student will draw and label circuit diagrams and show thorough mathematical solutions. 3. Student will apply and solve problems with different circuit analysis techniques and demonstrate a process for selecting an appropriate technique for a given problem.

ENG GEN 231 DYNAMICS (3) UC/CSU

Lecture: 2 hours / Lab: 3 hours

Prerequisite: ENG GEN 131

This course covers fundamentals of kinematics and kinetics of particles and rigid bodies. Topics include kinematics of particle motion, Newton's second law, work-energy and momentum methods, kinematics of planar and three-dimensional motions of rigid bodies, work-energy and momentum principles for rigid body motion, and an introduction to mechanical vibrations.

Student Learning Outcome(s):

1. Student will sketch free-body and kinetic diagrams by isolating rigid bodies and vectorially solve 2-D and 3-D kinematics and dynamics problems. 2. Student will apply Newton's second law to drive and analyze the equations of motion of a particle, a system of particles and a rigid body in motion. 3. Student will employ the conservation laws or principles of motion in mechanics i.e., Law of Conservation of Energy, Law of Conservation of Momentum (linear and angular), Impact Theory and principals of Relative Motion to solve dynamics problems, as an alternative method to Newtons laws of motion.

ENG GEN 241 STRENGTH OF MATERIALS (3) UC/CSU

Lecture: 2 hours / Lab: 3 hours

Prerequisite: ENG GEN 131

Plane stress-strain, axial, torsional, bending and shear stresses are studied, including combined loads, Mohr's Circle, principal stresses and strains, and pressure vessels. Generalized Hooke's Law, material properties, allowable stresses, factor of safety, statically indeterminate members, shear and moment diagrams; moment-area, and slope by double integration, singularity functions, superposition, moment-area, and Castigliano methods are also studied. Topics include thermal expansion, indeterminate forms and column buckling.

Student Learning Outcome(s):

1. Student will be able to understand the different types of stresses including normal, torsion, bending and shearing. 2. Student will be able to calculate and show Load (Force), Shear and Moments diagrams. 3. Student will be able to calculate internal stresses and strains of statically indeterminate structural problems given external loading. Methods employed consider derived bending, torsion, shear, shear center, and axial formulas, traditional equilibrium and compatibility equations, integration of differential equations, and energy. 4. Student will be able to calculate structural failure loads. Methods employed include interaction formulas for stress and strain, buckling, and deflection considerations. 5. Student will be able to solve and assess Engineering Strength of Materials literature to solving Strength of Materials problems.

ENGINEERING GRAPHICS & DESIGN

EGD TEK 101 ENGINEERING GRAPHICS (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Advisory: Math 240

This introductory course covers the fundamentals of technical drawing and an introduction to computer-aided design (CAD) with a focus on mechanical applications. Topics include the development of visualization and technical sketching skills in conjunction with orthographic projections; dimensioning and tolerancing practices, including an introduction to geometric dimensioning and tolerancing (GD&T); and descriptive geometry with applications to engineering. Lab work includes hand sketching and the use of two- and three-dimensional CAD systems. Students use one or more CAD software packages to draft and model various objects. The use of CAD software is an integral part of the course.

Student Learning Outcome(s):

1. Students will create design drawings using established industry standards and the principles of orthographic projection. 2. Students will reverse engineer using CAD software.

ENGLISH

ENGLISH 028 INTERMEDIATE READING AND COMPOSITION (3)

Lecture: 3 hours

Prerequisite: English 21, English 100 or Placement Exam

In this course, students plan, draft, revise, and edit compositions of increasing sophistication and complexity, progressing from multi-paragraph essays to research papers. Writing is based on readings that cover topics that challenge students' thinking and provide an intellectual background for the assignments. Readings, discussion, and writing assignments may focus on fiction, non-fiction, memoirs, and/or poetry. This course prepares students for English 101.

Student Learning Outcome(s):

Write a well developed, coherent timed essay. Write a 4-6 page research paper, demonstrating MLA format and citations.

ENGLISH 072 ENGLISH BRIDGE (1)

Lecture: 2 hours

English 72 is a complement to English 101. Students receive additional support to improve their analytical and composition skills necessary to meet English 101 standards. Emphasis is on the completion of written assignments and essays, library and research papers assigned in the concurrent English 101 course. Assistance is provided on pre-writing, drafting, and revising strategies, grammar and mechanics, critical thinking, and understanding reading-to-write strategies.

Student Learning Outcome(s):

1. Revise multi-paragraph essays to effectively support explicit theses by citing, synthesizing, and documenting evidence from multiple sources. 2. Quote, paraphrase and summarize texts effectively in written compositions.

ENGLISH 100 ACCELERATED PREP: COLLEGE WRITING (3)

Lecture: 2 hours / Lab: 2 hours

This class prepares students for academic reading, critical thinking, and writing expected in career/technical pathways, transfer and associate-degree classes. Students plan, draft, revise, and edit compositions of increasing sophistication and complexity, progressing from paragraphs to multi-paragraphs to research projects. Writing is based primarily on non-fiction college-level readings. This course prepares students for English 101 based on achievement of identified competencies.

Student Learning Outcome(s):

English 28 promotion :Write a well developed, coherent timed essay that demonstrates skills needed for English 28. And Write a 750-word research paper, demonstrating ability to synthesize, analyze and evaluate ideas and sources, showing familiarity with MLA format and citations. English 101 promotion: Write a well developed, coherent timed essay that demonstrates skills needed for English 101. And write a 1000 to 1500-word research paper, demonstrating ability to synthesize, analyze and evaluate ideas and scholarly sources, showing competency using MLA format and citations.

ENGLISH 101 COLLEGE READING AND COMPOSITION I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 28

In English 101, students extend their knowledge of the principles and structure of academic writing beyond the level of English 28 through the practice of writing essays and the analysis of non-fiction and select short and full-length fiction. The course includes an introduction to persuasive discourse, research skills, critical reading and thinking, and argumentation. Various compositions and extensive research assignments are required. English 101 fulfills the writing requirement for the Associate of Arts and Sciences degree and fulfills the transfer requirement to a four-year college.

Student Learning Outcome(s):

1. Write a well-developed, coherent and unified timed essay that demonstrates interpretive, critical thinking, and analytical skills based on a written text. 2. Write a research paper (1250 to 1750 words of text) demonstrating critical thinking and analytical skills, and showing inclusion of credible sources and mastery of recognized documentation style.

ENGLISH 102 COLLEGE READING AND COMPOSITION II (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101;

This course develops critical thinking, reading, and writing skills beyond the level achieved in English 101. It emphasizes logical reasoning, analysis, and strategies of argumentation using literature and theories of literary criticism. Evaluations are made of texts that reveal the multicultural/global aspects of society, which include traditional and contemporary forms in fiction, poetry, essays, and drama.

Student Learning Outcome(s):

Analyze a literary work that employs themes and theories, using MLA citation, emphasizing student interpretation not synthesis of sources. Write an in-class essay.

ENGLISH 103 COMPOSITION AND CRITICAL THINKING (3) UC/CSU

Lecture: 3 hours
Prerequisite: English 101

This course is designed to help students clarify and refine their thinking and reasoning processes, allowing them to more effectively solve problems and analyze complex issues. Students will develop skills in critical thinking, reading, and writing, which will help them succeed in their other academic coursework, regardless of discipline. Writing assignments will emphasize critical analysis and argumentation, and readings will reflect diverse points of view and cultures.

Student Learning Outcome(s):

Students will be able to research, identify, and incorporate credible sources and compose argumentative essays and research papers using accepted documentation formats. Students will be able to interpret, analyze, and compose a well developed argumentative essay, using appropriate appeals.

ENGLISH 127 CREATIVE WRITING (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101

This introductory workshop offers writers accessible, hands-on exercises in crafting poetry, personal narratives, short stories, and screenplays. Content includes analysis of select prose, poetry and basic vocabulary related to structure, form, genre and style, with special focus on in-class peer critiques and revision as an integral component of the writing process.

Student Learning Outcome(s):

1. Compose a variety original writings that reflect creative modes, multiple genres, and multiple techniques. 2. Analyze, interpret, and critique writings of published authors and fellow students.

ENGLISH 203 WORLD LITERATURE I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101;

This course surveys world literature in translation, including representative selections from Asian, Greek, and Latin literature, and European masterpieces of the Middle Ages and Renaissance, and the Bible.

Student Learning Outcome(s):

1. Analyze a selection of world literature in its literary significance, cultural and historical context. 2. Discuss literary works as they relate to their political and social contexts.

ENGLISH 205 ENGLISH LITERATURE I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101; Advisory: English 102;

This course is a chronological survey of the English language, literary forms, and ideas from the Anglo-Saxon period through the eighteenth century (Old English to the Neoclassical period), with special attention to Chaucer, Spenser, Shakespeare, Milton, Dryden, Pope, Swift, and Johnson as representatives of their respective periods. Extensive reading and discussion of works. Strong writing component and emphasis on textual analysis. Examination of the relationship between historical events and literary works.

Student Learning Outcome(s):

1. Student will demonstrate familiarity with important authors, works, genres, and themes of the period 2. Student will analyze and interpret themes found in the literature and intellectual movements of the period 3. Student will demonstrate understanding of an appropriate academic discourse and the conventions of critical literary analysis 4. Student will relate the literary works to their historical, philosophical, social, political and/or aesthetic contexts.

ENGLISH 206 ENGLISH LITERATURE II (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101;

Course will consist of a chronological survey of major authors and texts of British literature from the Romantic period, the Victorian Age, The Twentieth Century, and after. There is extensive reading and discussion of works as well as a strong writing component and emphasis on textual analysis, including examination of the relationship between historical events and literary works.

Student Learning Outcome(s):

1. Demonstrate familiarity with important authors, works, genres, and themes of the period; and analyze themes found in the literature and intellectual movements of the period 2. Relate the literary works to their historical, philosophical, social, political and/or aesthetic contexts.

ENGLISH 207 AMERICAN LITERATURE I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101;

This course surveys American literature from 1608 to the Civil War, emphasizing major writers and works, as well as writers who suggest the diversity of subject and opinion in American literature.

Student Learning Outcome(s):

SLO 1 Demonstrate an understanding of the contexts historical, intellectual, social, and culturalon a broad range of American literature from the Colonial Period to the Civil War Period. SLO 2 Identify literary figures and works, including those of the traditional canon as well as culturally diverse and often over-looked voices.

ENGLISH 208 AMERICAN LITERATURE II (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101;

This survey of American literature from the Civil War period to the present emphasizes major writers and works in order to understand, appreciate, and investigate multicultural influences within national identify.

Student Learning Outcome(s):

1. Demonstrate an understanding of the contextshistorical, intellectual, social, and culturally diverse voiceson a broad range of American literature from Civil War Period to the present. 2. Identify major literary figures and their works in the period. 3. Assess the historical development and cultural impact of themes that recur in American literature.

ENGLISH 212 POETRY (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101.Prerequisite: English 101;

English 212 features the reading, discussion, and analysis of selected American, British, and world poetry. Students will also write poetry. The course is designed to increase the students' understanding and enjoyment of poetry.

Student Learning Outcome(s):

Demonstrate knowledge of voice, imagery, and poetic conventions of form and sound, using original language. Effectively analyze poetry in light of historical context, critical theories, and/or formal elements.

ENGLISH 215 SHAKESPEARE I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101; Advisory: English 102;

Course introduces students to Shakespeare's prose and poetry through several major plays and sonnets with an additional examination of Elizabethan England and the relationship between historical events and literary works. Course features a strong reading and writing component with an emphasis on class discussion, research and textual analysis.

Student Learning Outcome(s):

1) understand dramatic technique and nuances of language in Shakespearean poetry and drama 2) recognize and analyze Shakespearean use of genre (Comedy, History, Tragedy, Romance), theme, character, setting, humor and allusion 3) Compare and interpret Shakespearean drama through theatrical presentation.

ENGLISH 240 LITERATURE AND THE MOTION PICTURE I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 101.

This course is designed to give the student opportunities to view, analyze, and evaluate films of artistic and cultural significance. The relationship between literature and film is discussed and evaluated.

Student Learning Outcome(s):

In creating an analysis of both media, students will locate research materials on various works, issues, ideas in texts and online. Students will demonstrate an understanding of MLA format and source documentation in their essays.

ENVIRONMENTAL DESIGN

ENV 101 FOUNDATIONS OF DESIGN I (3) UC/CSU

Lecture: 2.5 hours / Lab: 2.5 hours

Students develop creative, conceptual and analytical skills by creating simple to complex two and three dimensional projects based on nature systems and structural integrity. Connections between movement, rhythm, cycle, kinematics and mathematical formulation are explored in class as a foundation for smart spaces. Students will learn to properly communicate architectural concepts through drawings, renderings, physical models, and computer 3-D modeling. Form and space design principles, theories, order and methodologies are explored and incorporated into student projects. Process and procedures are applied to personal innovative projects inspired by Gaudi, Buckminster Fuller, Frank Lloyd Wright and Peter Eiseman. The profession of architecture and its relationship to others for the life cycle and sustainable synergy in the AEC Industry (Architecture, Engineering and Construction) are defined. This course is critical for students interested in pursuing a higher degree in architectural or a related design field. Students will also create an e-portfolio of their work.

Student Learning Outcome(s):

1. Students will identify patterns found in nature. 2. Students will apply natures patterns in developing structural design model compositions. 3. Students will develop drawing using balance, rhythm, cycles, movement and mathematical formulation.

ENVIRONMENTAL SCIENCE

ENV SCI 001 THE HUMAN ENVIRONMENT: PHYSICAL PROCESSES (3) UC/CSU

Lecture: 3 hours

A comprehensive study of how our environmental life support systems work, how we impact them, the social, economic and political factors that are the ultimate cause of these problems and possible solutions.

Student Learning Outcome(s):

Upon successful completion of the course, the student will be able to: 1. Describe the scientific method, the nature of scientific inquiry and apply the scientific process to assess real world problems and situations. 2. Discuss the status of environmental quality and pollution, and suggest possible remediation of problems. 3. Discuss the interrelationship between the environment and society including at least 3 influences from economics, aesthetics, culture, ethics, and/or law.

FASHION DESIGN

FASHDSN 111 CLOTHING CONSTRUCTION (5) CSU

Lab: 10 hours

The students will be given instruction in single needle machine operation, sewing technique projects, garment assembly projects, occupational information and method of evaluation and relationship to the Fashion Industry. Basic information needed for entry level employment is provided.

Student Learning Outcome(s):

Student will compile a notebook consisting of industry construction techniques. Student will construct a trouser pant. Student will construct a button front shirt.

FASHDSN 112 BASIC FASHION ART AND DESIGN (5) CSU

Lab: 10 hours

Instruction includes drawing the women's fashion figure, drawing children and men's figures, flats, various styles and details. Introduction to color, design theory, fabric properties and rendering. Merchandising a garment line.

Student Learning Outcome(s):

Student will draw a group of technical flat sketches. Student will develop a portfolio of drawings.

FASHDSN 118 ADVANCED CLOTHING CONSTRUCTION (2) CSU

Lab: 4 hours

Prerequisite: Fashion Design 111;

The objective of this course is to advance the sewing skills of students using specialized machinery. Students will construct garments using knit fabric, lycra/spandex, and Chiffon.

Student Learning Outcome(s):

Students will construct a one-piece swimsuit with bra cups hellenca lining and specialized elastics Students will construct a lined skirt with french seams and invisible zipper.

FASHDSN 119A HISTORY OF COSTUME I (1.5) CSU

Lecture: 1.5 hours

This course offers an overview of the evolution of fashion from its beginnings in the ancient world through the Baroque and Rococo Eras. Cross cultural influences on fashion through wars, trade, travel, immigration, and communication will be discussed.

Student Learning Outcome(s):

Students will create a presentation board tracing the historical and or cultural influences of a present day garment.

FASHDSN 119B HISTORY OF COSTUME II (1.5) CSU

Lecture: 1.5 hours

This course will examine events of each period between 1800 and the present and their influence on fashion. Emphasis is placed upon fabrications and silhouettes which represent each period. The ongoing influence of vintage fashion, on contemporary design, will be analyzed.

Student Learning Outcome(s):

Students will write a research paper including multiple media resources, a bibliography and the option of including visual elements.

FASHDSN 120 BASIC PATTERN MAKING & DESIGN (5) CSU

Lab: 10 hours

Prerequisite: Fashion Design 111; Fashion Design 112.

Instruction is given on drafting the basic block, multiple darts and gathers, style lines, sleeves, collars, skirts, and bodice silhouettes.

Student Learning Outcome(s):

Student will execute a pattern and garment utilizing basic pattern manipulations. Student will design and create a sketch for an original dress style from pattern through sewn garment that will include specific elements.

FASHDSN 122 GRADING AND MARKER MAKING (5)

Lab: 10 hours

Instruction is given in grading the basic block, multi-patterns, the complete pattern for men, women and children, in a variety of sizes, make a marker, manipulate the one and two darts block, draft the basic dart positions, demonstrate the slash and pivot methods, draft extensions, button placement and facing.

Student Learning Outcome(s):

Student will grade a princess style pattern including facings. Student will grade a stylized dress including stylized darts and facings. Student will use industry related software procedures to grade basic patterns.

FASHDSN 125A TEXTILES (1.5) CSU

Lecture: 1.5 hours

This course will introduce design students to fabrications and their appropriate styling. Fabrics discussed will include cottons, woolens, synthetics, and organics as well as support fabrications. Care and handling along with machinery for construction will be covered in this course.

Student Learning Outcome(s):

Student will recognize specific fabrics and identify their use and machinery needed to complete a finished garment.

FASHDSN 125B TEXTILE SCIENCE (1.5) CSU

Lecture: 1.5 hours

This course is an introduction and overview of trade terminology, characteristics of fabrics. This course is an introduction and overview of trade terminology, characteristics of fabric. Topics discussed include: types of yarns and properties, twist yarn, yarn numbering systems and factors in yarn influencing quality.

Student Learning Outcome(s):

Student will identify fiber, fabrics and properties.

FASHDSN 126 MANUFACTURING AND DESIGN ROOM PROCESS (1) CSU

Lecture: 1 hour

Instruction is provided on manufacturing and design room process including industry overview and terminology. Cost sheets, specification sheets and inspiration boards will be emphasized in the course.

Student Learning Outcome(s):

Student will execute a specification sheet. Student will create a cost sheet. Student will design and present an inspiration board.

FASHDSN 130 DRAPING & DESIGN (5) CSU

Lab: 10 hours

Prerequisite: Fashion Design 120.

Instruction is given in fundamental draping procedures. The basic block and dart variations, yoke styles, torso styles, advanced skirts, cowls, stretch knits, and current style adaptation are practiced.

Student Learning Outcome(s):

Student will drape a cowl blouse and stylized skirt in woven fabric including a finished pattern. Student will drape and create an original style in knit fabric and complete a finished pattern.

FASHDSN 132 ADVANCED PATTERNS AND DESIGN (5) CSU

Lab: 10 hours

Prerequisite: Fashion Design 120 and Fashion Design 122;

Instruction is given in torso, jacket and pant blocks, sleeves-in-one with the bodice, neckline variations, and style adaptations according to current styling.

Student Learning Outcome(s):

Student will design and create a contour blouse style and complete a finished pattern. Student will draft and create a pant style and complete a finished pattern. Student will draft and create a lined jacket style and complete a finished pattern.

FASHDSN 137 BUSTIER CREATION (2) CSU

Lab: 6 hours

Research historical bustier (corset foundation) designs and construction methods and adapt them to create currently fashionable bustiers. Fundamentals of evening dress foundation.

Student Learning Outcome(s):

Students will be able to drape and fit an evening dress foundation block to fit a form and construct an evening dress foundation with pads and bones.

FASHDSN 138 TAILORING TECHNIQUES FOR READY TO WEAR (2) CSU

Lab: 4 hours

The objective of this course is to advance the tailoring skills of fashion design students. Instruction will be given on preparation and cutting of fabric, basic hand stitching, the use of steam pressing equipment, and basic elements of tailored apparel.

Student Learning Outcome(s):

Students will construct a lined jacket incorporating required elements.

FASHDSN 139 COORDINATED SPORTSWEAR (2) CSU

Lab: 4 hours

Prerequisite: Fashion Design 132; Advisory: Fashion Design 118; Fashion Design 138;

Instruction is given on the development of coordinated sportswear including story board presentation and critique. This class has been developed to focus on this most important component of the local apparel industry with concentration on jacket and pant construction and coordination of multiple fabrications within a group.

Student Learning Outcome(s):

Student will develop and present a story board for a coordinated sportswear group. Student will design produce elements of a coordinated sportswear group.

FASHDSN 140 ADVANCED DRAPING & DESIGN (2) CSU

Lecture: 1 hour / Lab: 2 hours

Prerequisite: Fashion Design 130;

This course includes the draping of selected garment types & style innovations. Students use either muslin or fashion fabric according to design and fabrication. Original designs are created & executed in fabric.

Student Learning Outcome(s):

Student will drape and create a bias gown inspired by Vionette including a complete pattern. Student will drape and create an advanced style contemporary jacket using innovative style lines and will draft a complete pattern.

FASHDSN 141 ADVANCED DESIGN (5) CSU

Lab: 10 hours
Prerequisite: Fashion Design 130 and Fashion Design 132;

Instruction is given in knit blocks, specialized fabrics, dartless blocks, knock-offs, and specialized projects relating to current trends.

Student Learning Outcome(s):

Student will replicate an intricate pant style including a complete pattern and finished garment. Student will design and create a swim suit using industry required fabrications and draft of complete pattern. Student will design and construct a cocktail dress in appropriate assigned fabrications using drafting and draping techniques and complete pattern.

FASHDSN 142 MANUFACTURING PRODUCTION (5) CSU

Lab: 10 hours

Prerequisite: Fashion Design 141;

Instruction is given in design and creation of garments for showing to the apparel industry. Included is the creation of children's and men's designs along with evening and avant garde styles and the development of a perfect production patterns for a minimum of two ensembles. Field trips, senior evaluation, and job orientation are also included.

Student Learning Outcome(s):

Student will be required to complete two original designs for selected categories to be presented in the department fashion show. Student will be required to present a current resume and demonstrate the ability to interview for a professional position.

FASHDSN 147 FASHION SHOW PRODUCTION (2) CSU

Lecture: 1.5 hours / Lab: 1.5 hours

Instruction is given on developing a theme and overall concept for presenting a fashion show. Topics include history of fashion presentations, model selection, fitting, stage design and execution plus behind the scenes production of a department fashion show.

Student Learning Outcome(s):

Formulate a fashion show production plan including; a preliminary budget, venue description, and show categories.

FASHDSN 148 ACTIVEWEAR DESIGN (2) CSU

Lab: 6 hours

Prerequisite: Fashion Design 132 or Fashion Design 225 and 226

Instruction is given in the specialized area of activewear. Focusing on fabrication, design, inner-construction, and sewing techniques.The student will draft basic pattern blocks, design and construct activewear garments.

Student Learning Outcome(s):

Students draft and correct a basic dartless knit block to their personal measurements and body alignment using stretch reduction calculations.

FASHDSN 151 ADVANCED FASHION ART AND DESIGN (2) CSU

Lecture: 1 hour / Lab: 2 hours
Prerequisite: Fashion Design 112;

Instruction is given on design and creation of garments for showing to the apparel industry. Included is the creation of children's and men's designs along with evening and avant garde styles and the development of a perfect production patterns for a minimum of two ensembles. Field trips, senior evaluation, and job orientation are also included.

Student Learning Outcome(s):

Student will develop a portfolio and prepare a resume.

FASHDSN 185 DIRECTED STUDY - FASHION DESIGN (1)

Lecture: 1 hour

This course allows students to pursue directed study in Fashion Design on a contract basis under the direction of a supervising instructor. Students must be enrolled in at least one fashion course to take this class.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Fashion Design and related topics.

FASHDSN 207 SHOE AND ACCESSORIES DESIGN AND CONSTRUCTION LEVEL I (3)

Lab: 6 hours

In tIn this introductory course, students will learn the fundamentals of sewing with leather as it relates to personal accessories and shoe design and construction. Students will fabricate a belt, a simple wallet, a handbag, a pair of sandals, a pair of heels, and a pair of lace-up shoes. Students will learn how to prepare leather for construction, and will be exposed to sewing both by hand and by machine. No prior sewing experience required..

Student Learning Outcome(s):

Students will be able to draft and construct a variety of leather shoes and accessories to industry standards.

FASHDSN 208 SHOE AND ACCESSORIES DESIGN AND CONSTRUCTION LEVEL II (3)

Lab: 6 hours

Prerequisite: Fashion Design 207

In this intermediate course on working with leather, students will build upon the skills developed in Shoe and Accessories Design and Construction Level I. Students will design and construct a leather handbag with rope handles and an interior welt zippered pocket, and a pair of lace up boots. Students will further their leather sewing skills and will construct using both hand and machine sewing methods.

Student Learning Outcome(s):

1. Students will draft and construct a structured leather purse. 2. Students will draft and construct leather lace up boots.

FASHDSN 209 HISTORICAL COSTUME RESEARCH (3) CSU

Lecture: 3 hours

Prerequisite: English 101

This class will instruct students on how to identify key silhouettes across eras through learning how to research using archives, library resources, and on-line databases. Students will gain an appreciation for the relationship between fashion, politics, culture and technology. Will also gain an understanding of period costume on stage and in film.

Student Learning Outcome(s):

1.Student will be able to research and provide an evaluation of costume influences on a move production.

FASHDSN 210 ACCESSORIES FOR COSTUMES (3)

Lab: 6 hours

Advisories: Fashion Design 111 or Fashion Design 223 and 224

Students will understand historical silhouettes and how they are achieved. Instruction will include collar treatments, undergarments and modern knit foundations. Students will learn to pad the dress form to create a body double to measurements.

Student Learning Outcome(s):

1. Student will create a variety of costume undergarment accessories.

FASHDSN 211 CORSET CONSTRUCTION FOR COSTUME (3)

Lab: 6 hours

Prerequisite: Fashion Design 118 and Fashion Design 132 or Fashion Design 226 and 227

Students will learn the different styles of corsets across the eras and their corresponding silhouettes. Instruction will include how to drape, pattern and stitch period corsets for film and stage.

Student Learning Outcome(s):

1. Student will be able to design and create a period corset.

FASHDSN 212 COSTUME ILLUSTRATION (3) UC/CSU

Lab: 6 hours

Prerequisite: Fashion Design 244

Student will learn to design costumes for a range of body types and characters with period appropriate details. Students will develop the ability to convey their design ideas to technicians. Instruction will be provided in handand computer techniques.

Student Learning Outcome(s):

1. Students will be able to design a range of costumes.

FASHDSN 213 WOMEN'S PERIOD COSTUMES (3)

Lab: 6 hours

Prerequisite: Fashion Design 130 or Fashion Design 240 and Fashion Design 241 and Fashion Design 132 or Fashion Design 226 and Fashion Design 227

Students will learn to drape period costumes over appropriate underpinnings and learn to make patterns to prepare for construction of costumes. Instruction will include how to make pattern based on the needs of a stage or film production. Measurements and fitting will be emphasized in the creation of projects. Projects will include direction from costumer designers.

Student Learning Outcome(s):

Student will use draping and pattern making techniques to create period costumes, fitted on a selected model.

FASHDSN 214 MEN'S COSTUME DESIGN (3)

Lab: 6 hours

Prerequisite: Fashion Design 130 or Fashion Design 240 and Fashion Design 241 and Fashion Design 132 or Fashion Design 226 and Fashion Design 227

Students will learn draping and pattern making techniques to create period costumes for men and prepare for construction of costumes. Instruction will include how to make patterns based on the needs of a stage or film production. Measurements and fitting will be emphasized in the creation of projects.Projects will include direction from costumer designers.

Student Learning Outcome(s):

Student will be able to research and provide an evaluation of costume influences on a move production.

FASHDSN 215 COUTURE SEWING (3)

Lab: 6 hours

Prerequisite: Fashion Design 118 or Fashion Design 223 and Fashion Design 224

This course offers sewing techniques used in industry and couture houses for better quality garments, and for costume construction. Special fabrications and material manipulation will be included in class projects.

Student Learning Outcome(s):

Students will construct a garment using couture sewing techniques.

FASHDSN 216 COSTUME CRAFTS (3)

Lab: 6 hours

Students will learn craft skills necessary for film and stage productions. Instruction will be given on painting, dyeing and distressing fabrics and garments, as well as jewelry and glove making.

Student Learning Outcome(s):

Student will 'age' garments sing proper distressing techniques.

FASHDSN 217 COSTUME FABRICATION (3) UC/CSU

Lab: 6 hours

Prerequisite: FASHDSN 120 or FASHDSN 225; Advisory: FASHDSN 125A and FASHDSN 130 or FASHDSN 239

Instruction in fabrication techniques for costume creation for stage, film, and live performance. Course work includes proper tools, methods of forming foam, felt, and hard surfaces.

Student Learning Outcome(s):

Students will be able to design and create costumes for stage, film, and/or live performance utilizing appropriate fabrication techniques and materials.

FASHDSN 218 MILLINERY (3) UC/CSU

Lab: 6 hours

Instruction will be given in the fabrication techniques for original felted fabric hats, fascinators, cocktail style hats and berets.

Student Learning Outcome(s):

Students will be able to create different styles of hats using appropriate fabrication techniques and materials.

FASHDSN 222 SAMPLE MAKING AND DESIGN I (2)

Lab: 6 hours

The fundamentals of garment construction using industrial patterns, marker making and industrial power machines. Students are assigned garment projects which demonstrate basic techniques, combining classic with modern manufacturing techniques, with special emphasis on pattern layouts for plaids and prints.

Student Learning Outcome(s):

Students will develop a portfolio of sewing techniques and list the sequence of assembly.

FASHDSN 223 SAMPLE MAKING AND DESIGN II (2)

Lab: 6 hours

The objective of this course is to advance the sewing skills of fashion design students. Students are assigned to create and construct a coordinated group using industrial patterns. Selected blouses, shirts, pants and jacket are made.

Student Learning Outcome(s):

Students execute a coordinated group including a shirt, pant, and jackets. This project will be completed in children's wear.

FASHDSN 224 SAMPLE MAKING AND DESIGN III (2)

Lab: 6 hours

Instruction is provided on construction and fitting of selected commercial patterns adapted to industry standards. Students receive instruction in the theory of color, line and proportion. They create or select designs suitable to the individual and occasion. Selected soft dressmaker type coats, suits, vests, blouses, and dresses are made.

Student Learning Outcome(s):

Students will execute independent items including a lined vest and jacket, a lined pant or skirt, a shirt or blouse and 1 knit style.

FASHDSN 225 PATTERN MAKING AND DESIGN I (2)

Lab: 6 hours

Advisory: Fashion Design 222;

Entry level class offering instruction in development of a basic block, test fitting, and additional basic pattern making fundamentals.

Student Learning Outcome(s):

Student will draft and construct a basic block. Student will create and construct an original design based on required elements and quality of construction.

FASHDSN 226 PATTERN MAKING AND DESIGN II (2)

Lab: 6 hours

Prerequisite: Fashion Design 225;

Intermediate level class offering instruction on the torso bodice, dartless block and drafting a basic pant then using the blocks to create dresses, shirt styles and pant variations. Advanced skirts styling is also included.

Student Learning Outcome(s):

Students will draft and construct a torso block from the basic sloper.

Students will draft a shift dress with mandarin collar, princess seams, required sleeve elements, and construct a full muslin. Students will draft and construct a princess dress including required elements.

FASHDSN 227 PATTERN MAKING AND DESIGN III (2)

Lab: 6 hours

Prerequisite: Fashion Design 226

Advanced level class offering instruction on jackets, advanced sleeve styles, contouring fundamentals, and basic bodysuits and leotards.

Student Learning Outcome(s):

Students will be able to draft or knock-off and construct a basic pant including required elements to personal measurements. Students will be able to draft a bolero with a close fitting raglan and a shawl collar and construct a muslin. Students will be able to draft a tailored jacket block, construct a shell with 2 piece sleeve, revere collar, and traditional jacket facing.

FASHDSN 228 PATTERN GRADING AND DESIGN I (2)

Lab: 6 hours

This course offers training in increasing and decreasing the pattern size for basic slopers in the several size ranges of women's wearing apparel. Also includes practice in selected methods and in the use of "grading machines" currently used in industry.

Student Learning Outcome(s):

Student will grade a princess style pattern including facings.

FASHDSN 229 PATTERN GRADING AND DESIGN II (2)

Lab: 6 hours

Selected whole garments are graded. Research and study is done on the laws of proportionate growth, size ranges, and difficult pattern shapes. Principles of design are correlated to grading problems. Marker making and cost sheets development is included in this course.

Student Learning Outcome(s):

Student will grade a stylized dress including stylized darts and facings.

FASHDSN 236 FASHION SKETCHING AND DESIGN I (2)

Lab: 6 hours

Instruction includes fashion figure drawing, rendering fabrics and garments on figures, designing selected garments, study of color theory and techniques.

Student Learning Outcome(s):

Student will draw a group of technical flat illustrations.

FASHDSN 237 FASHION SKETCHING AND DESIGN II (2)

Lab: 6 hours

Prerequisite: Fashion Design 236

Instruction includes women's day dresses, children's fashion figures and garment designs, watercolor or gouache techniques, illustrations, contemporary graphic layouts and the portfolio development. Techniques of quick sketching will be covered.

Student Learning Outcome(s):

Students will execute fabric rendering with various mediums for design of womens, mens and childrens styles.

FASHDSN 238 FASHION SKETCHING AND DESIGN III (2)

Lab: 6 hours

Prerequisite: Fashion Design 236; Fashion Design 237

Development of professional portfolio presentation including development of design focus and, advanced research techniques. The process will include the development of illustration techniques and design refinement. Professional readiness including; writing a resume, cover letter and calling card and developing refined job interview skills.

Student Learning Outcome(s):

Student will develop a portfolio of drawings including mens and womens wear.

FASHDSN 239 GOWN DRAPING AND DESIGN I (2)

Lab: 6 hours

Instruction is offered on draping, fitting basic blocks, and transferring the drape to a paper pattern. Students will drape basic type bodices, sleeves, skirts, collars, and construction details. Theory includes basic principles of design, line, proportion, and fabric use.

Student Learning Outcome(s):

Students will drape and create a detailed blouse and skirt style including a complete pattern. Students will drape and create a stylized dress including a complete pattern.

FASHDSN 240 GOWN DRAPING AND DESIGN II (2)

Lab: 6 hours

This course includes the draping of casual knit garments and dress and jacket style innovations. Students use either muslin or fashion fabric according to their capabilities. Fashion trends are studied and original designs are created.

Student Learning Outcome(s):

Students will drape and create a woven shift dress with stylized neckline. Students will drape and create innovative coordinated separates in knit fabric using specialized machinery.

FASHDSN 241 GOWN DRAPING AND DESIGN III (2)

Lab: 6 hours

This course correlates the designer's knowledge of designing, sketching, patternmaking, draping, and construction. Students develop confidence as they study the problems of merchandising and manufacturing. Original designs for special occasion garments are executed in various fabrics.

Student Learning Outcome(s):

Students will drape an evening gown using selected elements in specific evening fabrications.

FASHDSN 244 PHOTOSHOP FOR FASHION DESIGN (2) CSU

Lab: 6 hours

This course offers computer fashion art instruction using Adobe Photoshop software. Emphasis is placed on preparation and input of fashion images for portfolios and design presentations as required by industry standards.

Student Learning Outcome(s):

Students will learn to use Adobe Photoshop selection tools to create and communicate vision; mood or trend boards that inspire color stories.

FASHDSN 250 BEGINNING COMPUTER APPAREL SYSTEMS (2)

Lab: 6 hours

This course will cover digitizing, grading, some pattern making, and marker making. Also covered are database files including grade rules, model files, and annotation. Student will plot pieces and markers. This course uses Gerber Accumark software.

Student Learning Outcome(s):

Students will create system files, digitize and verify pattern pieces using Gerber hardware and software.

FASHDSN 255 COMPUTERIZED PRODUCT DESIGN (2)

Lab: 6 hours

This course offers training and development of skills in apparel utilizing the latest versions of apparel pattern making software. Design students will concentrate on pattern development including, drafting, alterations, and manipulations.

Student Learning Outcome(s):

Students will draft a basic block to specific measurements using Gerber PDS Apparel System.

FASHDSN 256 CAD APPAREL PRE-PRODUCTION TECHNIQUES (2)

Lab: 6 hours

This course offers basic training in the apparel pre-production process, including grading and marker making as it applies to computerized apparel production. The class will cover the specialized Lectra computer software programs. Students will learn to the functions of the software while grading and making markers. Basic computerized pattern making will also be covered.

Student Learning Outcome(s):

Student will be able to digitize an existing pattern into the computer where it will be graded, marked and prepared for the production process. Student will be able to manipulate a basic block to create a stylized pattern.

FASHDSN 257 APPAREL PATTERN DESIGN SYSTEMS (2)

Lab: 6 hours

This course provides an overview of current computer-aided design applications used in apparel pattern development. The class will cover manual pattern development and demonstrate how two-dimensional patterns translate to the computer. Students will learn to identify menus associated with pattern applications, used for Tukatech software, and will compose a full-scale pattern on the computer as it applies to industry.

Student Learning Outcome(s):

Students will design a computer pattern from Tukatech systems basic blocks.

FASHDSN 258 COMPUTER-AIDED PATTERN SYSTEMS (2)

Lab: 6 hours

This course is designed to expand knowledge of pattern making using Lectra Systems software programs. A variety of pattern will be created using the draft method and the use of basic blocks.

Student Learning Outcome(s):

Students will be able to create a jacket pattern including lining, facing and two piece sleeve using the jacket foundation.

FASHDSN 264 APPAREL COMPUTER SYSTEMS ANALYSIS (1) CSU

Lab: 3 hours

This lab course demonstrates how the apparel industry uses commercial and Vendor apparel technology in the global market. Topics covered are apparel software and commercial hardware used to design and manufacture products.

Student Learning Outcome(s):

Student will use commercial software to create documents used in the manufacturing process. Student will use industry related software to perform basic manufacturing processes.

FASHDSN 270 ILLUSTRATOR FOR FASHION DESIGN (2) CSU

Lab: 6 hours

This computer sketching course focuses on the fundamental options to illustrate garments, and fabrics for clothing and accessory presentations based on current global fashion industry technology standards.

Student Learning Outcome(s):

Students will create Fashion Flat sketches according to Fashion industry standard. Students will learn to create acceptable file formats for different output mediums like web and print.

FASHDSN 285 DIRECTED STUDY - FASHION DESIGN (2)

Lecture: 2 hours

This course allows students to pursue directed study in Fashion Design on a contract basis under the direction of a supervising instructor. Students must be enrolled in at least one fashion course to take this class.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Fashion Design and related topics.

FASHDSN 385 DIRECTED STUDY - FASHION DESIGN (3)

Lecture: 3 hours

This course allows students to pursue directed study in Fashion Design on a contract basis under the direction of a supervising instructor.Students must be enrolled in at least one fashion course to take this class.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Fashion Design and related topics.

FASHDSN 941 COOPERATIVE EDUCATION - FASHION DESIGN (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

FASHION MERCHANDISING

FASHMER 001 ENTREPRENEURIAL FASHION (3) CSU

Lecture: 2.5 hours / Lab: 1.5 hours

Advisory: English 101; Mathematics 105.

This course delivers the information needed to develop an effective business plan and provides a background in entrepreneurship for apparel related businesses. Students will examine the development of a fashion retail business from concept evaluation to strategy articulation. Procedures and resources for researching and opening a business are covered, as well as assortment planning, pricing and financing.

Student Learning Outcome(s):

Students will be able to evaluate a potential business idea and write a business plan for a retail or wholesale business.

FASHMER 010 RETAIL MERCHANDISING (3) CSU

Lecture: 3 hours

Advisory: English 101; Mathematics 105.

This course introduces all phases of fashion retailing from the creative to the financial. It is designed to familiarize students to the crucial functions of merchandising and product management in a modern retail company. The course covers special aspects of retailing including: the evolution of the industry, merchandising roles and careers, market knowledge, consumer behavior, planning and control and retail pricing.

Student Learning Outcome(s):

Students will be able to identify a consumer market for a retail store through the research of demographic, psychographic, and behavioristic traits of a target market.

FASHMER 015 VISUAL DISPLAY FOR RETAIL (3) CSU

Lecture: 2.5 hours, Lab: 1.5 hours

This course covers the methods used to create visual displays and merchandise environments that increase retail sales. Students are introduced to all processes from display planning to implementation. Topics cover Principles of Design, color, themes, mannequins, props, fixtures, signs, and various forms of in-store and window display.

Student Learning Outcome(s):

Students will create a window or interior store display demonstrating effective design principles and industry standards.

FASHMER 020 APPAREL PRODUCT DEVELOPMENT (3) CSU

Lecture: 2.5 hours / Lab: 1.5 hours

Advisory: English 101; Mathematics 105.

This course covers the step-by-step development of apparel products in a retail or wholesale environment. Students will use research, merchandising knowledge and the application of merchandising concepts and theories in a simulated process. The course includes visual presentation of design concepts, raw materials sourcing, overviews of production technology, wholesale marketing and retail distribution. Special emphasis is placed on the California apparel industry.

Student Learning Outcome(s):

1. Students will complete wholesale cost sheets for apparel garments. 2. Students will create a line list for a seasonal delivery of garments.

FASHMER 021 CULTURAL PERSPECTIVES OF DRESS (3) CSU

Lecture: 3 hours

Advisory: English 101

This course covers the factors that influence human behavior in the selection of dress in societies and cultural groups, and the influence of these factors on the design and production of textiles and apparel. Students will study consumer's purchasing decisions. Topics include the cultural context of dress, dress as nonverbal communication, dress through life stages, dress in the workplace, ethnic influences on dress, and technological changes of dress.

Student Learning Outcome(s):

1. Students will explain the symbolism of specific tattoo art as it relates to body dressing as a part of fashion culture in our society. 2. Students will demonstrate how to present oneself in a professional setting to the best advantage and relate how dress affects specific jobs in various occupations.

FASHMER 025 FASHION AND INDUSTRY INTERCHANGE (3) CSU

Lecture: 3 hours

Advisory: English 101.

This course covers current trends and relationships in the Fashion Industry between apparel, accessories, cosmetics, and home goods. Each category of goods is reviewed from the perspectives of historical development, organization and operation, merchandising and marketing in order to gain broad insight to the unique aspects of these industry segments.

Student Learning Outcome(s):

Students will be able to identify relationships in the fashion industry between apparel, accessories, cosmetics, jewelry and hard lines. Students will understand the unique characteristics of these categories, and learn to identify and track current trends.

FASHMER 027 ADVANCED RETAIL MERCHANDISING (3) CSU

Lecture: 2.5 hours / Lab: 1.5 hours

Prerequisite: Fashion Merchandising 10. Advisory: English 101; Mathematics 105;

An advanced retail research and study course covering retail demographics, site selection, stock assortments, planning, retail budgets, and sales applicable to all retail environments. Merchandise coordination and seasonal planning are given detailed coverage.

Student Learning Outcome(s):

Students will be able to conduct market, fabric, and sourcing research to create a line of LATTC Logo Apparel, and illustrate their work in a Power Point presentation.

FASHMER 030 WHOLESALE MERCHANDISING (3) CSU

Lecture: 3 hours

Advisory: English 101; Mathematics 105.

This course prepares students for a merchandising position with an apparel manufacturing company. All phases, including line development, design, costing, sales, production, contracting and distribution are covered. Current trends and specialized knowledge in merchandising a successful line are emphasized.

Student Learning Outcome(s):

Students will understand the steps of wholesale merchandising relating to marketing the line, preproduction processes, quality assurance and distribution.

FASHMER 035 FASHION PROMOTION (3) CSU

Lecture: 3 hours

Advisory: English 101.

This course covers the promotional aspects of the retail fashion industry. Emphasis is given to the processes of fashion communication and how they connect company profit and performance with skillful and creative promotional strategies. Sales promotion, advertising formats, public relations, and direct marketing are presented.

Student Learning Outcome(s):

Student will be able to write a press release for a new apparel product or event. They will be proficient in the use of an industry standard template to create and write a document for the purpose of publicizing a fashion item or event.

FASHMER 040 MODERN MERCHANDISING MATH (3) CSU

Lecture: 3 hours

Advisory: Mathematics 105.

Students will learn to use the computer for costing, pricing, inventory control as well as vendor analysis. All current concepts in wholesale and retail merchandise planning are presented. The emphasis is on practical knowledge and the use of computers in today's apparel business. The class will cover the principles and procedures involved in the business applications of the apparel industry using Apparel Information Management System (AIMS) software for wholesale and Microsoft Excel for making retail buying decisions.

Student Learning Outcome(s):

Students will create an inventory management and vendor analysis reports including calculations of retail price, wholesale cost, markup dollars, and markup percent for apparel items using manual and computer software applications.

FASHMER 041 FASHION MERCHANDISE BUYING (3) CSU

Lecture: 2.5 hours / Lab: 1.5 hours

Advisory: Fashion Merchandising 10; English 101; Mathematics 105.

This course provides specific instruction on fashion/merchandise buying tasks such as: identifying target customers, creating six month merchandise plans, departmental assortment plans, shopping the market and placing orders, in-season sales planning and forecasting, and calculating open-to-buy. This course covers the process of retail buying for a small business as well as for larger companies.

Student Learning Outcome(s):

Students will be able to identify a retail product opportunity and articulate a well developed strategy to accomplish their proposed sales and marketing plan. They will be able to demonstrate their strategy through a computer generated six month plan (excel), window and floor displays (Smart Draw, Photoshop, etc.), and written text presented in an organized binder/portfolio.

FASHMER 045 FASHION ECOMMERCE (3) CSU

Lecture: 3 hours

Students will develop an understanding of various eCommerce platforms and how they are used to sell fashion products. Platform specific lessons will be presented to cover digital selling methods, strategies, analytics, and marketing techniques in the changing online environment. Students will create an online eCommerce site using a hosted interface to present a fashion product assortment for online selling.

Student Learning Outcome(s):

1 Students will develop an eCommerce site using a platform specific interface that reflects industry best practices.

FASHMER 050 INTERNATIONAL FASHION BUSINESS (3) CSU

Lecture: 3 hours

Advisory: English 101.

This course provides an active study of the dynamics and challenges of the international apparel industry. Topics covered include: International business today; cultural diversity and dynamics; international legal issues; global opportunities in marketing; importing/exporting strategies; and international fashion business vocabulary terms.

Student Learning Outcome(s):

Students will analyze news articles related to class discussion topics and present key information.

FASHMER 941 COOPERATIVE EDUCATION - FASHION MERCHANDISING (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

FINANCE

FINANCE 008 PERSONAL FINANCE AND INVESTMENTS (3) CSU

Lecture: 3 hours

This course is designed to provide students with an understanding of a person's financial affairs, including family budgeting, consumer credit, home ownership, insurance, investment/savings, banking services, and major consumer purchases.

Student Learning Outcome(s):

Students will evaluate the use of financial budgeting concepts to make sound decisions in managing their personal finances.

FRENCH

FRENCH 001 ELEMENTARY FRENCH I (5) UC/CSU

Lecture: 5 hours

This course introduces the cultures and civilization of France and the French-speaking world. This introductory course stresses the fundamentals of French pronunciation and grammar; the building of a practical basic vocabulary; and the development of the ability to speak, understand, read, and write simple contemporary French .

Student Learning Outcome(s):

1. Demonstrate novice mastery of the fundamental structure of French the ability to communicate in the present and immediate future tenses in everyday situations. 2. Recognize and relate facts about culture of France and Francophone countries. 3. Perform novice level communication functions skills using the structures and vocabulary learned.

FRENCH 002 ELEMENTARY FRENCH II (5) UC/CSU

Lecture: 5 hours

Prerequisite: French 1.

This course completes the study of elementary grammar, increases vocabulary, includes the reading of simplified texts with continued emphasis on aural and written comprehension, oral expression, and the writing of simple French. Further study of French and Francophone cultures are expected to be covered.

Student Learning Outcome(s):

1. Student will recognize the overall basic structure and patterns of the French language and ability to communicate personal information, activities, describe feelings and preferences in everyday situations using various past tenses(passÃ© compose/ imparfait), present conditional, and future tenses on an elementary language level. 2. Student will perform novice level communication function skills using the vocabulary structures learned. 3. Student will recognize and relate facts about culture of France and Francophone countries.

GEOGRAPHY

GEOG 001 PHYSICAL GEOGRAPHY (3) UC/CSU

Lecture: 3 hours

This course studies the physical environment of earth. Emphasis is placed on climate, soils, vegetation, landforms, maps, weather systems, oceans, and the atmosphere, and their pattern on Earth.

Student Learning Outcome(s):

Students will apply basic geography concepts to answer the following questions: a) Classify rock types according with their geologic origin. b) Describe the concept of plate tectonic boundaries and types. c) Describe the types of waves generated during an earthquake.

GEOG 002 CULTURAL ELEMENTS OF GEOGRAPHY (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course examines how human civilization and the physical planet affect each other. This includes cultural ecology, population growth and distribution, sustainable development, languages and religions, use of natural resources, transportation and commerce, energy production, food production, globalization, as well as the social, political, and economic causes of war and climate change.

Student Learning Outcome(s):

QUESTION 1: Students will asses and list how organic agriculture improves the U.S. economy, its environment and the physical health of its citizens. QUESTION 2: Students will report which factors lead to a decline in death rates and a maintenance of high birth rates in Stage 2 of the Demographic Transition.

GEOG 007 WORLD REGIONAL GEOGRAPHY (3) UC/CSU

Lecture: 3 hours

This course provides a geographical survey of the world's regions and nations, including physical, cultural, and economic features. Emphasis is on spatial influences and historical legacies on population growth, cities, transportation networks, and natural environments. Focus is placed on distinctive features and also regional issues of global concern.

Student Learning Outcome(s):

1. Locate the world's major physical geographic features and climates and compare them with world population distribution; and for each world region locate major countries, cities, and physical features (climates, rivers, mountain ranges, plains, seas, etc) and identify the land area and population, economic geography (major livelihoods), features that create regional unity, and geopolitical issues. 2 List some of the factors used to measure different levels of economic and social development, and evaluate how these are used to compare regions and create stereotypes. 3. Summarize the influences of European colonialism and the Industrial Revolution on the cultural and economic geography of the modern world, compare capitalism and communism as major economic systems, and describe some of the geographic effects of capitalism vs. centrally planned economies.

GEOLOGY

GEOLOGY 001 PHYSICAL GEOLOGY (3) UC/CSU

Lecture: 3 hours

In this elementary course, the students learn Earth's internal and external forces and the features that these forces create. Students study minerals, rocks, volcanoes, earthquakes, mountain building, plate tectonics, tsunami, global warming, natural resources, and alternative energy resources. Students will also learn basic scientific principles, the process of the scientific method, map reading and geographic literacy.

Student Learning Outcome(s):

The student will be able to correctly describe all of the three rock types and accuratley discuss and give concrete examples of the basic components of the the rock cycle, processes such as plate tectonics, and earth's natural resources.

GEOLOGY 006 PHYSICAL GEOLOGY LABORATORY (1) UC/CSU

Lecture: 1 hour / Lab: 2 hours

Prerequisite: Geology 6. Corequisite: Geology 6

This course supplements Geology 1 with additional exercises in the identification of rocks and minerals, reading of maps, and study of rock structures. Studies of local geology are made based upon field trips and the collection of specimens.

Student Learning Outcome(s):

Upon completion of this course the student will be able to: 1. Analyze the role of plate tectonics in changing the sizes of the Earth's continents and oceans; Graph seismic data to determine the magnitude of earthquakes and locate the epicenter of earthquakes. 2. Identify common minerals & rock types on the basis of their physical properties; interpret past environment through detailed observation of mineral composition, fossil types and rock structures. 3. Construct topographic cross sections and geologic cross sections to analyze the geologic and deformational history of an area. 4. Determine the relative and absolute ages of rocks based on their physical relationships; using fossils to determine their age relationships, and determine absolute ages from radiometric data. 5. Analyze landforms formed by and hazards related to surface and groundwater, oceans, glaciers and wind. Interpret global climate change patterns on the basis of variations in sea level and glacier sizes. Program SLOs: 1. Explain the interrelationships between different disciplines to understand how the geological processes function 2. Apply the scientific method to the study of the geological materials and processes 3. Utilize information learned to make informed decisions about global and local environmental issues. Institutional SLOs: 1. Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences. 2. Quantitative Reasoning: Identify, analyze, and solve problems that are quantitative in nature. 3. Technical Competence: Utilize the appropriate technology effectively for informational, academic, person, and professional needs.

HEALTH

HEALTH 002 HEALTH AND FITNESS (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

This course promotes healthy physical and psychological lifestyles, with emphasis on disease prevention, including violence/abuse, nutrition, sexuality, reproduction, drugs, alcohol, tobacco, aging, stress management, and weight control. The physical fitness segment emphasizes individual improvement utilizing aerobic, flexibility, and strengthening activities.

Student Learning Outcome(s):

Students will use critical thinking skills to gather, identify, analyze, synthesize information, and evaluate problems and solutions to reaching improving their personal health and fitness.

HEALTH 006 NUTRITION FOR HEALTHFUL LIVING AND FITNESS ACTIVITIES (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

Basic nutrition theories, information for healthful food purchasing, and relationship of nutrition to disease. Benefits of exercise and techniques for body conditioning are learned. Class time includes participation in fitness activities including aerobic, developmental and flexibility exercises.

Student Learning Outcome(s):

Using the components of Health and Fitness and information on nutrition gained from the class, students will develop a program that includes a structured fitness and nutritional program that they can modify and enhance yearly to promote lifelong fitness.

HEALTH 008 WOMEN'S PERSONAL HEALTH (3) UC/CSU

Lecture: 3 hours

A study of factors affecting physical, social and emotional well-being of women in our society.

Student Learning Outcome(s):

1. Student will identify the major health issues affecting women and the lifestyle changes which can be made to improve their own health and the health of their family members.

HEALTH 011 PRINCIPLES OF HEALTHFUL LIVING (3) UC/CSU

Lecture: 3 hours

This course offers concepts to use today and tomorrow as guidelines for self-directed responsible living. Health topics cover the emotional and mental health, cardiovascular fitness, nutrition, chronic and communicable diseases, environmental issues, and the life cycle. Student is provided with self-assessments for examining their lifestyle habits and relationships, as well as, resources for getting help when they need it.

Student Learning Outcome(s):

Student will create and present a "lifeplan" that will include activities that will promote lifelong wellness using all the dimensions of health.

HEALTH 012 SAFETY EDUCATION AND FIRST AID (3) UC/CSU

Lecture: 3 hours

This course involves the theory and detailed demonstration of the first aid care of the injured. The student will learn to assess a victim's condition and incorporate proper treatment. Standard first aid, CPR, and AED certification(s) will be granted upon successful completion of requirements.

Student Learning Outcome(s):

1. Student will be able to perform the culminating CPR skills final for the American Heart Association or the American Red Cross demonstrating high quality CPR techniques. 2. Student will be able to apply a pressure bandage to forearm in correct sequence.

HEALTH 021 HUMAN SEXUALITY (3) UC/CSU

Lecture: 3 hours

This course provides a comprehensive introduction to the cultural, behavioral, biological and psychosocial aspects of human sexuality. Topics presented include acquired immune deficiency syndrome and other sexually transmitted diseases, as well as sexual variance and dysfunction, and sexuality throughout the human life cycle.

Student Learning Outcome(s):

Student will define the various sexually transmitted infections, their causes and the treatment for each.

HEALTH 043 MEN'S HEALTH AND FITNESS (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

This course explores men's health issues and adds a fitness component so that men can learn to understand and control their life long health practices, attitudes and challenges that contemporary men experience in urban areas. It studies topics important to men such as domestic abuse and violence, stress, alcoholism, disease transmission and other physical, emotional and social topics related to men's health, fitness and wellness.

Student Learning Outcome(s):

Student will identify key factors that specifically affect a Man's health and ways to improve a man's health.

HEALTH 046 BASIC LIFE SUPPORT CPR/AED FOR THE HEALTHCARE PROVIDER (1) CSU

Lecture: 1 hour

This course covers the content of the American Heart Association Basic Life Support (CPR/AED) for the Healthcare Provider. It covers care of the adult, child, and infant.

Student Learning Outcome(s):

1. Student will be able to perform Adult CPR techniques according to the current guidelines set by the American Heart Association CPR for Health Care Providers. 2. Student will be able to perform Infant CPR techniques according to the current guidelines set by the American Heart Association CPR for Health Care Providers.

HEALTH 051 DRUGS AND ALCOHOL IN SOCIETY (3) UC/CSU

Lecture: 3 hours

This course provides an overview of the epidemiology and toxicology of substance abuse and its relevance to personal and public health. Students will be introduced to the concept of substance abuse and dependence, the definition of licit and illicit drugs, and the pharmacologic, neurologic and physiologic effects of selected substances on the human brain. Political, social and economic factors involved in the supply and demand for drugs will be discussed. Epidemiologic data on the prevalence, incidence, and trends of smoking, alcohol, prescription and other drug dependencies in the U.S. will be covered, as well as risk factors associated with the use and abuse of these substances. Current options for recovery and a survey of local resources will be reviewed.

Student Learning Outcome(s):

1. Differentiate between the major drugs of abuse, mechanisms of action, and beneficial and harmful effects of these substance. 2. Examine the various drug prevention strategies, treatment and support programs available. 3. Analyze and debate current problems of drug use and abuse on individuals, families and the society.

HEALTH 101 INTRODUCTION TO PUBLIC HEALTH (3) UC/CSU

Lecture: 3 hours

This course provides an introduction to the discipline of Public Health. Students will gain an understanding of the basic concepts and terminologies of public health, and the history and accomplishments of public health officials and agencies. An overview of the functions of various public health professions and institutions, and an in-depth examination of the core public health disciplines is covered. Topics of the discipline include the epidemiology of infectious and chronic disease; prevention and control of diseases in the community including the analysis of the social determinants of health and strategies for eliminating disease, illness and health disparities among various populations; community organizing and health promotion programming; environmental health and safety; global health; and health care policy and management.

Student Learning Outcome(s):

1. Identify and analyze health promotion strategies and programming for prevention, detection, and control of infectious and chronic disease. 2. Analyze current public health issues and describe how they affect societal well-being among specific populations of age, sex, ethnicity, education, and socioeconomic status. 3. Identify, assess, and utilize credible information resources on community health current issues, such as the Internet, social media, television, newspapers, and libraries.

HEALTH 105 BREAST CANCER SCREENING, TESTS, PREVENTION, AND TREATMENT OPTIONS (3)

Lecture: 3 hours

This course will cover the traditional and emerging options for breast cancer screening, tests, prevention and treatment. The course will include a look at the new iBreast Exam and NoTouch BreastScan screening technology. Public health issues will be discussed on safety, education, efficacy, and universal access to breast cancer screening, prevention, and treatment.

Student Learning Outcome(s):

1. Describe the current breast cancer screening recommendations and controversies. 2. Identify high risk groups and lifestyle habits which need to be considered when following current breast cancer screening and follow-up guidelines. 3. Analyze and evaluate the new breast cancer screening, diagnostic, and treatment currently being used.

HEALTH OCCUPATIONS

HLTHOCC 048 MEDICAL ASSISTANT PRECEPTORSHIP (3)

Lecture: 2.5 hours / Lab: 4.5 hours

Prerequisite: Health Occupations 47.

This 8-week course allows the student to apply knowledge, perform administrative and clinical procedures and develop professional attitudes while interacting with other professionals and consumers in a health care setting. Student will work under the supervision of a medical assistant preceptor. Student is expected to complete 135 contact hours at the assigned placement and participate in weekly meetings with faculty supervisor.

HLTHOCC 049 FUNDAMENTALS OF ELDER CARE (5)

Lecture: 4 hours / Lab: 3 hours

Prerequisite: HLTHOCC 062, HLTHOCC 063, HLTHOCC 064 and HLTHOCC 065

This course will introduce students to the information about the aging process and related medical, psychological and cognitive changes that is needed to effectively care for the elderly person in a long-term care center or at home.

Student Learning Outcome(s):

Student will acquire understanding of fundamentals of physical and psychosocial care of the elderly. Student will provide basic physical and psychosocial care to the elderly resident of a care facility

HLTHOCC 062 SKILL SET FOR THE HEALTH CARE PROFESSIONAL (2) CSU

Lecture: 1 hour / Lab: 3 hours

This course is an introduction of the concepts and skills that serve as a foundation for the health care professions. Topics include hygiene and safety, infection control, basic client monitoring and basic first aid, therapeutic communication and basic health documentation.

Student Learning Outcome(s):

Student will demonstrate understanding of principles in basic patient care skills. Student will perform basic skills of care to patients with injuries or diseases.

HLTHHOC 062A SKILL SET FOR THE HEALTH CARE PROFESSIONAL – LECTURE (1) CSU

HLTHHOC 062B SKILL SET FOR THE HEALTH CARE PROFESSIONAL – LAB (1) CSU

HLTHOCC 063 BASIC MEDICAL TERMINOLOGY, PATHOPHYSIOLOGY AND PHARMACOLOGY (2) CSU

Lecture: 2 hours

This basic medical language course will discuss common diseases and injuries and their pharmacological treatment using medical terminology in English and Spanish, when appropriate.

Student Learning Outcome(s):

1.Student will analyze medical language and component parts. 2.Student will apply medical language to discussion of treatment of common diseases and injuries.

HLTHOCC 064 CULTURAL AND LEGAL TOPICS FOR HEALTH CARE PROFESSIONALS (1) CSU

Lecture: 1 hour

This course provides an overview of the concepts of health and illness, cultural diversity and legal issues that affect the health care professional

Student Learning Outcome(s):

1. Student will apply legal guidelines as they relate to health care situations including privacy, confidentiality and safety. 2. Students will take action to minimize cultural conflicts in the health care setting.

HLTHOCC 065 FUNDAMENTALS FOR THE HEALTH CARE PROFESSIONAL (2.5) CSU

Lecture: 2.5 hours

This course explores career options in the health care industry, healthy behavior for health care workers, work ethics, professional resumes and interviewing skills and personality traits of a health care professional. There will be an externship during which area employers will introduce students to direct and indirect patient care opportunities

Student Learning Outcome(s):

1.Student will take action that demonstrates understanding of the variation, complexity and ethical principles of the health care provider role in direct and indirect patient care settings. 2.Student will demonstrate workplace traits that promote professional responses to patients, families, colleagues and other members of the healthcare system in simulated settings.

HLTHOCC 066 DEMENTIA FOR HEALTH CARE (3)

Lecture: 3 hour(s) / Lab: 1 hours

The course focuses on an overarching focus on health care practice to ensure quality dementia care for all.

HLTHOCC 911 COOPERATIVE EDUCATION – HEALTH OCCUPATIONS (1)

Lab: 3.34 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least (3) learning objectives to be accomplished on the job. The objective will be related to the educational/occupational goals of the student.

HLTHOCC 921 COOPERATIVE EDUCATION – HEALTH OCCUPATIONS (2)

Lab: 3.34 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least (3) learning objectives to be accomplished on the job. The objective will be related to the educational/occupational goals of the student.

HLTHOCC 931 COOPERATIVE EDUCATION – HEALTH OCCUPATIONS (3)

Lab: 10 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least (3) learning objectives to be accomplished on the job. The objective will be related to the educational/occupational goals of the student.

HISTORY

HISTORY 002 INTRODUCTION TO WESTERN CIVILIZATION II (3) UC/CSU

Lecture: 3 hours

Advisory: English 028

This course surveys Western Civilization from the Protestant Reformation to the present. Major topics include the political, economic, and social organization of Europe with emphasis upon the rise of the nation state and industrialization. European imperialism in the nineteenth and twentieth centuries is also examined.

Student Learning Outcome(s):

1. Student will demonstrate ability to interpret historical primary and secondary sources to compose an argument using the sources as support. 2. Student will explain mjoy economic, technological, and/or scientific developments and their historical significance. 3. Student will analyze and explain the historical significance of major political trends, attitudes, conflicts and effects, including both mainstream and reform efforts.

HISTORY 011 POLITICAL AND SOCIAL HISTORY OF THE UNITED STATES I (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will examine the historical development of the United States of America from 1492 to the close of the Civil War. Emphasis is placed on the relationship of regions, the role of major ethnic and social groups, the continuity of the American experience, and its derivation from other cultures, politics, economics, social movements, and its geography.

Student Learning Outcome(s):

1. Student will demonstrate ability to interpret historical primary and secondary sources to compose an argument which uses them, as appropriate, for support. 2. Student will explain major economic, technological and scientific developments and their historical significance. 3. Student will analyze and explain the historical significance of major political trends, attitudes, conflicts and effects, including both mainstream and reform efforts.

HISTORY 012 POLITICAL AND SOCIAL HISTORY OF THE UNITED STATES II (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will examine the historical development of the United States of America from the close of the Civil War to the present. Emphasis is placed on the role of the major ethnic and social groups, the continuity of the American experience, and its derivation from other cultures, politics, economics, social movements, and its geography.

Student Learning Outcome(s):

1. Students will defend a position on a debatable historical issue. 2. Describe and analyze the actors, locations, timelines, actions, and reasons surrounding a historical event. 3. Students will examine and assess the key events from 1865 to the Present.

HISTORY 041 THE AFRICAN AMERICAN IN THE HISTORY OF THE U.S. I (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will examine the historical development of the African American from precolonial Africa through the Civil War. This course will examine the political, social, economic and intellectual development of the United States, as well as the State and local government and constitution of the U.S.

Student Learning Outcome(s):

Students will critically examine how the decade of the 1850s offered a preview of the coming of the Civil War. Students will assess the key events as primary causes of the Civil War. Students will describe the events they perceive as pivotal events that led African American participation in the Civil War. Students will include the following key people, events, issues: Anti-Slavery society, Fugitive Slave Laws, the Dred Scott Decision, Kansas Nebraska Act, John Brown Raid, Frederick Douglass, Abraham Lincoln, Mary Ellen Pleasant, Thomas Sims and Martin R. Delany.

HISTORY 042 THE AFRICAN AMERICAN IN THE HISTORY OF THE U.S. II (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will examine the historical development of the United States of America from the end of the Civil War to the present with special emphasis on the contributions of the Afro- American. Emphasis is placed on the relationship of regions, both internal and external, the role of major ethnic and social groups, the continuity of the American experience, and its deviation from other cultures, politics, economics, social movements, and its geography will be examined.

Student Learning Outcome(s):

Students will be able to critically analyze experiences of African Americans from the post Civil War to the present, New Millennium. 1. Students will be able to research and analyze a topic that affected African Americans post Civil War to present. 2. Students will analyze an event from this period and be able to link the people, issues and factors that influence the event (s).

HISTORY 043 THE MEXICAN-AMERICAN IN THE HISTORY OF THE UNITED STATES I (3) UC/CSU

Lecture: 3 hours

Advisory: English 028

Examines historical development of the United States from the period of exploration to the close of the Civil War with special emphasis on the history of Mexican-Americans. Emphasis on regions, both internal and external, major ethnic and social groups, the American experience and its derivation from other cultures, politics, economics, social movements, and geography.

Student Learning Outcome(s):

1. Discuss and defend a position on a debatable Mexican-American historical issue.

HISTORY 044 THE MEXICAN AMERICAN IN THE HISTORY OF THE UNITED STATES II (3) UC/CSU

Lecture: 3 hours
Advisory: English 028

Examines historical development of the United States from the close of the Civil War to the present with special emphasis on the history of Mexican-Americans. Emphasis on regions, both internal and external, major ethnic and social groups, the American experience and its derivation from other cultures, politics, economics, social movements, and geography. The U.S. Constitution, the State of California Constitution, and local government will be examined. Political philosophies, political institutions, amendments and interpretations, rights and obligations of citizens, and Federal/State/local governments will be examined.

Student Learning Outcome(s):

1. . Examine and assess the key events of the Chicano Movement. 2. Students conduct academic research to create a paper on a historical 20th century Mexican American issue using APA format.

HISTORY 052 THE ROLE OF WOMEN IN THE HISTORY OF THE U.S. (3) UC/CSU

Lecture: 3 hours

Advisory: English 28

This course will explore the political, social, economic and intellectual history of women in the development of the United States from the early colonial era to the present, with special emphasis on their contributions, as well as issues. Also, it surveys, the U.S. Constitution and California state and local government in the context of the story of women in the history of the United States.

Student Learning Outcome(s):

1. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify and critically analyze individuals who have contributed to changing womens status in U.S. History. 2. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify and explain movements that have contributed to changing womens status in U.S. History. 3. In a research essay through the evaluation of print or web primary and/or secondary sources, analyze the role that American law has played in defining womans position in American society.

HISTORY 086 INTRODUCTION TO WORLD CIVILIZATION I (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

Introductory survey of World Civilization to 1500. This course will examine and compare the social, economic, and political formations of various societies and world cultures. Major topics will include religion, philosophy, technology, and migration and settlement patterns.

Student Learning Outcome(s):

1. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify and critically analyze the development of a major world civilization and its culture. 2. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify and compare two major world civilizations. 3. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify and critically analyze social patterns, economic trends, political formations, religious changes, and/or cultural changes of a major world civilization.

HISTORY 087 INTRODUCTION TO WORLD CIVILIZATION II (3) UC/CSU

Lecture: 3 hours

Introduction survey of World Civilization from 1500 to the Present. This course will examine and compare the social, economic, and political formations of various governments, societies, and world cultures. Major topics will include the development of the nation state, economic systems and technology, industrialization, colonization, and global conquest, revolutions, and migration and settlement patterns.

Student Learning Outcome(s):

1. In a research essay through the evaluation of print or web primary and/or secondary sources, students will identify a world civilization from 1500 to the present and critically analyze its importance and contributions to humankind. 2. In a research essay through the evaluation of print or web primary and/or secondary sources, students will discuss the development of a major world government from 1500 to the present and demonstrate how this government and its culture interact. 3. In a research essay through the evaluation of print or web primary and/or secondary sources, students will compare and analyze the social patterns, economic trends, political formations, or religious and cultural changes of two major world civilizations developed from 1500 to the present.

HUMANITIES

HUMAN 001 CULTURAL PATTERNS OF WESTERN CIVILIZATION (3) UC/CSU

Lecture: 3 hours

Advisory: English 028

This course is an introduction to the general concepts of the humanities. Music, painting, sculpture and architecture are studied and compared in relation to their background, medium, organization and style. Included is a survey of the most productive periods of Western history, from classical Greek through the Medieval period. Stress is placed on awareness of difference in cultural heritage, values and perspective as revealed in the arts.

Student Learning Outcome(s):

Students will demonstrate familiarity with a broad spectrum of world civilizations with particular emphasis on how their artistic legacies reflect political and religious traditions. 1. Students will demonstrate familiarity with several early world civilizations. 2. Students will compare and contrast world religions. 3. Students will assess the ways in which visual art and literature reflect social, political and religious traits of the society that produced them.

HUMAN 002 STUDIES IN SELECTED CULTURES (3) UC/CSU

Lecture: 3 hours

Advisory: English 028

Students study in-depth the social, political, economic and cultural features of a particular culture or set of related cultures. Customs, traditions, values, historical events and trends, religious traditions, pop cultural practices, achievements and trends in the arts and the sciences of the cultures studied are also examined. Western, Eastern, Mid-Eastern, African and other cultures and societies both past and present may be studied.

Student Learning Outcome(s):

Students will be able to analyze ways in which modern social and political history are reflected in the arts, including literature, visual arts and music: 1. Students will explore art and architecture within the context of the society that created it. 2. Students will interpret social, religious,and psychological dimensions of works of poetry, prose and drama. 3. Students will compare and contrast art, literature and music from different cultures or time periods

HUMAN 060 PEOPLE AND THEIR WORLD: TECHNOLOGY AND THE HUMANITIES (3) UC/CSU

Lecture: 3 hours

This course relates technology to the humanities and provides opportunities to examine the interaction between society and technology. Questions about cultural and social values in light of the effects of technology from the Paleolithic period to the 21st century are developed and discussed. In their research, students explore the societal effects of the latest technological developments of our time.

Student Learning Outcome(s):

1)Students will identify the links that have historically existed between technology and the arts. 2) Explain technological innovations within the arts. .

KINESIOLOGY

KIN 047 ADAPTED SWIMMING AND HYDROEXERCISE (1) UC/CSU

Lab: 3 hours

This course meets the needs of students with disabilities requiring restricted or modified activities. Individualized exercise programs focus on basic swimming and water safety skills. Hydroexercise programs emphasize physical fitness, buoyancy, and hydrodynamic resistance principles.

Student Learning Outcome(s):

1. Students will identify how variances in surface area, speed of movement, turbulence, and buoyancy effects resistance, propulsion, and exercise intensity when moving in the water. 2. Students will identify effective swimming skills related to the kick, arm motion, and breathing.3. Students will differentiate what factors affect one's buoyancy when swimming in the water.

KIN 180 MARATHON TRAINING COURSE FOR RUN/WALK (1.5) UC/CSU

Lab: 3 hours

This course develops cardiovascular endurance for a student training for a marathon using a variety of tempo runs. Students utilize and understand aerobic and anaerobic energy systems and when each is used. Race analysis and race psychology are also explained.

Student Learning Outcome(s):

Compare and contrast anaerobic and aerobic development in long distance running/walking by analyzing self performances, timed trials, and heart rate.

KIN 237 BOOT CAMP I (3) CSU

Lab: 3 hours

This course is designed as a lower intensity style boot camp class that is conducted both on and off campus using indoor and outdoor facilities. Training exercises used during this class include basic aerobic and anaerobic conditioning, muscular strength, resistance and endurance training, and also individual and team concepts. In addition, students are challenged to understand and apply basic fitness principles, basic anatomy and physiology, the prevention of training injuries, target heart rate, and

the intensity of exercise as well as nutrition for fitness. The students train individually, with a partner, or in a team setting.

Student Learning Outcome(s):

1. Students will be able to perform a variety of cardiovascular endurance exercises with proper form and technique. 2. Students will assess their goals and current fitness levels to design a personalized workout plan to increase cardiovascular and muscular endurance.

KIN 300-1 SWIMMING NON-SWIMMER I (1) UC/CSU

Lab: 3 hours

This course will enhance the skills of the students in floating, kicking and swimming the crawl and backstroke.

Student Learning Outcome(s):

Students will be able to successfully swim Freestyle without flotation support in deep water:

KIN 300-2 SWIMMING NON-SWIMMER II (1) UC/CSU

Lab: 3 hours

This course continues to enhance the skills of the students in floating, kicking and swimming the crawl and backstroke, that were developed in Swimming-I. Additionally, skills in the sidestroke and the elementary backstroke will be taught as well as the ability to safely enter the water with a jump and a long shallow dive.

Student Learning Outcome(s):

Students will be able to successfully swim Freestyle and Backstroke. Students will demonstrate proficiency in at least 6 of the swimming skills and at least 2 of the lifelong skills.

KIN 300-3 SWIMMING NON-SWIMMER III (1) UC/CSU

Lab: 3 hours

This course continues to enhance the skills of the students in Freestyle, backstroke, elementary backstroke and sidestroke that were developed in Swimming-II. Additionally, the basic skills of the Breaststroke, competitive starts and turns, and interval training will be taught.

Student Learning Outcome(s):

The student will demonstrate proficiency in at least 8 of the swimming skills and 3 of the lifelong skills.

KIN 301-1 SWIMMING SKILLS I (1) UC/CSU

Lab: 3 hours

This course is designed to further enhance the skills of competitive swimming in freestyle and backstroke including competitive flip turns, starts and finishes. The course will also introduce the basic principles of training.

Student Learning Outcome(s):

Student will complete 30 lengths (750 yards) in a combination of freestyle and backstroke within 20 minutes.

KIN 301-2 SWIMMING SKILLS II (1) UC/CSU

Lab: 3 hours

This course is designed to further enhance the skills of competitive swimming in freestyle and backstroke learned in 301-1 as well as introduce the basic principles of the competitive Breaststroke. The course will also use slightly advanced principles of training and increased yardage.

Student Learning Outcome(s):

Student will complete 40 lengths (1000 yards) in a variety of strokes within 20 minutes Successfully complete a 100 Ind. Medley Swim.

KIN 301-3 SWIMMING SKILLS III (1) UC/CSU

Lab: 3 hours

This course is designed to further enhance the skills of competitive swimming in freestyle and backstroke learned in 301-1 as well as the skills learned in 301-2 for the competitive breaststroke and introduce the skills of the competitive butterfly. The course will also use advanced principles of training and increased yardage.

Student Learning Outcome(s):

Student will be able to successfully complete a 200 IM and demonstrate the proper techniques and skills within the swim.

KIN 303-1 AQUA AEROBICS I (1) UC/CSU

Lab: 3 hours

Instruction and practice in deep water exercise to increase knowledge and levels of cardiovascular fitness, muscular strength and endurance, and flexibility. No swimming skills required.

Student Learning Outcome(s):

Students will engage in and assess their performance in a variety of shallow water exercises that promote overall health and fitness.

KIN 303-2 AQUA AEROBICS II (1) UC/CSU

Lab: 3 hours

Advisory: KIN 303-1

Instruction and practice in deep water exercise to increase knowledge and levels of cardiovascular fitness, muscular strength and endurance, and flexibility. No swimming skills required. This course builds upon knowledge acquired in kin 303-1.

Student Learning Outcome(s):

Students will engage in and assess their performance in a variety of deep water exercises that promote overall health and fitness.

KIN 303-3 AQUA AEROBICS III (1) UC/CSU

Lab: 3 hours

Advisoriy: KIN 303-1 and 303-2

This course applies the knowledge and experience gained from KIN 303-1 and KIN 303-2 to exercise at intensities designed to prevent and reverse Type 2 Diabetes. Students will journal their workouts and caloric intake to focus on reducing body fat and insulin resistance. Exercises will be done in both shallow and deep water with specialized water resistance equipment designed to exhaust stored muscle glycogen.

Student Learning Outcome(s):

Students will engage in and assess their performance in a variety of water activities at a level capable of reducing insulin resistance.

KIN 303-4 AQUA AEROBICS IV (1) UC/CSU

Lab: 3 hours

Advisoriy: KIN 303-1 and 303-2

This course applies the knowledge and experience gained from KIN 303-1 and KIN 303-2 to develop personal water exercise programs to meet the demands of career, improve posture, and alleviate pain caused by muscle imbalances. Students will utilize water exercises and resistance equipment in both shallow and deep water to strengthen weaker muscles. Water Yoga techniques will be used to stretch muscles and build core strength.

Student Learning Outcome(s):

Students will engage in and assess their performance in a variety of water activities that promote muscle balance.

KIN 307-1 SWIM AND RUN I (1) UC/CSU

Lab: 3 hours

This course develops cardiovascular conditioning and fitness through running and swimming laps. It enables students to gain awareness of the importance of proper running techniques/postural alignment, including progressive resistance training and conditioning for the purpose of training for a biathlon. Nutrition and concepts of fitness are also covered.

Student Learning Outcome(s):

The student will be able to run and swim with the proper techniques and skills for an extended period of time.

KIN 307-2 SWIM AND RUN II (1) UC/CSU

Lab: 3 hours

This course develops cardiovascular conditioning and fitness through running and swimming laps. It enables students to gain awareness of the importance of proper running techniques/postural alignment, including progressive resistance training and conditioning for the purpose of training for a triathlon.

Student Learning Outcome(s):

The student will be able to run and swim with the proper technique with an empahasis on the principles of training including overload and specificity of training.

KIN 307-3 SWIM AND RUN III (1) UC/CSU

Lab: 3 hours

This course develops cardiovascular conditioning and fitness through running and swimming laps.

Student Learning Outcome(s):

The student will be able to run and swim with the proper technique with an empahasis on the principles of training including overload and specificity of training, and be able to transition between the run and swim phases of a biathalon.

KIN 317-1 SELF DEFENSE I (1) CSU

Lab: 3 hours

This course instructs the student in self-defense and personal safety skills for men and women against deadly dangerous and other physical attacks at an introductory level. The course includes discussion of safety precautions and the promotion of mental and physical well-being. Introductory skills include palm-heel strike to floating rib and face targets, knee strike, scrape-stomp strike to shin and feet, street 'ready' stance, and dojo (class training) 'ready' position.

Student Learning Outcome(s):

1. The student will be able to defend and protect one's self against an assailant. 2.The student will be able to demonstrate how to make a safe transition to the ground when knocked down.

KIN 317-2 SELF DEFENSE II (1) CSU

Lab: 3 hours

This course instructs the student in self-defense and personal safety skills for men and women against deadly dangerous and other physical attacks at a beginning karate and martial arts skills level. The course includes discussion of safe defense and protection strategies and the promotion of mental and physical well-being, and provides beginning skills training in self-defense physical technique development. These beginning skills include forward punch, head, chest and groin blocks, forward stance, and front kick.

Student Learning Outcome(s):

Demonstrate appropriate Kenpo self-defense technique for a particular situation.

KIN 329-1 BODY CONDITIONING I (1) UC/CSU

Lab: 3 hours

This class is designed to incorporate forms, concepts and techniques associated with body conditioning. Including Pilates, Core Strengthening, Cardiovascular Exercise and Muscular Strength and Endurance exercises.

Student Learning Outcome(s):

Students will learn basic fitness principles and techniques and will be able to show proficiency.

KIN 329-2 BODY CONDITIONING II (1) UC/CSU

Lab: 3 hours

This class is designed to incorporate intermediate forms, concepts and techniques associated with body conditioning. Including Pilates, Core Strengthening, Cardiovascular Exercise and Muscular Strength and Endurance exercises.

Student Learning Outcome(s):

Students will be able to incorporate fitness principles and techniques and create a personalized fitness program.

KIN 329-3 BODY CONDITIONING III (1) UC/CSU

Lab: 3 hours

Body Conditioning Intermediate concepts and mastery of exercise techniques in the design of individualize exercise programs to enhance cardiovascular Endurance, Muscle Strength and Endurance, Flexibility and Body Composition. Utilizing: Pilates Core Strengthening, Medicine balls, Weight Training and Other Preventive Exercise Methods.

Student Learning Outcome(s):

Students will learn basic fitness principles and techniques and will be able to show proficiency.

KIN 330-1 CARDIO KICKBOXING I (1) UC/CSU

Lab: 3 hours

This is the first level of a non-contact activity course designed to use basic kicking and punching techniques to improve overall fitness including: cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition.

Student Learning Outcome(s):

Student Learning Outcome: Student will be able to demonstrate a jab/ reverse punch combination.

KIN 330-2 CARDIO KICKBOXING II (1) UC/CSU

Lab: 3 hours

This is the second level of a non-contact activity course designed to build on basic kicking and punching techniques from Cardio Kickboxing-1. New techniques and combinations will be added to improve overall fitness including: cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition.

Student Learning Outcome(s):

Including the jab/reverse combination from Cardio Kickboxing-1, student will be able to demonstrate the proper Kenpo self-defense technique against one of four attacks.

KIN 330-3 CARDIO KICKBOXING III (1) UC/CSU

Lab: 3 hours

This is the third level of a non-contact martial arts activity course designed to build on techniques from Cardio Kickboxing-1 and Cardio Kickboxing-2. New techniques and combinations will be added to improve overall fitness including: cardiorespiratory endurance, muscular strength and endurance, flexibility, and body composition.

Student Learning Outcome(s):

Student Learning Outcome: Drawing from the Kenpo techniques in Cardio Kickboxing 2 and 3, student will be able to demonstrate the proper Kenpo self-defense technique against one of eight attacks.

KIN 332-1 STEP AEROBICS I (1) UC/CSU

Lab: 3 hours

This course is designed to improve cardiovascular fitness and strengthen select muscle groups by performing stepping skills in rhythm with music. Stepping is primarily a low impact aerobic exercise. Activity includes muscle conditioning and flexibility exercises.

Student Learning Outcome(s):

Students will demonstrate an understanding of cardiovascular fitness by performing a group fitness routine and achieving BASIC skills on the Rubric.

KIN 334-1 FITNESS WALKING I (1) UC/CSU

Lab: 3 hours

Walking for Fitness level 1 focuses on achieving cardiovascular fitness, building upon level 1 workouts and enhancing a healthy lifestyle through walking. Includes such topics as fitness walking training principles overload and specificity, proper nutrition, differences of aerobic versus anaerobic workouts, Target Heart Rate, proper technique, shoe selection, posture, gait, flexibility, clothing, and safety limitations. This course will assess fitness levels and identify the physical health benefits from walking.

Student Learning Outcome(s):

Students will complete the Mile Walk Test to determine cardiorespiratory fitness.

KIN 334-2 FITNESS WALKING II (1) UC/CSU

Lab: 3 hours

Walking for Fitness level 2 focuses on achieving cardiovascular fitness, building upon level 1 workouts and enhancing a healthy lifestyle through walking. Includes such topics as fitness walking training principles overload and specificity, proper nutrition, differences of aerobic versus anaerobic workouts, Target Heart Rate, proper technique, shoe selection, posture, gait, flexibility, clothing, and safety limitations. This course will assess fitness levels and identify the physical health benefits from walking.

Student Learning Outcome(s):

Students will demonstrate an optimal healthy flexibility range. Students will complete the Mile Walk Test to determine aerobic capacity.

KIN 334-3 FITNESS WALKING III (1) UC/CSU

Lab: 3 hours

Walking for Fitness level 3 focuses on developing cardiovascular fitness at an advanced level. This course will introduce principles and strategies of interval training building upon level 1 and 2 workouts and developing a healthy lifestyle through walking.

Student Learning Outcome(s):

Students will demonstrate an optimal healthy flexibility range. Students will complete the Mile Walk Test to determine aerobic capacity. Students will determine Target Heart Rate to monitor intensity of workouts

KIN 334-4 FITNESS WALKING IV (1) UC/CSU

Lab: 3 hours

Walking for Fitness level 4 is for the advanced Fitness Walker. Level 4 focuses on achieving developing fitness walking programs based upon exercise physiological principles.

Student Learning Outcome(s):

Students will demonstrate an optimal healthy flexibility range. Students will complete the Mile Walk Test to determine aerobic capacity. Students will determine Target Heart Rate to monitor intensity of workouts Students will determine BMI for optimal healthy body weight

KIN 337 BOOT CAMP II (1) UC/CSU

Lab: 3 hours

This course is designed as a moderate intensity style boot camp class that is conducted both on and off campus using indoor and outdoor facilities. Training exercises used during this class includes basic aerobic and anaerobic conditioning, muscular strength, resistance and endurance training, and also individual and team concepts. In addition, students are challenged to understand and apply fitness principles, anatomy and physiology, the prevention of training injuries, target heart rate, and the intensity of exercise as well as nutrition for fitness. The students train individually, with a partner, or in a team setting.

Student Learning Outcome(s):

Students will design a personalized, moderate to high intensity interval training program.

KIN 350-1 WEIGHT TRAINING I (1) UC/CSU

Lab: 3 hours

This course enhances training skills, including enhanced spotting techniques, enhanced lifting techniques and an introduction to more adnvanced exercises used in a weight training program. An increased emphasis will be placed in the knowledge, understanding, value and practical application of building muscle strength and endurance. The course will include an increased understanding of the human muscular system. The objective is to further enhance the student's ability to prepare their own physical fitness program at any time in their life and to assist others based upon sound physiological and bio-mechanical principles.

Student Learning Outcome(s):

Demonstrate and increased knowledge in weight training, including safety techniques and level 2 exercises. Define the main muscles in the human muscular system

KIN 350-2 WEIGHT TRAINING II (1) UC/CSU

Lab: 3 hours

Designed for intermediate weight training students who desire a deeper knowledge and understanding of weight training and conditioning and it's relationship to personal fitness. This class is open to intermediate weight trainers only.

Student Learning Outcome(s):

Student will demonstrate the proper procedures for spotting a bench press lift. Student will show an increase in muscular strength between a pre and post strength test.

KIN 351-1 YOGA I (1) UC/CSU

Lab: 3 hours

This introductory course teaches a 5,000 year old form of mostly isometric poses (asanas), breathing techniques, and meditation. Yoga promotes mental, physical, and spiritual fitness. In addition there are brief lectures covering basic information on hypertension, exercise precautions, body composition and how to live a healthy lifestyle.

Student Learning Outcome(s):

1. Identify and practice safe movement mechanics. 2. Demonstrate improved strength, cardiovascular endurance and flexibility.

KIN 351-2 YOGA II (1) UC/CSU

Lab: 3 hours

Students explore mindfulness through the practice of Yoga poses and breathing exercises to experience balance in the physical and energetic bodies. Students will examine ways to integrate yoga postures, philosophy and breathing techniques into their daily lives to experience freedom and ease in all activities

Student Learning Outcome(s):

1. Identify intermediate yoga concepts and demonstrate through yoga poses and breathing techniques. 2. Apply mindfulness practice with body and breath to daily living.

KIN 351-3 YOGA III (1) UC/CSU

Lab: 3 hours

Students will explore and apply mindfulness into their daily life. Moving from the physical to the subtle body, students will examine and discern (viveka) relative truths and absolute truth in nature through the practice of yoga asana (postures), pranayama (breathwork), and meditation. Students will study the 5 koshas of yoga as introduced in the Taittiriya Upanishads.

Student Learning Outcome(s):

1. Identify advanced yoga concepts and demonstrate through yoga poses, breathing techniques and meditation. 2. Apply mindfulness practice including meditation to daily living.

KIN 366-1 BADMINTON SKILLS I (1) UC/CSU

Lab: 3 hours

Students learn the basic fundamental skills and knowledge necessary to play badminton such as the serve, forehand, backhand, clear, drop, and smash shots. Also covered are singles and doubles strategy, along with the history of badminton, basic terminology, rules, and scoring. Safety and selection of equipment are included.

Student Learning Outcome(s):

The students will develop the basic knowledge and skills in the game of badminton to use for recreation and lifelong fitness demonstrated by achieving the NOVICE level of the Skill Rubric.

KIN 366-2 BADMINTON SKILLS II (1) UC/CSU

Lab: 3 hours

In this course, students learn intermediate skills and knowledge necessary to play badminton such as cross court, down the line and reverse cross-court clears; at the net, from the back court, and from the mid-court drops; and forehand and backhand service. The course also covers offensive and defensive techniques of the smash as well as training drills, agility, endurance, and court coverage for competitive play.

Student Learning Outcome(s):

The student will demonstrate advanced skills needed to play badminton recreationally and competitively, demonstrate the ability to teach basic skills in the game and use the game for lifelong fitness by completing skills at the Intermediate level on the attached Rubric.

KIN 387 BASKETBALL (1) UC/CSU

Lab: 3 hours

This course is designed to teach all levels of basketball skills. It not only emphasizes fundamental basketball skills such as dribbling, passing and shooting but it also includes the selection and care of equipment, rules, offense and defense strategy, etiquette, terminology and the components of fitness.

Student Learning Outcome(s):

Student will be able to identify the basic rules of the game of basketball. Students will be able to participate in a game situation basketball scrimmage using proper skills.

KIN 391-1 VOLLEYBALL I (1) UC/CSU

Lab: 3 hours

This course is designed to teach the basic volleyball skills of passing, setting, spiking, serving and blocking. The course will introduce individual and team offense and defense systems, as well as the rules, etiquette, terminology and strategies for volleyball.

Student Learning Outcome(s):

Student will demonstrate a minimum of NOVICE in each of the skill areas tested on the rubric.

KIN 500 BASKETBALL THEORY (3) UC/CSU

Lecture: 2 hours / Lab: 2 hours

This course will help the advanced basketball student acquire a more in depth understanding of the various offensive and defensive theories in the sport of basketball. Analysis of strategies and outcomes will be emphasized.

Student Learning Outcome(s):

At the conclusion of this course, students will be able to diagram offensive and defensive plays.

KINESIOLOGY ATHLETICS

KIN ATH 504 INTERCOLLEGIATE ATHLETICS-BASKETBALL (3) UC/CSU RPT 3

Lab: 10 hours

Fundamental, intermediate and advance principles/theories and skills of Basketball. Instruction, demonstration and practice of basic basketball skills, include passing, dribbling, shooting, rebounding, individual and team offense/ defense and basketball intercollegiate competition.

Student Learning Outcome(s):

Students will demonstrate the skills and strategies necessary to succeed in a game, meet or match.

KIN ATH 513 INTERCOLLEGIATE ATHLETICS-SWIMMING AND DIVING (3) UC/CSU RPT 3

Lab: 10 hours

Intercollegiate Athletic competitive swimming and diving team course. Instruction, demonstration and practice of fundamental and advanced swimming and diving techniques, including starts, turns, stroke technique, breathing, interval training and intercollegiate competition.

Student Learning Outcome(s):

Students will compete in Intercollegiate Athletics.

KIN ATH 516 INTERCOLLEGIATE ATHLETICS-VOLLEYBALL (3) UC/CSU RPT 3

Lab: 10 hours

This course provides the skills, training and allows for participation in the intercollegiate volleyball team. Students who take this class must meet eligibility requirements as requested by the conference and/or CCCAA.

Student Learning Outcome(s):

Students will demonstrate the skills and strategies necessary to succeed in a game, meet or match.

KIN ATH 517 INTERCOLLEGIATE ATHLETICS-WATER POLO (3) UC/CSU RPT 3

Lab: 10 hours

Intercollegiate Athletic competitive Water Polo team course. Fundamental and advanced principles/theories of water polo techniques. Instruction, demonstration and practice of swimming, eggbeater, offense, defense, counter attack, man up and man down situations.

Student Learning Outcome(s):

Students will demonstrate the skills and strategies necessary to succeed in a game, meet or match.

KIN ATH 552 INTERCOLLEGIATE SPORTS-CONDITIONING & SKILLS TRAINING (1) UC/CSU RPT 3

Lab: 3 hours

This course is designed for the student athlete. The following areas are emphasized: the analysis and training of athletic skills, the analysis of offensive and defensive systems, physical conditioning, strength training and aerobic conditioning.

Student Learning Outcome(s):

Students will demonstrate the skills and strategies necessary to succeed in a game, meet or match.

KIN ATH 560 INTERCOLLEGIATE SWIMMING/DIVING-FITNESS & SKILLS TRAINING (1) UC/CSU RPT 3

Lab: 3 hours

The course provides strength and fitness training for current or prospective intercollegiate athletes in the sport of swimming. The class provides the groundwork for an upcoming season through various swimming skills, drills, and aerobic and anaerobic conditioning.

Student Learning Outcome(s):

Student will Complete Eligibility Standards. Student will demonstrate improved swim conditioning levels. Students will demonstrate increased speed and decreased time in competitive events.

KIN ATH 561 INTERCOLLEGIATE WATER POLO-FITNESS & SKILLS TRAINING (1) UC/CSU RPT 3

Lab: 3 hours

The course is a designed to provide strength and fitness training for current or perspective intercollegiate athletes in the sport. The class provides conditioning for an upcoming season, the rules and regulations of the sport as well as provides information on the requirements of being a competitive player.

Student Learning Outcome(s):

1.) Students will demonstrate exceptional ball handling skills in passing and receiving. 2.) Students will demonstrate exceptional defensive play in game situations. 3.) Students will meet eligibility standards. 4.) Students will demonstrate exceptional shooting abilities.

KIN ATH 563 INTERCOLLEGIATE VOLLEYBALL-FITNESS & SKILLS TRAINING (1) UC/CSU RPT 3

Lab: 3 hours

This course is designed for the student athlete. It is intended to provide focused strength and conditioning and flexibility exercises, emphasize safety and injury prevention and present new rules and game plays for volleyball.

Student Learning Outcome(s):

Students will demonstrate physical improvements in volleyball skills and game play.

KINESIOLOGY MAJOR

KIN MAJ 100 INTRODUCTION TO KINESIOLOGY (3) CSU

Lecture: 3 hours

Introduction to the discipline of Kinesiology/Physical Education; examination of the study of physical activity from the perspectives of experience, research, and professional practice. Topics include career opportunities, history, philosophy, current trends and curriculum development.

Student Learning Outcome(s):

1. Evaluate different career paths in Kinesiology and describe the basic requirements needed to pursue a career in this field. 2. Explain the importance of physical activity in daily life and its relationship to health. 3. Identify the career options available to students graduating from departments of kinesiology, and the qualifications associated with 3 different careers.

KIN MAJ 101 FIRST AID AND CPR (3) UC/CSU

Lecture: 3 hours

This course covers and expands standard emergency first aid to include situations where help is delayed, during natural disasters and major catastrophies. This course also covers the recommendations by the American Heart Association, National Safety Council and the American National Red Cross for community members to respond to non-breathing and sudden cardiac emergencies. Includes techniques for all ages along with emergency action plans, safety, and prevention of disease transmission.

Student Learning Outcome(s):

Students will be able to identify emergency situations and provide the appropriate emergency care to victims. Students will be able to demonstrate the first aid care that is needed in common medical emergencies. Demonstrate cardiopulmonary resuscitation and the use of the AED.

KIN MAJ 106 SPORTS ETHICS (3) UC/CSU

Lecture: 3 hours

This course addresses a wide range of moral and ethical issues in sports. Topics include values, principles, racial and gender equity, coaching, commercialization, enhancing stimulants and ergogenic aids, eligibility, violence, sportsmanship and Code of Ethics in sports. Examines current and historical events, rules, laws and governing organizations.

Student Learning Outcome(s):

Identify of performance substances used in sports and the impact they have had to the game.

KIN MAJ 108 ANCIENT OLYMPIC GAMES (3) UC/CSU

Lecture: 3 hours

This course addresses a wide range of topics that are specific to the field of the Ancient Olympic Games. Topics include Prehistory of the Games, Athletics and Education, The Olympic Games in Ancient Greece, The Events, Sport in the Hellenistic and Roman Periods. The course will examine the historical and continuing effect of the Ancient Games on the present day Olympic movement.

Student Learning Outcome(s):

Define the role of Ancient Athletes in Greek society.

KIN MAJ 117 PERSONAL TRAINER INSTRUCTOR (3) CSU

Lecture: 3 hours

Instruction in fabrication techniques for costume creation for stage, film, and live performance. Course work includes proper tools, methods of forming foam, felt, and hard surfaces.

Student Learning Outcome(s):

Students will be able to identify and apply the components of physical fitness to develop a fitness program for potential clients.

KIN MAJ 120 HISTORY OF PHYSICAL EDUCATION, KINESIOLOGY AND SPORT (3) CSU

Lecture: 3 hour(s)

This course introduces students to the history and foundations of physical education, kinesiology and sport. From the ancient non-western civilizations to current times, students will learn the contributions of cultures, individuals and events to the physical education, kinesiology and sport fields. Through lecture, reading sources and class discussions, students will gain a better understanding of the disciplines, the differences between the disciplines and the future directions for physical education, kinesiology and sport.

Student Learning Outcome(s):

Identify the contributions of various people and groups to the modern day physical education, kinesiology and sport field.

KIN MAJ 134 ADVANCED LIFESAVING (2) UC/CSU

Lecture: 1 hour / Lab: 2 hours

This class provides training in and the opportunity to get certified in the latest Red Cross Lifeguarding program. The Red Cross Lifeguarding certificate includes training in cardiopulmonary resuscitation (CPR), first aid, automated external defibrillator (AED), oxygen administration, and CA Title 22 materials.

Student Learning Outcome(s):

Students are prepared to respond to emergencies in and around the swimming pool.

KIN MAJ 135 WATER SAFETY INSTRUCTION (3) CSU

Lecture: 2 hour(s) / Lab: 2 hours

This American Red Cross water safety instructor certification course teaches individuals how to instruct students in all levels of swimming and water safety skills. A qualifying swim test is required, and an ARC-WSI certificate is granted upon successful course completion.

Student Learning Outcome(s):

Students will develop lesson plans to teach swimming skills and water safety to a diverse population.

Students will demonstrate age-appropriate techniques to teach swimming skills and water safety to both kids and adults.

KIN MAJ 150 SENIOR FITNESS ASSESSMENT, STRENGTH & CONDITIONING PROGRAMMING (3) CSU

Lecture: 3 hours

This course prepares the student to administer the Senior Fitness Tests, interpret the results, and recommend strength, balance and conditioning activities based upon the results.

Student Learning Outcome(s):

1. Conduct the Senior Fitness Tests (SFT) following the prescribed testing protocol. 2. Propose a fitness program based upon the results of the SFT. 3. Collect, manipulate, and analyze data associated with an exercise program.

KIN MAJ 151 SENIOR FITNESS EXERCISE LEADER (3) CSU

Lecture: 3 hours

This course prepares the student to lead balance, resistance training, and fitness games and activities in a safe and highly interactive social environment. Students write lesson plans and practice teaching the Walk With Ease program by the Arthritis foundation, and portions of FallProof, Matter of Balance, chair exercises, resistance band and tube exercises, and flexibility/stretching activities.

Student Learning Outcome(s):

1. Compose a lesson plan and conduct one session of the Walk with Ease program. 2. Compose a lesson plan and conduct one session of a balance class. 3. Collect, manipulate and analyze data associated with an exercise program.

LABOR STUDIES

LABR ST 001 US LABOR HISTORY (3) UC/CSU

Lecture: 3 hours

This course covers the often untold story of workers' struggle to improve their lives through union organizing and collective bargaining, ranging from early craft unions, the bloody battles to form industrial unions, and the rise of labor federations and public sector unions.

Student Learning Outcome(s):

Students will describe the lessons learned from labor history and their current relevance.

LABR ST 002 COLLECTIVE BARGAINING (3) CSU

Lecture: 3 hours

This course examines the dynamics of collective bargaining including: preparation of demands and negotiation strategies, offers and counter-offers, major bargaining trends, contract campaigns, and 'mock' bargaining.

Student Learning Outcome(s):

Students will demonstrate the skills and knowledge to bargain a union contract.

LABR ST 003 LABOR RELATIONS LAW (3) CSU

Lecture: 3 hours

This course provides a comprehensive overview of labor relations laws, primarily for the private sector, covering employee, employer and union rights and obligations, unfair labor practices, union representation elections and other Labor Board procedures.

Student Learning Outcome(s):

The student will be able to recognize the main provisions of the National Labor Relations Act.

LABR ST 004 LABOR IN AMERICA (3) UC/CSU

Lecture: 3 hours

Examines how labor organizations and labor laws impact workers, families and American society focusing on worksite-related issues such as job security, income, workers' rights, immigration and role of unions.

Student Learning Outcome(s):

Students will identify the role unions play in the United States and how unions benefit all workers.

LABR ST 005 GRIEVANCE AND ARBITRATION PROCEDURES (3) CSU

Lecture: 3 hours

Students learn to identify, investigate, write and present grievances and arbitrations with emphasis on participant's own contract, grievance procedure and experiences.

Student Learning Outcome(s):

Students will identify, investigate, write and present grievances and arbitrations.

LABR ST 006 LABOR AND COMMUNITY SERVICES (3) CSU

Lecture: 3 hours

This course is designed to train Union Counselors to aid members in need. Topics include: financial assistance, debt counseling, unemployment/ disability, health and mental health services, child care and other important community support.

Student Learning Outcome(s):

Students will be able to identify public and private agencies that provide assistance to members in need. Students will be able to develop a program to assist their members in need.

LABR ST 107 ORGANIZING FOR POLITICAL ACTION (1) CSU

Formerly: Political Action Skills

Lecture: 3 hours

Covers current political issues facing working people, labor movement, methods and techniques for lobbying, political action, member mobilization, monitoring legislation and campaign laws.

Student Learning Outcome(s):

The student will be able to use effective electioneering techniques, including methods to mobilize members to political action.

LABR ST 008 LABOR IN THE GLOBAL ECONOMY (3) UC/ CSU

Lecture: 3 hours

Impact of the global economy on working families, covering key economic concepts, processes and institutions such as wages, productivity, technology, outsourcing, public services, inflation, taxation, privatization, multinational corporations, and unions.Student Learning Outcome(s):

Student Learning Outcome(s):

After completing this course, students will be able to explain the economic processes and governmental policies of globalization, the impacts of transnational consumption/production on U.S. workers, and tactics for building locally-based, globally-connected worker power.

LABR ST 009 ORGANIZING STRATEGIES AND TECHNIQUES (3) CSU

Lecture: 3 hours

Students will learn basic skills and techniques needed to organize new workers, build and strengthen their unions and learn about relevant laws and winning strategies.

Student Learning Outcome(s):

The student will be able to effectively use organizing strategies and techniques. The student will be able to formulate effective non-NLRA strategies.

LABR ST 010 IDENTITY AND DIVERSITY IN LABOR (3) UC/ CSU

Lecture: 3 hours

Examines the ever-changing social and political conditions impacting issues such as gender, sexual orientation, disability, race, age, etc in the context of the workplace. Workers' rights advocates learn to strategize to combat discrimination and promote diversity in workplaces and the labor movement. Students learn to overcome workplace divisions by developing respect for differences based on: race, sex, ethnicity, disability, age, sexual orientation, etc.

Student Learning Outcome(s):

Students will be able to identify legal frameworks and strategies for combating discrimination and promote diversity in the workplace.

LABR ST 011 LABOR IN THE PUBLIC SECTOR (3) CSU

Lecture: 3 hours

This course covers public employment practices, policies, laws and labor relations at the federal, state and local levels.

Student Learning Outcome(s):

Students will identify the legal framework of public sector labor relations and the impact of public policy on public sector unions.

LABR ST 012 BUILDING STRONG UNIONS (3) CSU

Lecture: 3 hours

This course examines how to manage and lead a union: including strategic planning and goal setting; effective communications; time management; team building; increasing member participation; leading organizational change.

Student Learning Outcome(s):

The student will be able to develop a strategic plan to motivate and mobilize members. .

LABR ST 013 UNION LEADERSHIP (3) CSU

Lecture: 3 hours

This class covers basic leadership skills for building influence and advancing in a union. Includes public speaking, parliamentary procedure, strategic planning, staff development, motivating and mobilizing members.

Student Learning Outcome(s):

Students will develop a strategic plan to build power for their union to organize and mobilize members for contract and political campaigns.

LABR ST 020 WORKERS' RIGHTS (3) CSU

Lecture: 3 hours

Basic legal rights for workers, including: wage and hour laws, overtime, leaves, workplace privacy including e-mail and computers, accommodating disabilities, including pregnancy, and combating sexual harassment and employment discrimination.

Student Learning Outcome(s):

Students will identify workers' rights deriving from federal, California and local labor laws.

LABR ST 021 THE WORKING CLASS AND CINEMA (3) UC/CSU

Lecture: 3 hours

This course will examine and analyze how feature film portrayals of the working class and labor unions may shape public perception.

Student Learning Outcome(s):

The student will be able to describe how Hollywood portrayals affect Americans' views of unions.

LABR ST 024 ENFORCING WORKERS' RIGHTS (3) CSU

Lecture: 3 hours

Advisories: LABR ST 020

Skills needed to work in the Labor Commissioner's office and other state agencies to ensure workers are paid their wages.

Student Learning Outcome(s):

Students will be able to investigate, analyze, prepare and write cases to enforce labor laws.

LABR ST 101 INTRODUCTION TO UNIONS (1) CSU

Lecture: 1 hour

Overview of union impact on wages, benefits, working conditions and public policies by industry. Surveys basic union structures, operation and governance.

Student Learning Outcome(s):

Students will identify the role of unions in society and how unions work in a particular industry.

LABR ST 102 CONTRACT NEGOTIATIONS SKILLS (1) CSU

Lecture: 1 hour

This course covers the basics of union contract negotiations, including preparation of demands, negotiations strategies and tactics, contract language, and major bargaining trends.

Student Learning Outcome(s):

Students will learn and demonstrate the skills and techniques needed to bargain union contracts.

LABR ST 103 LABOR LAW UPDATE (1) CSU

Lecture: 1 hour

This course covers recent changes in labor law related to labor relations, state and local bargaining, federal, state and local labor boards, employment and discrimination, union organizing, and campaign election laws.

Student Learning Outcome(s):

The student will be able to identify recent changes in labor relations and related laws which govern the relationships between labor unions, employees and employers.

LABR ST 104 CURRENT ISSUES FOR LABOR (1) CSU

Lecture: 1 hour

This course explores issues facing the American Labor Movement, including strategies to address them.

Student Learning Outcome(s):

Students will describe key issues facing Labor and strategies to address them.

LABR ST 105 GRIEVANCE HANDLING SKILLS (1) CSU

Lecture: 1 hour

The student will investigate, write and present union grievances.

Student Learning Outcome(s):

Students will acquire knowledge of the grievance process, including how to investigate, evaluate, document, write and present a union grievance.

LABR ST 106 LABOR AND DISASTER RELIEF (1) CSU

Lecture: 1 hour

Training labor representatives to respond to disasters, emergencies, acts of terrorism or union/employer economic actions through utilizing appropriate community, public and private resources and agencies.

Student Learning Outcome(s):

Students will be able to identify public and private agencies that provide assistance to members in need. Students will be able to develop a program to assist your members in need.

LABR ST 107 ORGANIZING FOR POLITICAL ACTION (1) CSU

Formerly: Political Action Skills
Lecture: 1 hour

A primer for political activists: phone banks, precinct walks, polling, get out the vote, and vote-by-mail, campaign financing regulations, and communication strategies to mobilize members and the public.

Student Learning Outcome(s):

The student will be able to identify the essential elements of a grassroots political campaign and how to recruit and mobilize members.

LABR ST 108 LABOR AND GLOBALIZATION (1) CSU

Lecture: 1 hour

Explores how globalization affects the economy and jobs.

Student Learning Outcome(s):

Students will be able to describe current economic issues regarding globalization and labor strategies to address the issues.

LABR ST 109 UNION BUILDING STRATEGIES (1) CSU

Lecture: 1 hour

Skills and techniques to build a strong union through strategic planning, leadership development, communication techniques, 1-to-1 techniques.

Student Learning Outcome(s):

Student will develop a plan to organize and build strong unions.

LABR ST 113 UNION LEADERSHIP SKILLS (1) CSU

Lecture: 1 hour

Basic leadership skills for building influence and advancing in your union. Includes strategic planning, parliamentary procedure, running effective meetings, communications and public speaking.

Student Learning Outcome(s):

Students develop leadership skills to be effective union leaders.

LABR ST 114 WORKER'S LEGAL RIGHTS (1) CSU

Lecture: 1 hour

Basic workers' rights such as privacy, leaves, wage and hour laws, accommodating disabilities, including pregnancy and protections against wrongful discharge, etc.

Student Learning Outcome(s):

Students will be able to identify and explain the basic legal rights and protections of workers.

LABR ST 115 WORKPLACE HEALTH AND SAFETY (1) CSU

Lecture: 1 hour

Strategies to identify and address current issues in workplace health and safety, such as stress, understaffing, workload, chemical hazards and ergonomic problems. Strategies covered: hazard identification, legal rights, Cal/OSHA, contract language, effective Health & Safety Committees, outside resources, and training programs.

Student Learning Outcome(s):

The student will be able to identify and create an action plan to address workplace health and safety hazards.

LABR ST 118 EMPLOYEE BENEFITS PLANS (1) CSU

Lecture: 1 hour

This course Cover employee health and retirement plans: how they work, how they are funded, how workers can maximize their benefits, proposed changes in these plans, and labor's role in negotiating and preserving employee benefits.

Student Learning Outcome(s):

The student will list and describe the three basic elements of employee retirement security - employer based pensions, social security, and personal savings. The student will recognize how health plans are negotiated, funded, and maintained.

LABR ST 121 LABOR COMMUNICATIONS (1) CSU

Lecture: 1 hour

This course surveys methods and techniques that modern labor organizations use in e-communications, including web sites, text messaging, Twitter and Facebook, list serves, and e-blasts.

Student Learning Outcome(s):

The student will be able to list and explain the different new media tools currently available.

LABR ST 122 FRAMING THE MESSAGE FOR LABOR (1) CSU

Lecture: 1 hour

Students examine the language of labor and progressive action and learn to sharpen the message to broaden public support, build power, and gain political results.

Student Learning Outcome(s):

The student will be able to craft effective messages based on the union's goals and audience assessment.

LABR ST 123 STEWARD TRAINING (1) CSU

Lecture: 1 hour

In this course, students will survey the role of union stewards and practice basic skills necessary. Students will overview skills and procedures for communicating with members, processing grievances, solving problems, organizing and mobilizing members.

Student Learning Outcome(s):

Students will employ the steps necessary to handle employee grievance under a union contract. Students will develop a plan to mobilize members.

LABR ST 125 LABOR ARBITRATION (1) CSU

Lecture: 1 hour

The arbitration process covers: selection and authority of arbitrators, preparation and elements of cases, how arbitrators decide cases, settlement techniques, and tips for effective use of arbitration.

Student Learning Outcome(s):

The student will be able to prepare and present a case for labor arbitration.

LABR ST 126 ISSUES IN LABOR ARBITRATION (1) CSU

Lecture: 1 hour

This course provides an overview of the two major issues in arbitration: discipline and discharge cases, covering: just cause, absenteeism, insubordination, substance abuse, and theft/dishonesty.

Student Learning Outcome(s):

The student will be able to evaluate facts and contract language to present an effective discipline and discharge case.

LABR ST 127 WORKER'S COMPENSATION (1) CSU

Lecture: 1 hour

The course provides a basic understanding of how Workers Compensation works, including: types of injuries and disability benefits, medical care, rehabilitation and financial support; and procedures for filing a claim and appeals.

Student Learning Outcome(s):

Students will describe basic California Workers' Comp benefits, procedures, and how to file claims.

LABR ST 128 SEXUAL HARASSMENT AND DISCRIMINATION (1) CSU

Lecture: 1 hour

This course surveys sexual harassment and job discrimination including: criteria for claims, the law, court decisions, and protective agencies, policies and procedures for prevention.

Student Learning Outcome(s):

The student will be able to describe the legal elements of employment discrimination and sexual harassmentm and identify ways for employers, employees and unions to prevent job discrimination.

LABR ST 132 STRATEGIC BARGAINING (1) CSU

Lecture: 1 hour

Building bargaining power through the strategic use of leverage and pressure tactics, such as power analysis and member and community involvement.

Student Learning Outcome(s):

Students will develop a strategic contract campaign which includes pressure and leverage techniques.

LABR ST 134 CA WAGE AND HOUR LAW (1) CSU

Formerly: California Worker's Rights

Lecture: 1 hour

This course examines how the California Labor Code extends basic rights beyond federal law, including: minimum wage, maximum hours, timely pay, overtime and meal periods, right to know, parental and other leave rights, and enforcement procedures.

Student Learning Outcome(s):

Students will learn and demonstrate an understanding of California labor laws and protections, leaves and enforcement procedures.

LABR ST 136 WHEN THE PAYCHECK STOPS (1) CSU

Lecture: 1 hour

Union representatives occasionally must counsel members when the paycheck stops due to strikes, layoff, or plant closure. This course overviews professional services available for referral and teaches strategies for negotiating with landlords, mortgage companies, utility companies and other creditors.

Student Learning Outcome(s):

Students will identify public and private agencies that provide assistance to members in need. Students will develop a program to assist members in need.

LAW

LAW 007 STREET LAW (3) CSU

Lecture: 3 hours

Students develop a practical understanding of the U.S. legal system and students will engage in active community participation. Students learn about areas of the law that affect the daily lives of all Americans and U.S. residents. Particularly relevant are the areas of consumer, housing, family, and employment law, along with marriage, and parental rights. Additionally, students learn fundamental criminal law and constitutional law principles. This knowledge provides a platform for guided discussion of important public policy issue concerning crime, discrimination, health care, and immigration.

Student Learning Outcome(s):

1 The student will be able to analyze contemporary, original source material pertaining to the U.S. legal system in areas of family, housing, employment, criminal, and immigration, laws.

2 The student will be able to identify and support an argument regarding a contemporary political or societal issue in areas of family, housing, employment, criminal and immigration law ramifications.

LAW 018 MARRIAGE AND FAMILY LAW (3) CSU

Lecture: 3 hours

Students will examine and evaluate the ramifications of marriage,legal separation, divorce, custody and support, adoption. and guardianship on parental prerogatives and/or their statuses and capacities as legally recognized adults.

Student Learning Outcome(s):

Upon successful completion of this course a student will be able to: 1. Brief family law cases 2. Prepare legal documents, complete legal forms pertaining to marriage dissolution, or domestic violence, or modification of child support and custody orders.

LAW 038 CRIMINAL LAW & PROCDEDURE (3)

Lecture: 3 hours

This course will introduce the student to Criminal Law and Criminal Procedure. The student will learn the elements of a crime that must be proven as to the allegations of the commission of that particular crime. The student will learn the regulatory procedures, both federal and state, that must be followed in order to realize criminal culpability. The student will also examine the roles of the parties to a criminal action.

Student Learning Outcome(s):

1) Student will be able to define a crime in terms of its elements and properly classify it. 2) Student will be able to determine if the parties to a crime have met their requisite juridical obligations and procedures in defending against the allegation of having engaged in a criminal act.

LAW 931 COOPERATIVE EDUCATION - LAW (3)

Lecture: 3 hours

This Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or

volunteer work/internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a law course or successfully completed a law course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

Develop learning objectives related to educational/occupational goals to be accomplished on the job.

LEARNING SKILLS

LRNSKIL 068 STUDY SKILLS (1)

Lecture: 0.5 hours / Lab: 1 hour

This course helps students develop basic study skills needed for college success. Study skills covered include but are not limited to: time management, organization skills, vocabulary building, reading, note taking, and listening strategies.

Student Learning Outcome(s):

Students will create a portfolio of activities that include self assessments dealing with study habits, learning styles, character traits, time management tool, and organizational strategies.

LIBRARY SCIENCE

LIB SCI 100 MEDIA AND INFORMATION LITERACY: RESEARCH STRATEGIES AND BEYOND (3) CSU

Formerly: Critical Approaches to Research in College and Beyond
Lecture: 3 hours

This course examines the exponential growth of online information and the resulting complex digital media landscape faced by students in the 21st century. Students explore the psychological, social, and physiological impacts of online media engagement, while developing essential information literacy skills that are relevant to current academic endeavors and to their future as informed citizens and lifelong learners. Through multiple online platforms and advanced online search strategies, students learn to locate, evaluate, and communicate information responsibly and ethically

Learning Student Outcomes:

1 Critically assess information source for its value, context, degree of credibility, authority, and purpose to determine its value as evidence to support a claim

2 Understand and explain research techniques which incorporate credible claims and sources and meet personal and professional information needs

LIB SCI 101 COLLEGE RESEARCH SKILLS (1) UC/CSU

Formerly: Library Research Methods

Lecture: 1 hour

Students learn to conduct research using the library's print and electronic resources, to distinguish between academic and popular sources, to develop research and organizational strategies for research assignments, to apply citation rules to their assignments, and to understand the basic requirements of copyright law and academic integrity.

Student Learning Outcome(s):

At the completion of the course, students will be able to: -Access books and articles electronically -Gather, identify, and analyze library resources -Appraise a Web site for its currency, accuracy and authority -Evaluate sample paraphrases to detect plagiarism and explain how a paraphrase is or is not plagairized -Construct MLA and APA citations and a Works Cited List.

MACHINE SHOP

MSCNC 111 PRINCIPLES OF MACHINE TOOLS I (2) CSU

Lecture: 1.5 hours / Lab: 1.5 hours

MSCNC 111 (Principles of Machine Tools I) is a course that will engage students with Machine Shop specific topics including; safety practices, hand tools, precision measuring tools, set-up and operation of band saws, drill presses, lathes, mills, pedestal grinders, power saws as well as computer numerical control (CNC) machine tools. Theoretical and manipulative exercises will challenge students' understanding of practical subject matter.

Student Learning Outcome(s):

Students will utilize applied machine shop theory to identify and know the safe use of various basic hand and machine tools.

MSCNC 112A TECHNOLOGY AND APPLICATION OF MACHINING IA (3)

Lab: 9 hours

MSCNC 112A (Technology and Application of Machining IA) is a lab course that will engage students with machine shop specific topics including; shop safety, speeds, feeds, set-up, operation and technology of basic machine tools. Band saws, drill presses, lathes, mills, pedestal grinders, power saws as well as computer numerical control (CNC) machine tools will be introduced and used by the students. Along with the machine tools, students will be expected to identify, manipulate and properly use and read basic hand tools and precision measuring instruments.

Student Learning Outcome(s):

Students will demonstrate knowledge of safety practices in the shop.

MSCNC 112B TECHNOLOGY AND APPLICATION OF MACHINING (CAD) IB (1)

Lab: 3 hours

MSCNC 112B (Technology and Application of Machining (CAD) IB) is a course that will engage students with Machine Shop specific topics related to computer aided design (CAD). Topics will include solid model creation, blueprint creation, dimensioning, product development and assembling individual parts into completed assemblies.

Student Learning Outcome(s):

Students will utilize the computer aided design (CAD) software to create a solid model and generate a blueprint.

MSCNC 114 PRINT INTERPRETATION & SKETCHING (BLUEPRINT I) (3) CSU

Lecture: 3 hours

MSCNC 114 (Print Interpretation & Sketching (Blueprint I)) is a course that will engage students in Machine Shop topics that are related to blueprint reading, interpretation and sketching techniques. Mechanical drawings of multiple views, different drawing standards, dimensioning techniques, as well as sketching techniques for free hand drawings will also be covered.

Student Learning Outcome(s):

Students will utilize industry specific blueprint reading skills to visualize and communicate part shape, form and function

MSCNC 115 BASIC APPLIED MATHEMATICAL CALCULATIONS (3) CSU

Lecture: 3 hours

MSCNC 115 (Basic Applied Mathematical Calculations) is a course that will engage students with machine shop specific topics related to calculations and calculator manipulation. Number theory, inch & metric calculations, algebra, ratios & proportions and fractions will all be covered in this course.

Student Learning Outcome(s):

Student will utilize applied machine shop calculations to perform addition, subtraction, multiplication & division of whole numbers, decimals, fractions & mixed numbers.

MSCNC 121 PRINCIPLES OF MACHINE TOOLS II (2) CSU

Lecture: 1.5 hours / Lab: 1.5 hours

MSCNC 121 (Principles of Machine Tools II) is a course that will engage students with Machine Shop specific topics including; safety practices, Principles of lathes, milling machines, attachments, and special lathe and milling operations. Introduction to other special machinery and basic CNC programming will also be covered.

Student Learning Outcome(s):

Students will utilize applied machine shop theory to identify and know the safe use of various milling and turning machines as well as their accessories.

MSCNC 122A TECHNOLOGY AND APPLICATION OF MACHINING IIA (3) CSU

Lab: 9 hours

MSCNC 122A (Technology and Application of Machining IIA) is a course that will engage students with Machine Shop specific topics, such as implementation of safety, speeds, feeds, form tools, setups including related attachments and accessories for lathe and milling machine operations. Inspection techniques and CNC machine set-up and operations will also be covered.

Student Learning Outcome(s):

Students will utilize CNC programming techniques to write and run part programs.

MSCNC 122B TECHNOLOGY AND APPLICATION OF MACHINING IIB (1)

Lab: 3 hours

MSCNC 122B (Technology and Application of Machining IIB) is a course that will engage students with Machine Shop specific topics related to computer aided design (CAD). Topics will include geometric dimensioning and tolerancing (GD&T), section views, auxillary views and advanced modeling and assembling techniques.

Student Learning Outcome(s):

Students will utilize a computer aided design (CAD) program to create intermediate part models, product assemblies and related blueprints

MSCNC 124 PRINT INTERPRETATION AND INSPECTION (BLUEPRINT II) (3) CSU

Lecture: 3 hours

MSCNC 124 (Print Interpretation and Inspection (Blueprint II)) is a course that will engage students in Machine Shop specific topics regarding; advanced interpretation of machine shop-CNC related drawings with introduction to inspection, geometric tolerancing, and SPC.

Student Learning Outcome(s):

Students will utilize industry accepted standards for reading, form, fit and function of parts described on MSCNC related blueprints.

MSCNC 125 INTERMEDIATE APPLIED MATHEMATICAL CALCULATIONS (3) CSU

Lecture: 3 hours

MSCNC 125 (Intermediate Applied Mathematical Calculations) is a class that will engage students with Machine Shop specific topics such as; algebraic formulas related to good machining practices and geometric relationships and formulas are used to get correct cutting positions and programming code.

Student Learning Outcome(s):

Students will utilize applied machine shop calculations to perform machine shop related algebraic & geometric calculations

MSCNC 131A PRINCIPLES OF MACHINE TOOLS IIIA (2)

Lecture: 1.5 hours / Lab: 1.5 hours

MSCNC 131A (Principles of Machine Tools IIIA) is a course that will engage students with Machine Shop specific topics including; shop safety, engine lathe, milling machine, vertical milling machine, grinders as well as materials, inspection techniques and machining topics. Theoretical and manipulative exercises will challenge students' understanding of practical subject matter.

Student Learning Outcome(s):

Students will utilize applied machine shop theory to identify and know the safe use of various materials, sawing machines, grinding machines & specialized tools and equipment.

Degree Math Course Options

MATHEMATICS @ LATTC

Associate Degree Math Options (A.A.) or (A.S.)

College Level Placement

MATH 137
Pre-Statistics Algebra

OR

MATH 125
Intermediate Algebra

OR

200 LEVEL*
Placement in any 200 level Math course

*Math 215, 227, 230, 236, 241, 245, 260, 265, etc.

GRADUATION REQUIREMENTS, PATHWAYS AND PROGRAMS OF STUDY

NOTES

See a counselor to determine which math sequence is best to meet your Associate's Degree.

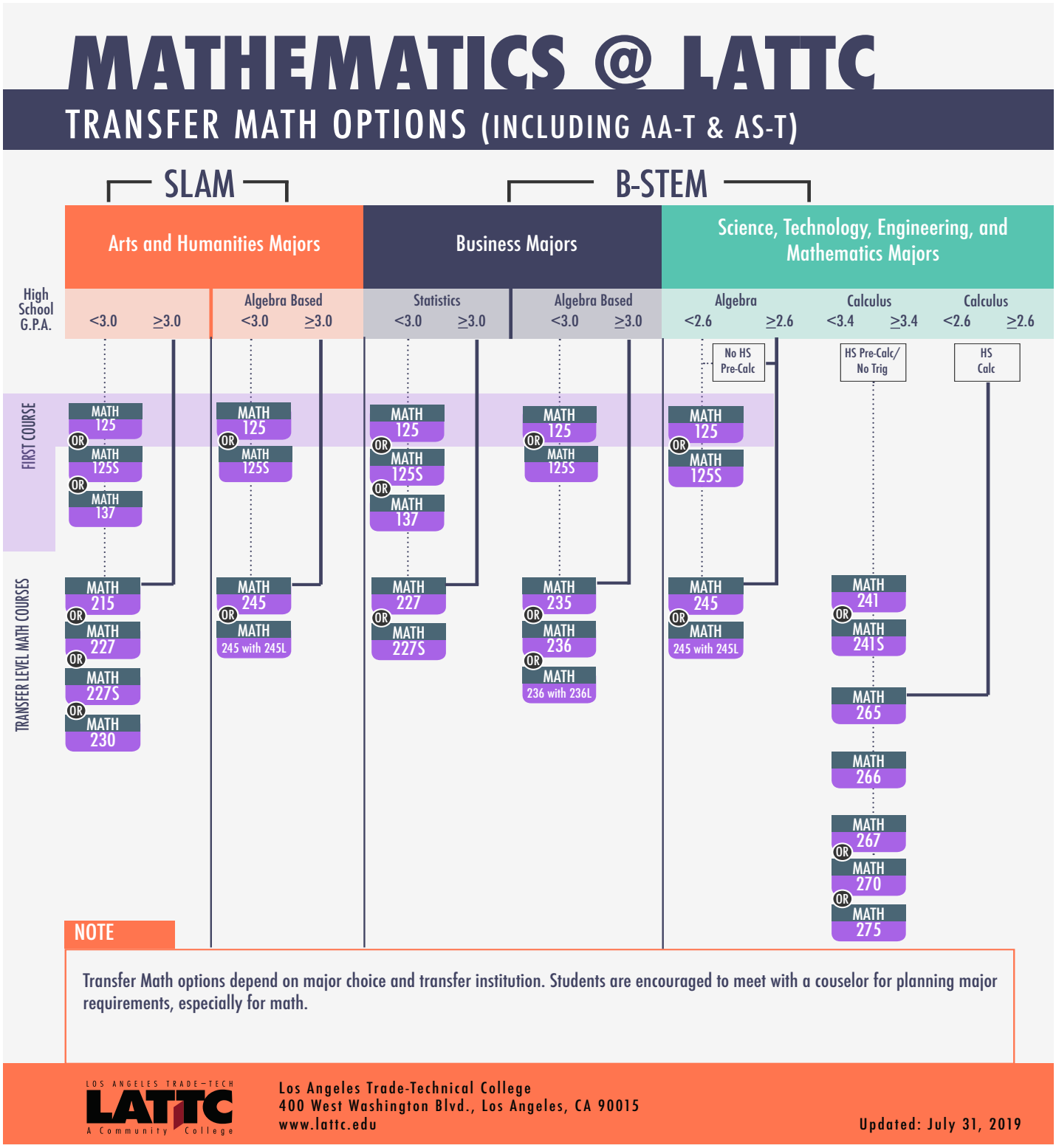
If your goal is to pursue a Bachelor's Degree after an Associate's, planning your math courses is essential, please see a counselor and refer to Transfer Math Option chart.

*If placed in a 200 level math course, you have met the math competency but still must complete the LACCD Associate Degree Area D2 General Education unit requirement.

LOS ANGELES TRADE-TECH LATTC A Community College
Los Angeles Trade-Technical College
400 West Washington Blvd., Los Angeles, CA 90015
www.lattc.edu

Updated: July 31, 2019

Transfer Math Course Options



LOS ANGELES TRADE-TECH LATTC A Community College
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Updated: July 31, 2019

MSCNC 131B PRINCIPLES OF MACHINE TOOLS (CNC) IIIB (3)

Lecture: 3 hours

MSCNC 131B (Principles of Machine Tools (CNC) IIIB) is a course that will engage students with Machine Shop specific topics related to machine tool programming. Both numerical control (NC) and computer numerical control (CNC) machine tools must have 'part programs' written for them to perform their intended function and create parts that are correct in fit, form and function.

Student Learning Outcome(s):

Students will utilize CNC programming knowledge to draw a picture that represents the "part" that the machine tool program would make.

MSCNC 132A TECHNOLOGY AND APPLICATION OF MACHINING IIIA (3)

Lab: 9 hours

MSCNC 132A (Technology and Application of Machining IIIA) is a course that will engage students with Machine Shop specific topics related to the set-up, operation, and/or programming of grinding machines, milling machines, engine lathes, CNC machining centers, CNC turning centers and EDM machines. Assigned projects will allow students to continue to build their skills on previously encountered machine tools as well as being introduced to new technologies, including unconventional machining techniques.

Student Learning Outcome(s):

Students will utilize industry accepted procedures to create shop projects.

MSCNC 132B TECHNOLOGY AND APPLICATION OF MACHINING (CAM) IIIB (1)

Lab: 3 hours

MSCNC 132B (Technology and Application of Machining (CAM) IIIB) is a course that will engage students with Machine Shop specific topics regarding computer aided manufacturing (CAM) computer programs. Students will create geometry, cutting tools, process information in order for the CAM program to create cutter paths that will create the correct fit, form and function on the part.

Student Learning Outcome(s):

Students will utilize the computer aided manufacturing (CAM) program to create simple geometry, cutting tools and processes and then have the CAM program write a part program.

MSCNC 135 ADVANCED APPLIED MATHEMATICAL CALCULTIONS (3) CSU

Lecture: 3 hours

MSCNC 135 (Advanced Applied Mathematical Calculations) is a course that will engage students with Machine Shop specific topics as they relate to trigonometric and compound angular calculations.

Student Learning Outcome(s):

Students will utilize applied machine shop calculation problems related to machine shop trigonometric problems and programming related problems.

MSCNC 141 PRINCIPLES OF MACHINE TOOLS (CNC) IV (2) CSU

Lecture: 1.5 hours / Lab: 1.5 hours

MSCNC 141 (Principles of Machine Tools (CNC) IV) is a course that will engage students with Machine Shop specific topics: Advanced theory related to safety, programming, set-up and operation of CNC machine tools. Introduction to specialized machining for intricate parts and/or tool and die and/or mold making will also be covered.

Student Learning Outcome(s):

Students will utilize applied machine shop theory to program various computer numerical control machine tools.

MSCNC 142A TECHNOLOGY AND APPLICATION OF MACHINING IV A (3)

Lab: 9 hours

MSCNC 142A (Technology and Application of Machining IV A) is a course that will engage students with Machine Shop specific topics: advanced safety, application, programming, set-up and operation of CNC lathes and milling machines. Set-up and operation of precision machine tools for intricate parts and/or tool and die and/or plastic mold fabrication will also be covered.

Student Learning Outcome(s):

Students will utilize industry approved techniques and procedures to program, set-up and machine several parts to create a multiple part assembly.

MSCNC 142B TECHNOLOGY AND APPLICATION OF MACHINING IV B (1)

Lab: 3 hours

MSCNC 142B (Technology and Application of Machining IV B) is a course that will engage students with Machine Shop specific topics: shop safety, advanced manufacturing techniques, CNC operations, advanced inspection techniques and manufacturing economy.

Student Learning Outcome(s):

Students will utilize knowledge of computer aided design (CAD) and compute aided manufacturing (CAM) programs to model, generate a part program and then cut the part on a CNC machine tool.

MSCNC 161A COMPUTER ASSISTED MACHINE PROGRAMMING (CAM) IA (3) CSU

Lecture: 3 hours

MSCNC 161A (Computer Assisted Machining Programming (CAM) IA)is a course that will engage students with Machine Shop specific topics: application of Computer Aided Manufacturing (CAM) systems for development of computer numerical control (CNC) programs for complex two and three axis machined parts. Use of 3-D graphics and part verification software systems will also be explored.

Student Learning Outcome(s):

Students will utilize the computer aided manufacturing (CAM) program to generate a part program for a specified CNC machine tool control.

MSCNC 161B COMPUTER ASSISTED MACHINE PROGRAMMING (CAM) IB (3)

Lecture: 3 hours

MSCNC 161B (Computer Assisted Machine Programming (CAM) IB) is a course that will engage students with Machine Shop specific topics: advanced topics of computer aided design (CAD), computer aided manufacturing (CAM) and computer numerical control (CNC) and the integration of these three technologies in modern manufacturing.

Student Learning Outcome(s):

Students will utilize the computer aided manufacturing (CAM) program to generate a part program to run a CNC machine with a specified control.

MSCNC 921 COOPERATIVE EDUCATION - MACHINE SHOP - CNC (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Machine Shop CNC course or successfully completed an Machine Shop CNC course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

MSCNC 931 COOPERATIVE EDUCATION - MACHINE SHOP - CNC (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Machine Shop CNC course or successfully completed an Machine Shop CNC course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

MANAGEMENT

MGMT 002ORGANIZATION AND MANAGEMENT THEORY (3) CSU

Lecture: 3 hours

As part of the study of industrial organization, this course covers such topics as financing enterprise, building the internal organization, and plant layout. The study of industrial operations includes production planning and control, inventory and materials handling, quality control, and methods analysis and work simplification. In addition, this course includes a consideration of the principles of industrial relations and personnel management, office management, and internal coordination and environmental issues.

Student Learning Outcome(s):

1. Students will understand the overview of organization development. 2. Student will understand the nature of planned change in organizations. 3. Student will be ale to diagnose organizations along with groups and jobs. 4. Students will understand individual, interpersonal and group process approaches in organizations. 5. Student will be able to evaluate the restructuring of an organization. 6. Student will understand work design and performance management. 7. Student will understand organizational transformation that includes cultural change, organization learning and knowledge management. 8. Student will understand organizational development in global settings. 9. Students will be able to examine future trends in organizational development.

MGMT 013 SMALL BUSINESS ENTREPRENEURSHIP (3) CSU

Lecture: 3 hours

This course will present a systematic approach to successful small business operation. The course covers personnel evaluation, pre-ownership evaluation, management and leadership, financing, location, taxation, records, employees, purchasing, advertising, sales, and credit. The course emphasizes the development of a business plan.

Student Learning Outcome(s):

Students will be able to research, compose, and write a comprehensive business plan. Students will be able to apply the principles of marketing, financial requirements, operations, and management to a small business. Students will be able to analyze and evaluate the competitive environment and identify direct competition. Students will be able to understand, evaluate and compare starting a business versus buying an ongoing business.

MGMT 033HUMAN CAPITAL MANAGEMENT (3) CSU

Lecture: 3 hours

This course is concerned with the development of the personnel function, personnel tools and records, and the use of psychology in personnel administration. Training and education of employees, incentives, special problems of personnel administration and management, employee representation, and social controls are included as topics of discussion.

Student Learning Outcome(s):

1. Students will learn the environment of Human Resource Management by being able to demonstrate an understanding of the Human Resource Management functions in organizations. 2. Students will learn the elements of planning, recruiting and staffing as they relate to Human Resource Management. 3. Students will learn and understand the elements of workplace training, performance management and career planning.

MGMT 041 RETAIL MANAGEMENT (3) CSU

Lecture: 3 hours

This course provides a systematic approach to the principles and procedures of retailing, including a study of store location, store layout, store organization, buying, pricing, stock planning, and the retail communication mix.

Student Learning Outcome(s):

Students will be able to analyze and apply various marketing concepts in the industry of retail management, such as identification of market needs and/or wants and buying behavior. They will also understand marketing planning, retail strategies, and the retail mix to design, to develop and operate a retail business.

MGMT 941 COOPERATIVE EDUCATION - MANAGEMENT (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

MANUFACTURING & INDUSTRIAL TECHNOLOGY

MIT 220 INTRODUCTION TO ROBOTICS (3) CSU

Lecture: 2 hours / Lab: 2 hours

This introductory course in robotics emphasizes hands-on experience to build a basic functional robot. Students learn about electric motors, servos, sensors, switches, actuators and their application in a robot. Students learn computer programming and its integration into a working robotic unit. The course also includes mechanical assembly, connecting electronic components, wiring and soldering, and testing.

Student Learning Outcome(s):

1. Student will construct a fully functional robot by assembling components such as Servo motors, sensors, switches and actuators. 2. Student will utilize learned algorithms to program a Basic Stamp micro-controller and integrate it into a fully functional robot.

MIT 221 SEMI-AUTOMATIC WELDING I (GMAW) IN ADVANCED MANUFACTURING (4.5)

Lecture: 1.5 hours / Lab: 9 hours

This course provides detailed knowledge including welder's performance qualifying skills using the Gas Metal Arc Welding (MIG) process used in the modern manufacturing industry. This course follows the American Welding Society Curriculum Guide for the Training of Welding Personnel: Level I-Entry Welder leading to qualifications outlined in American Welding Society (AWS) D1.1-Structural Steel Welding Code and the American Society of Manufacturing Engineers(ASME) Section IX Code.

Student Learning Outcome(s):

1. Students will perform a safety inspection while identifying GMAW and equipment components. 2. Upon completion of this course students will (1) add, subtract, multiply, divide whole numbers, fractions, mixed numbers and decimals, (2) round off decimals to one or more places, (3) use measuring devices to determine size, length, angle or distance, (4) use a calculator to perform basic arithmetic operations, and (5) convert mixed numbers fractions to decimals and vice versa. 3. Students will pass the GMAW-S welder performance qualification test (AWS EDU-3) on carbon steel. 4. Students will pass the GMAW welder performance qualification test (AWS EDU-2) on carbon steel.

MIT 222 GAS TUNGSTEN ARC WELDING I IN ADVANCED MANUFACTURING (4.5)

Lecture: 1.5 hours / Lab: 9 hours

This course is designed to provide students with basic performance qualification skills in Gas Tungsten Arc Welding (TIG) needed for employment in the modern manufacturing industry. This course follows AWS standardized curriculum leading to students performance qualifications to the AWS Specifications for Fusion Welding for Aerospace Applications.

Student Learning Outcome(s):

1. Student will perform a safety inspection while identifying GTAW equipment components. 2. Students will interpret basic elements of a drawing or sketch. 3. Students will pass the welder performance qualification test (Module 3) on carbon steel.

MIT 223 SEMI-AUTOMATIC WELDING II (FCAW) IN ADVANCED MANUFACTURING (4.5)

Lecture: 1.5 hours / Lab: 9 hours

This course provides detailed knowledge including welder's performance qualifying skills using the Flux-Cored Arc Welding process used in the modern manufacturing industry. This course follows the American Welding Society Curriculum Guide for the Training of Welding Personnel: Level I-Entry Welder leading to qualifications outlined in American Welding Society (AWS) D1.1-Structural Steel Welding Code and the American Society of Manufacturing Engineers(ASME) Section IX Code.

Student Learning Outcome(s):

1. Students will perform a safety inspection while identifying GMAW and FCAW equipment components. 2. Upon completion of this course students will make metric system measurements, geometric measurements, angular measurements, and bends, stretchouts, economical layout, and takeoffs. 3. Students will pass the FCAW welder performance qualification test (AWS EDU-1) on carbon steel using both FCAW-S and FCAW-G processes.

MIT 224 GAS TUNGSTEN ARC WELDING II IN ADVANCED MANUFACTURING (4.5)

Lecture: 1.5 hours / Lab: 9 hours

This course is designed to provide students with advanced performance qualification skills in Gas Tungsten Arc Welding (TIG) needed for employment in the modern manufacturing industry. This course follows AWS standardized curriculum leading to students performance qualifications to the AWS Specifications for Fusion Welding for Aerospace Applications.

Student Learning Outcome(s):

1. Students will interpret advanced elements of a drawing or sketch. 2 . Students will pass the GTAW welder performance qualification test (AWS EDU-4) on stainless steel. 3. Students will pass the GTAW welder performance qualification test (AWS EDU-5) on aluminum.

MIT 225 GAS TUNGSTEN ARC WELDING III (PIPE) IN ADVANCED MANUFACTURING (4.5)

Lecture: 1.5 hours / Lab: 9 hours

This course provides the advance knowledge needed to weld pressure vessels using the Gas Tungsten Arc Welding (TIG) process. This course follows the American Welding Society Curriculum Guide for the Training of Welding Personnel: Level II-Advance Welder, leading to welder's qualifications outlined in the American Society of Manufacturing Engineers (ASME) Section IX Code.

Student Learning Outcome(s):

1. Students will interpret advanced elements of a drawing or sketch. 2. Students will pass the GTAW Welder's Performance Qualification Test on Pipe in the Fixed 45Â° Position to AWS Standard- Level II- Advance Welder-Workmanship Test, (AWS2-5) and (AWS2-6).

MIT 226 INTRODUCTION TO ROBOTIC WELDING AND AUTOMATION (4.5)

Lecture: 1.5 hours / Lab: 9 hours

The course provides fundamental theory and hands-on application of robotic welding and automation. Emphasis is placed on safety awareness, programing techniques, and basic gas metal arc welding applications using a six-axis robotic welding systems.

Student Learning Outcome(s):

1. Student will have understanding of the robotic interfacing system. 2. Students will have the ability to make changes to the weld data, torch angles, electrode stickout, starting techniques, and other welding variables.

MARKETING

MARKET 001 PRINCIPLES OF SELLING (3) CSU

Lecture: 3 hours

This course includes the development of the fundamental principles of wholesale and specialty selling, including such phases as developng the sales plan, securing prospects, effective goods and service presentation, product analysis, closing the sale, and service after the sale.

Student Learning Outcome(s):

Student will be able to determine appropriate technique to suit the sale of a product or service.

MARKET 011 FUNDAMENTALS OF ADVERTISING (3) CSU

Lecture: 3 hours

This course will provide students the introduction to the role of advertising in our economy. It gives a comprehensive overview of the planning and managing of advertising. The course also covers how the major forms of media, such as television, radio, newspapers, magazines, the Internet are integrated into the advertising campaign.

Student Learning Outcome(s):

Analyze and apply the advertising strategies and concepts in the advertising industry along with the core advertising components of the advertising agency, media, research and sales promotion services.

MARKET 021 PRINCIPLES OF MARKETING (3) CSU

Lecture: 3 hours

This course will provide students a managerial approach to marketing principles. It covers marketing research, sales forecasting, sales cost analysis, domestic and international markets, customer motivation, production analysis, consumer and industrial markets, retailing and wholesaling, distribution channels, sales promotion and advertising, personal selling, pricing policies, market legislation and environment factors which impact marketing.

Student Learning Outcome(s):

Students will explain and analyze the marketing concepts and its core components.

MARKET 025 SMALL BUSINESS MARKETING (3)

Lecture: 3 hours

This course will provide students with the opportunity to test their entrepreneurial potential and experience firsthand what entrepreneurship entails. Students will immerse themselves in the entrepreneurial process by participating in a comprehensive real-world small business simulation and participating in an external internship provided by local small businesses. Students will also work with entrepreneurial faculty to successfully develop and launch their own small business in addition to receiving valuable knowledge, resources and one-on-one support to aid them in sustainable, long-term small business success.

Student Learning Outcome(s):

Students will be able to recognize entrepreneurial opportunities and demonstrate the understanding of how to launch their entrepreneurial career. Students will be able to utilize their critical thinking and problem solving abilities to develop a small business operations,marketing, human resources and financial plan, develop strategies for ongoing small business advancement and success, utilize computer technology to support small business management and determine relevant federal, state, and city licensing regulations and requirements.

MARKET 040 RETAIL MANAGEMENT (3) CSU

Lecture: 3 hours

This course provides a systematic approach to the principles and procedures of retailing, including a study of store location, store layout, store organization, buying, pricing, stock planning, and the retail communication mix.

Student Learning Outcome(s):

Students will be able to analyze and apply various marketing concepts in the industry of retail management, such as identification of market needs and/or wants and buying behavior. They will also understand marketing planning, retail strategies, and the retail mix to design, to develop and operate a retail business.

MATHEMATICS

MATH 110 INTRODUCTION TO ALGEBRAIC CONCEPTS (5)

Lecture: 5 hours

Prerequisite: Placement Exam

This course discusses abstract ideas necessary for understanding algebra and reviews selected topics in arithmetic relevant to algebra. Students are introduced to fundamental notions of algebra including signed numbers, variables, simple equations, proportional reasoning, applications, and modeling. This course also includes instruction in mathematics study skills.

Student Learning Outcome(s):

Upon successful completion of this course 1. Students will define and manipulate signed number and variables. 2. Students will solve simple linear equations in one variable. 3. Students will locate signed numbers on the number line and use a number line to add and subract signed numbers. 4. Students will apply a known formula to a given situation.

MATH 112 PRE-ALGEBRA (3)

Lecture: 3 hours

Prerequisite: Math 105

This course prepares students for their first course in Algebra. Topics include brief review of arithmetic, operations with signed numbers, evaluate and simplify variable expressions, solve linear equations in one variable, introduce number line, and apply known formulas to given situations in word problems.

Student Learning Outcome(s):

Upon successful completion of this course 1. Students will be able to define and manipulate signed numbers and variables. 2. Students will be able to solve simple linear equations in one variable. 3.Students will be able to locate signed numbers on the number line and use a number line to add and subtract signed numbers. 4.Students will be able to apply a known formula to a given situation.

MATH 113 ELEMENTARY ALGEBRA A (3)

Lecture: 3 hours

Prerequisite: Mathematics 110 or 112.

Topics include review of signed numbers, variables, the order of operations; addition, subtraction, multiplication and division of polynomials;solve and graph linear equations ,linear inequalities and systems of linear equations. Solve application problems involving linear equations and linear inequalities.

Student Learning Outcome(s):

1. Solve any linear equation, a variety of two variable linear equations (systems). 2. Plot points and graph linear equations or inequality on a Cartesian coordinate system. 3. Set up linear equations representing situations, solve, justify, and interpret the solution in the context of the problem. 4. Add, subtract, multiply and divide polynomials.

MATH 114 ELEMENTARY ALGEBRA B (3)

Lecture: 3 hours

Prerequisite: Mathematics 113.

The course reviews of operations on polynomials and covers factoring polynomials and operations on rational expressions, radicals, quadratic, rational, and radical equations, and application problems. This course is the second half of Math 115. Math 113 and 114 together are equivalent to Math 115. Credit is allowed in only one of Math 115 or the Math 113/114 combination. Concurrent enrollment in Math 113 and 114 is not permitted.

Student Learning Outcome(s):

1. Define and manipulate polynomial, rational and radical expressions. 2. Solve the system of linear inequalities in two variables. 3. Solve any rational and radical and factorable and non-factorable quadratic equations

MATH 120 PLANE GEOMETRY (3)

Lecture: 5 hours

Prerequisite: Mathematics 115

This course is an introduction to Euclidean geometry and it is equivalent to one year of high school geometry. This course covers introduction to logic, and analytical reasoning, the study of plane figures such as triangles, parallelograms and other polygons, and circles with related definitions, postulates, theorems, and construction of a formal proof, construction of plane figures using compass and straight edge, and computations for perimeter, area and volume.

Student Learning Outcome(s):

1. Determine angle measures in different geometric figures. 2. Construct geometric figures using a straightedge and compass. 3. Write direct and indirect proofs of theorems and corollaries.

MATH 121 ELEMENTARY GEOMETRY FOR COLLEGE STUDENTS (3)

Lecture: 3 hours

Prerequisite: Mathematics 115.

This course is an introduction to Euclidean geometry and it is equivalent to one year of high school geometry. This course reviews the basic geometric construction, definitions, postulates, theorems and their proofs for triangles, parallel lines and circles.

Student Learning Outcome(s):

SLOs: Determine angle measures in different geometric figures. Construct geometric figures using a straightedge and compass. Write direct and indirect proofs of theorems and corollaries. Solve problems involving geometric figures using definitions, postulates, and theorems.

MATH 125 INTERMEDIATE ALGEBRA (5)

Lecture: 5 hours

Prerequisite: Mathematics 114 or Mathematics 115.

This course is a study of the properties of real numbers, laws of exponents, radicals, equations & inequalities in linear and quadratic form, system of equations, matrices, graphing in two variables, rational expressions & equations, complex numbers, conic sections & their graphs, exponential and logarithmic functions.

Student Learning Outcome(s):

Upon successful completing this course: 1. The student will be able to define and manipulate nonlinear and linear functions and relations. 2. The student will be able to solve a variety of nonlinear equations, e.g. logarithmic, inverse, quadratic equations, absolute value, rational. 3. The student will be able to create, analyze, and interpret graphs of linear and nonlinear relations. 4. The student will be able to apply algebraic skills to a variety of applications such as: growth and decay, logic, reasoning, geometry, optimization, quadratic applications (motion, mixture, work).

MATH 125S INTERMEDIATE ALGEBRA WITH SUPPORT (5)

Lecture: 4 hours/Lab: 2 hours

Advisory: MATH 115

This course includes a mandatory lab component to review topics from prealgebra and elementary algebra. This course strengthens and further develops manipulative skills in elementary algebra. Topics include the fundamental operations on algebraic expressions, solutions of equations and inequalities, exponentiation, graphs of algebraic, exponential and logarithmic functions, systems of equations and inequalities, and an introduction to the conic sections. Applications are included in a wide variety of word problems.

Student Learning Outcome(s):

1. The student will be able to define and manipulate nonlinear and linear functions and relations. 2. The student will be able to solve a variety of nonlinear equations, e.g. logarithmic, inverse, quadratic equations, absolute value, rational. 3. The student will be able to create, analyze, and interpret graphs of linear and nonlinear relations. 4. The student will be able to apply algebraic skills to a variety of applications such as growth and decay, logic, reasoning, geometry, optimization, quadratic applications (motion, mixture, work).

MATH 137 PRE-STATISTICS ALGEBRA (5)

Lecture: 5 hours

Advisory: MATH 110 or 112

This course reviews topics from algebra pertain to exploratory data analysis, probability and statistics. Topics include: solving algebraic equations, simplifying algebraic expressions, functions their domain, range, and graphs, data analysis, sample statistics and graphs, graphical and tabular displays, measures of central tendency and spread, probability, sequences and series, and exponential and logarithmic functions. This class intended as preparation for non-STEM students who wish to take Statistics.

Student Learning Outcome(s):

1. Construct and interpret graphical and tabular displays of data and compute and interpret the summary of data numerically. 2. Graph and interpret linear and exponential models for a given data set. 3. Evaluate formulas or expressions and functions and solve exponential or logarithmic equations.

MATH 215 PRINCIPLES OF MATHEMATICS I (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 125.

This course is the first of two in a sequence designed primarily for prospective elementary school teachers. The course covers language of sets, system of numeration, nature of real numbers and fundamental operations, relations and functions, elementary logic, and various algorithms used in calculations.

Student Learning Outcome(s):

1. Show different representations of fractions (part-whole, ratio, measurement) and use them to solve problems. 2. Give explanation of conceptual and procedural basis of arithmetic algorithms. 3. Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues.

MATH 225 INTRODUCTORY STATISTICS (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 125.

The course discusses basic concepts and techniques of descriptive and inferential statistics including sampling, probability, statistical distributions, tables and graphs, central limit theory, hypothesis testing, confidence interval estimation, correlation and regression.

Student Learning Outcome(s):

Upon successful completing this course: 1. The student will be able to test the hypothesis for sample proportion, mean and standard deviation. 2. The student will be able to determine the probability of an event in given a distribution. 3. Student will perform correlation and linear regression analysis.

MATH 227 STATISTICS (4) UC/CSU

Lecture: 4 hours

Prerequisite: Mathematics 125.

Discusses basic concepts and techniques of descriptive and inferential statistics including sampling, probability, statistical distributions, tables and graphs, central limit theory, hypothesis testing, confidence interval estimation, correlation and regression. Most analysis will be done using Excel spreadsheet program.

Student Learning Outcome(s):

Upon successful completing this course: 1. The student will be able to test the hypothesis for sample proportion, mean and standard deviation. 2. The student will be able to determine the probability of an event in given a distribution. 3. Student will perform correlation and linear regression analysis.

MATH 227S STATISTICS WITH SUPPORT (4) UC/CSU

Lecture: 4 hours / Lab: 1 hours

This course is an introduction to probability, measures of central tendency and dispersion, descriptive and inferential statistics including sampling, estimation, and hypothesis testing. Analysis of variance, chi-square and student t-distributions, linear correlation, and regression analysis are also presented as topics.

Student Learning Outcome(s)

1.The student will be able to test the hypothesis for sample proportion, mean and standard deviation. 2. The student will be able to determine the probability of an event in a given a distribution. 3 The student will perform correlation and linear regression analysis

MATH 230 MATHEMATICS FOR LIBERAL ARTS STUDENTS (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 125.

This course is intended for liberal arts majors. Topics include a variety of mathematical fields including logic, set theory, systems of numeration, number theory, algebra, the metric system, geometry, mathematics of finance, probability, statistics, and graph theory with their applications.

Student Learning Outcome(s):

1. Organize the given information to create a Venn diagram, interpret the diagram, and write a summary when given an application problem. 2. Determine the value of a compounded statement by constructing a truth table.3. Solve an application problem using the simple interest formula. 4. State constraints, graph a feasible region and determine the optimum value when given a linear programming problem.

MATH 235 FINITE MATHEMATICS (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 125.

This course consists of the basic concepts and operations of algebra essential to business, life and social science majors. The course includes the study of rational exponents, quadratic equations, graphs, logarithms, mathematics of finance, linear programming and an introduction to probability and statistics.

Student Learning Outcome(s):

Upon successful completion of the course, student wiill be able to: 1. Analyze a wide range of applications from many disciplines and graphically or using simplex method to solve optimization problems in two variables with linear constraints. 2. Understand the principles of borrowing and saving to compare different financial opportunities and make informed decisions. 3. Use some of the principles from probability and statistics to extract useful information from raw data.

MATH 236 CALCULUS FOR BUSINESS AND SOCIAL SCIENCE (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 125.

This course is an introduction to one and two variable calculus as applied to business, economics, and social sciences, included are applications of partial derivatives and multiple integrals to extrema problems.

Student Learning Outcome(s):

1) Apply the methods of differential calculus to analyze problems in Business and Economics, as well as Life Science, Physical Science and Social Science. 2) Apply the methods of differential calculus to sketch the graph of functions, determine maxima and minima in optimization problems, find rates of change and tangent lines and analyze revenue, cost and profit, in addition to marginal revenue, marginal cost and marginal profit. 3) Apply the methods of integral calculus to solve problems in Business and Economics.

MATH 236L SUPPORT COMPONENT FOR CALCULUS FOR BUSINESS AND SOCIAL SCIENCE (0.5) CSU

Lab: 2 hours

Corequisite: Mathematics 236.

This course covers core mathematics skills and concepts needed to succeed in a Calculus for Business and Social Sciences. The course designed for students who concurrently enrolled in Math 236, Calculus for Business and Social Sciences, at Los Angeles Trade Technical College. Topics in the course include concepts from Elementary and Intermediate Algebra such as linear equations in one and two variables with applications, literal equations, functions and graphs, systems of equations, inequalities, factoring, operations with polynomial, rational expressions, radicals; graph of linear, quadratics, exponential and logarithmic functions.

Student Learning Outcome(s):

1. The student will be able to define and manipulate and graph nonlinear and linear functions and relations. 2. The student will be able to solve a variety of nonlinear equations, e.g. logarithmic, inverse, quadratic equations, absolute value, rational. 3. The student will be able to create, analyze, and interpret graphs of linear and nonlinear relations/functions. 4.The student will be able to apply algebraic skills to a variety of applications such as growth and decay, logic, reasoning, geometry, optimization, quadratic applications (motion, mixture, work).

MATH 241 TRIGONOMETRY WITH VECTORS (4) CSU

Lecture: 4 hours

Prerequisite: MATH 125

This course includes the study of angles and their measurement in degrees and radians; triangles; trigonometric functions and their inverses and their graphs, identities, and proofs related to trigonometric expressions, trigonometric equations, solving right triangles, solving triangles using the Law of Cosines and the Law of Sines, vectors; complex numbers; graphing trigonometric functions as polar curves.

Student Learning Outcome(s):

1. Develop reciprocal, quotient and Pythagorean identities from the definitions of the trigonometric functions. 2. Solve application problems that are right-triangle based such as the Law of Sines and Law of Cosines to solve vector applications. 3. Graph the trigonometric functions; define and graph the inverse circular functions. 4. Solve such application problems as length of an arc, area of a sector, velocity and angular speed.

MATH 241S TRIGONOMETRY WITH VECTORS WITH SUPPORT (4) CSU

Lecture: 4 hours/ Lab: 1 hour

Prerequisite: MATH 125

This course includes the study of angles and their measurement in degrees and radians; triangles; trigonometric functions and their inverses and their graphs, identities, and proofs related to trigonometric expressions, trigonometric equations, solving right triangles, solving triangles using the Law of Cosines and the Law of Sines, vectors; complex numbers; graphing trigonometric functions as polar curves. The lab component supplements the lecture by providing background information and additional support.

Student Learning Outcome(s):

1. Develop reciprocal, quotient and Pythagorean identities from the definitions of the trigonometric functions. 2. Solve application problems that are right-triangle based such as the Law of Sines and Law of Cosines to solve vector applications. 3. Graph the trigonometric functions; define and graph the inverse circular functions. 4. Solve such application problems as length of an arc, area of a sector, velocity and angular speed.

MATH 245 COLLEGE ALGEBRA (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 125.

Upon successful completion of this course, students will reinforce the concept of functions and their graphs important in later courses of mathematics, science, business, nursing, or computer science. Polynomial, rational, radical, exponential, and logarithmic equations, both linear and nonlinear systems, sequences and series, and basics of probability are covered to allow students to solve a wide variety of real-life applications.

Student Learning Outcome(s):

Upon of successful completion of the course student will: (1) Graph and model with polynomial, rational, exponential and logartithmic functions. (2) Solve polynomial, rational, exponential and logarithmic equations. (3) Solve linear and nonlinear system of equations and inequalities and their applications.

MATH 245L JUST IN TIME SUPPORT FOR COLLEGE ALGEBRA (1) UC/CSU

Lab: 2 hours

Corequisite: Mathematics 245.

This course covers core mathematics skills and concepts needed for College Algebra. Intended for students who are concurrently enrolled in College Algebra, Math 245. Topics include concepts from elementary and intermediate algebra that are needed to succeed in a College Algebra course: linear and quadratic equations in one and two variables with applications, literal equations, functions, and their graphs, systems of equations and inequalities, factoring, operations with polynomials, radicals rational expressions, complex numbers.

Student Learning Outcome(s):

1. Define and manipulate and graph nonlinear and linear functions and relations. 2. Solve a variety of nonlinear equations such as logarithmic, exponential, quadratic, absolute value, rational equations. 3. Apply algebraic skills to a variety of applications such as growth and decay, logic, reasoning, geometry, optimization, applications (motion, mixture, work).

MATH 260 PRECALCULUS (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 240.

After a brief review of algebra with real and complex numbers, this course will cover the following topics: polynomial and rational functions with informal limits; exponential, logarithmic and trigonometric functions; systems of equations and matrices; sequences, series and the binomial theorem; conics and polar coordinates.

Student Learning Outcome(s):

Upon successful completion students will be able to: 1. Analyze and graph exponential and logarithmic functions; solve exponential and logarithmic equations. 2. Analyze and graph trigonometric functions; solve trigonometric equations; verify and use trigonometric identities and formulas. 3. Write recursive and explicit formulas for sequences; evaluate partial sums and infinite series; apply the Binomial Theorem. 4. Write equations of conics, and graph conics; convert equations from rectangular to polar coordinates, and vice versa.

MATH 260S PRECALCULUS WITH SUPPORT (5) UC/CSU

Lecture: 4 hours, Lab: 2 hours

Prerequisite: MATH 241 or MATH 241S

After a brief review of algebra with real and complex numbers, this course will cover the following topics: polynomial and rational functions, exponential, logarithmic and trigonometric functions; systems of equations and matrices; sequences, series, limits as a preview to calculus, and the binomial theorem; conic sections and polar coordinates.

Student Learning Outcome(s):

1 Analyze and graph exponential and logarithmic functions; solve exponential and logarithmic equations.

2 Analyze and graph trigonometric functions; solve trigonometric equations; verify and use trigonometric identities and formulas.

3 Write recursive and explicit formulas for sequences; evaluate partial sums and infinite series; apply the Binomial Theorem.

4 Write equations of conics and graph conics; convert equations from rectangular to polar coordinates, and vice versa.

MATH 265 CALCULUS WITH ANALYTIC GEOMETRY I (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 260.

The first Calculus course in a three-course sequence. Topics include: functions, limits, continuity, techniques and applications of differentiation and integration, mean value theorem, Fundamental Theorem of Calculus, definite integrals.

Student Learning Outcome(s):

Upon successful completion students will be able to: 1. Use and interpret derivatives algebraically, graphically, and numerically to model rates of change in application problems (for example, velocity, acceleration, population growth) 2. Use and interpret integrals algebraically, graphically, and numerically to model summation in application problems (for example, distance traveled, average value, and areas of geometric figures).

MATH 266 CALCULUS WITH ANALYTIC GEOMETRY II (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 265.

This is the second course in the Calculus sequence. Topics include: application of the definite integral to geometry, science and engineering; techniques of integral evaluation; introduction to differential equations; sequences and infinite series; parametric and polar curves; conic sections.

Student Learning Outcome(s):

Upon completion of the course, a student will be able to: 1. Select and use the appropriate technique to evaluate a given non-elementary integral. 2. Use the definite integral to solve problems in geometry, science and engineering. 3. Select an appropriate test and apply it to determine whether a given infinite series converges; apply the theory of power series to applications.

MATH 267 CALCULUS WITH ANALYTIC GEOMETRY III (5) UC/CSU

Lecture: 5 hours

Prerequisite: Mathematics 266.

This is the third course in Calculus series. It reviews operations with vectors in two and three-dimensional spaces as well as vector-valued functions with their applications. Topics include partial derivatives, Lagrange multiplier, Line integrals, multiple integrals in polar, cylindrical and spherical coordinates, Green's theorem, Surface integrals, Divergence and Stokes' theorems.

Student Learning Outcome(s):

Upon successful completion of this course, students will be able to 1. Use and interpret derivatives algebraically, graphically, and numerically to model rates of change in application problems such as: locate relative and absolute extrema of functions of several variables, derive equations of lines and planes, analyze the motion of a particle in space, use differentials to find local linear approximations, find directional derivatives, and gradient. 2. Use and interpret integrals algebraically, graphically, and numerically to model summation in application problems such as: find volume of a solid region, center of a mass, moments of inertia, surface area, flux, work, and energy.

MATH 27O LINEAR ALGEBRA (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 266.

Introduction to linear algebra and matrix theory. Topics include: linear systems, matrices and determinants; vector spaces and linear transformations; eigenvectors and eigenvalues; inner product spaces and canonical forms.

Student Learning Outcome(s):

Upon the successful completion of the course students will: 1.- Solve systems of linear equations using Linear Algebra methods. 2.- Prove basic results in Linear Algebra using appropriate proof-writing techniques. 3.- Use orthogonal and orthonormal bases to solve problems in Linear Algebra. 4.- Find eigenvalues,eigenvectors and the dimensions of the spaces of a matrix or a linear transformation and use them in applications.

MATH 272 METHODS OF DISCRETE MATHEMATICS (5) UC/CSU

Lecture: 5 hours

Prerequisite: MATH 266

This course consists a study of sets, relations, mathematical logic, algorithms, number systems, mathematical induction, counting principles, probability, Boolean algebra, the logic network, Pigeonhole principle, cardinality, and computability, recurrence relations, and recursion, graph theory, switching circuits, trees.

Student Learning Outcome(s):

1. The student will apply the Modular Arithmetic to RSA Cryptography. 2. The student will write a closed form formula for a given recurrence relation using the characteristic equation

MATH 275 ORDINARY DIFFERENTIAL EQUATIONS (3) UC/CSU

Lecture: 3 hours

Prerequisite: Mathematics 266.

Topics include ordinary differential equations with concentration on first and higher-order, homogeneous and non-homogeneous linear differential equations with or without initial-value conditions and their applications; establishing existence of solutions as the techniques for obtaining solutions, including, series solutions, and singular points, Laplace transforms and linear systems. System of linear first-order differential equations; Cauchy-Euler equation; series solutions; Laplace transform; numerical solutions.

Student Learning Outcome(s):

Upon the successful completion of the course students will: 1. Solve first-order separable linear differential equations and use these methods to solve applied problems. 2. Solve higher order constant-coefficient linear differential equations and systems of differential equations and use these methods to solve applied problems. 3. Apply appropriate transform methods to solve differential equations. 4. Construct power series solutions for various classes of ordinary differential equations.

MICROBIOLOGY

MICRO 001 INTRODUCTORY MICROBIOLOGY (5) UC/CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: ANATOMY 001 or BIOLOGY 003 or 005 or 006 and CHEMISTRY 051 or 101.

This course covers fundamental principles of microbiology and standard laboratory techniques. It includes systematics, morphology, physiology, genetics, ecology and evolution of microorganisms. Medical applications include concepts in microbial growth and control, epidemiology, immunology and disease. Industrial and environmental applications cover use of microorganismsâ€™ diverse metabolic abilities in the production of food, chemicals and medicine, including role in biotechnology and environment.

Student Learning Outcome(s):

1. Be able to apply basic chemical principles in microbiology. 2. Be able to differentiate cellular structures in procaryotic and eucaryotic cells. 3. Be able to discuss fundamental concepts in microbial metabolism, microbial growth, and microbial genetics. 4. Be able to compare and contrast bacteria, fungi, algae, protozoa, helminthes, and viruses. 5. Be able to differentiate nonspecific and specific defenses of the host. 6. Be able to discuss infectious diseases of the human organ systems.

MICRO 020 GENERAL MICROBIOLOGY (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: ANATOMY 001 or BIOLOGY 003 or 005 or 006 and CHEMISTRY 051 or 101.

This is a comprehensive course for nursing and allied health majors. It covers fundamental principles and laboratory techniques related to systematics, morphology, physiology, genetics, ecology and evolution of microorganisms. Medical applications include basic concepts of microbial growth and control, epidemiology, immune response and a survey of important human diseases.

Student Learning Outcome(s):

1. Be able to apply basic chemical principles in microbiology. 2. Be able to differentiate cellular structures in procaryotic and eucaryotic cells. 3. Be able to discuss fundamental concepts in microbial metabolism, microbial growth, and microbial genetics. 4. Be able to compare and contrast bacteria, fungi, algae, protozoa, helminthes, and viruses. 5. Be able to differentiate nonspecific and specific defenses of the host. 6. Be able to discuss infectious diseases of the human organ systems.

MICROCOMPUTER TECHNICIAN

MICROTK 077 CISCO NETWORKING ACADEMY - SEMESTER I (3)

Lecture: 2 hours / Lab: 3 hours

The first in a four course sequence. that qualifies the student to take the CISCO CCNA Certification Test; and covers Fundamentals of Computer Internet-working, Safety Technology, Protocols, Network Theory and Standards, Cabling, Electrical Considerations, OSI Models, IP Addressing and basic networking Hardware.

Student Learning Outcome(s):

The student will have an understanding of network terminology and theory, recognize various ethernet configurations.

MICROTK 078 CISCO NETWORKING ACADEMY - SEMESTER II (3)

Lecture: 2 hours / Lab: 3 hours

This is the second course in a four course sequence that qualifies the student to take the CISCO CCNA Certification Test; and covers router fundamentals, beginning router setup and configuration, routed and routing protocols, WAN fundamentals, network troubleshooting and network management.

Student Learning Outcome(s):

The student will understand beginning router setup and configuration, routed and routing protocols, wide area inter networking fundamentals, network troubleshooting, and network management.

MICROTK 079 CISCO NETWORKING ACADEMY - SEMESTER III (3)

Lecture: 2 hours / Lab: 3 hours

This is the third course in a four course sequence that qualifies the student to take the CISCO CERTIFICATION TEST; and covers advanced router set-up and configurations, LAN switching theory and VLANs, advanced LAN and LAN switched design, Novell IPX, and Threaded case studies.

Student Learning Outcome(s):

The student will demonstrate an understanding of the following: Single-Area OSPF, EIGRP, Switching Concepts, Switches and Switch Configuration, the Spanning Tree Protocol, Virtual LANs, Trunking Protocols, and Scaling IP Addresses. The WAN technologies PPP, ISDN and DDR, and Frame Relay are introduced. The student will also become familiar with Network Administration.

MICROTK 080 CISCO NETWORKING ACADEMY - SEMESTER IV (3)

Lecture: 2 hours / Lab: 3 hours

This is the fourth course in a four course sequence that qualifies the student to take the CISC0 CCNA Certification Exam; and covers advanced WAN theory and design; WAN Technology, PPP, Frame Relay, ISDN; Application of National SCANS skills in manging a network and network threaded case studies.

Student Learning Outcome(s):

Students will demonstrate an understanding of the following: advanced WAN theory and design, WAN technologies PPP, Frame Relay, ISDN, applications of national SCAN skills in managing a network, and Network Threaded case studies.

MICROTK 160 IT ESSENTIALS APPLICATION SOFTWARE FUNDAMENTALS (2) CSU

Lecture: 1 hour / Lab: 3 hours

Instruction and demonstrations are provided on the application, set-up, configuration and operation of a wide ranger of computer programs.

Student Learning Outcome(s):

Students will demonstrate the ability to install a computer Operating System with all its driver devices.

MICROTK 162 IT ESSENTIALS NETWORKING PERSONAL COMPUTERS (4)

Lecture: 2 hours / Lab: 6 hours

The course will assist students in designing, selecting, configuring and installing local area networks. System administration and troubleshooting is also covered in detail.

Student Learning Outcome(s):

Upon completion students will be able to connect to the Internet and share resources in a network environment.

MICROTK 164 IT ESSENTIALS MICROCOMPUTER THEORY AND SERVICING (5)

Lecture: 3 hours / Lab: 6 hours

The course provides servicing techniques for microcomputers and their related peripherals. Hands-on instruction is provided in diagnosing a range of microcomputers malfunctions.

Student Learning Outcome(s):

Students will assemble a computer system and troubleshoot the system using appropriate tools and diagnostic software.

MICROTK 165 LINUX SURVIVAL COURSE (3) CSU

Lecture: 2 hours / Lab: 3 hours

This course provides an introduction to the world of Linux (considered the success story of Open Source Software development). Linux and Open Source fundamentals will be taught as well as configuration and basic troubleshooting.

Student Learning Outcome(s):

Students will be able to deploy and troubleshoot a linux installation.

MICROTK 166 CCNA SECURITY (3)

Lecture: 2 hours / Lab: 3 hours

This course provides knowledge and skills to administer network devices and applications in a security infrastructure, recognize network vulnerabilities, and detect security threat. This course offers an overview of security challenges and solutions, and installing, monitoring, and troubleshooting Cisco security solutions to secure a network.

Student Learning Outcome(s):

Students will be able to control administrative access to network devices using ssh and configure administrative roles on network devices for network security.

MOTORCYCLE REPAIR MECHANIC

MCYCMEK 210 MOTORCYCLE FUEL INDUCTION AND POLLUTION CONTROL (4) CSU

Lecture: 3 hours / Lab: 3 hours

Instruction is offered in the areas of motorcycle fuel systems including carburetion, fuel injection, and pollution controls.

Student Learning Outcome(s):

Disassemble, reassemble, and adjust carburetors, fuel injection system and pollution controls.

MCYCMEK 212 MOTORCYCLE TUNE-UP AND CHASSIS MAINTENANCE (4) CSU

Lecture: 3 hours / Lab: 3 hours

Course offers instruction in the areas motorcycle tune-up, general motorcycle repair and maintenance, including chassis components.

Student Learning Outcome(s):

Perform tune-up, valve adjustment and clutch/brake system maintenance.

MCYCMEK 214 MOTORCYCLE ELECTRICAL PRINCIPLES AND REPAIR (4) CSU

Lecture: 3 hours / Lab: 3 hours

Instruction is offered in electrical theory, diagnosis, and repair as applied to the electrical systems of multi-cylinder motorcycles. Shop practices are given on testing procedures and test equipment, and repair.

Student Learning Outcome(s):

Perform diagnosis, repair and adjustment of motorcycle electrical systems.

MCYCMEK 216 MOTORCYCLE ENGINE OVERHAUL AND DIAGNOSIS (4) CSU

Lecture: 3 hours / Lab: 3 hours

Multi-cylinder engine principles, operation and overhaul methods are stressed. Shop instruction on diagnosis, disassembly, repair, overhaul and assembly of multi-cylinder engines is offered.

Student Learning Outcome(s):

Perform engine overhaul.

MCYCMEK 941 COOPERATIVE EDUCATION - MOTORCYCLE REPAIR MECHANIC (4)

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. This course requires a student to be currently enrolled in a Motorcycle Repair Mechanic course or successfully completed a Motorcycle Repair Mechanic course in a prior semester. Student must be employed or volunteering/interning in order to participate in program. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10).

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

MUSIC

MUSIC 101 FUNDAMENTALS OF MUSIC (3) UC/CSU

Lecture: 3 hours

This course provides an introduction to Western music theory and composition. The goal is to increase students' enjoyment and appreciation of music by understanding musical terminology, theory, and techniques. By the end of the course, students will be able to write a short musical composition.

Student Learning Outcome(s):

1. Students will understand the fundamentals of Western music theory and composition through an awareness of music terminology, theoretical structures, and techniques. 2. Students will be able to identify the notes of a piano keyboard. 3. Students will be able to write and read melodic, harmonic, and rhythmic notation in treble and bass clef. 4. Students will be able to write a short musical composition.

MUSIC 116 SURVEY AND HISTORY OF ROCK, POP AND SOUL MUSIC (3) UC/CSU

Lecture: 3 hours

Introduction to rock, pop, and soul music styles covering their origins, stylistic development and cultural impact. This course is designed to increase student awareness of the relationship between popular music and society.

Student Learning Outcome(s):

1. Student will know and understand the origins and development of the diverse elements/styles associated in rock music and identify and distinguish the various style periods aurally. 2. Student will identify various people important in the creation of rock music and identify the musical instruments they play(ed) and/or other important accomplishments by them. 3. Student will analyze the sociological trends as reflected in musical styles and song lyrics.

MUSIC 141 JAZZ APPRECIATION (3) UC/CSU

Lecture: 3 hours

A survey of twentieth century ragtime, blues, New Orleans and Chicago jazz, stride piano, swing, bebop, cool jazz, hard bop, modal jazz, third stream, avant-garde and free jazz, fusion, and experimental jazz styles.

Student Learning Outcome(s):

Students will be aware of and breakdown various styles and genres of jazz music.

MUSIC 650 BEGINNING GUITAR (2) UC/CSU

Lecture: 1 hour / Lab: 2 hours

Learning the basics of guitar with emphasis on right and left hand techniques, tuning, chords, strumming and notation. Students will learn to read and play simple melodies and accompaniments to gain a firm grasp of the instrument. Student must possess a guitar.

Student Learning Outcome(s):

1. Students will demonstrate the understanding of the fundamentals of left and right hand technique for both finger style and pick style guitar playing. 2. Students will be able to read standard notation. 3. Students will be able to identify Major, minor, and seventh chords. 4. Students will use the skills they have learned to perform melodies and songs. 5. Students will be able to perform a song demonstrating proper left hand and right hand technique.

NURSING, REGISTERED

REGNRSG 119 INTRODUCTION TO NURSING (1)

Lecture: 1 hour

This course will introduce nursing students to the RN Program Conceptual Framework and ethics as applied to nursing. It will identify student learning styles and guide students in study and test taking techniques to promote success in the program

Student Learning Outcome(s):

Student will demonstrate basic understanding of conceptual framework of nursing education.

REGNRSG 121 FUNDAMENTALS OF NURSING (3) CSU

Lecture: 1 hour / Lab: 6 hours

Prerequisites: REGNRSG 119 and REGNRSG 125

This course introduces the basic knowledge and bedside skills needed by the registered nurse. Quality and Safety (QSEN) competencies, Maslow's Hierarchy of Needs and nursing process for the theoretical framework. Concurrent with the theory, the nursing student will have basic client care experience in the skills lab and hospital setting.

Student Learning Outcome(s):

1. The student will demonstrate knowledge and understanding of fundamental principles of nursing care. 2. The student will be able to provide basic nursing care to a hospitalized patient using principles of nursing process and Maslow's Hierarchy of Needs.

REGNRSG 122 INTRODUCTION TO MEDICAL SURGICAL NURSING (3) CSU

Lecture: 1 hour / Lab: 6 hours

Prerequisites: REGNRSG 121 and passing of Dosage Calculation Exam.

This course is designed to introduce the student to basic principles of medical surgical nursing using Maslow's Hierarchy of Needs, Nursing Process and emphasizing Quality and Safety (QSEN) competencies as a conceptual framework.

Student Learning Outcome(s):

The student will be able to utilize the nursing process and Maslow's Hierarchy of Needs to assess and plan how to meet the basic needs of medical surgical client.

REGNRSG 123 NURSING PROCESS AND COMMUNICATION (2) CSU

Lecture: 2 hours

Prerequisites: REGNRSG 119 and REGNRSG 125

This course is designed to acquaint the students with the application of therapeutic communication and the components of Nursing Process: assessment, nursing diagnosis, planning, implementation and evaluation. Students will use Nursing Process in conjunction with Maslow's Hierarchy of Needs to make appropriate nursing judgments.

Student Learning Outcome(s):

Student will be able to utilize the nursing process in the care of patients in an acute healthcare setting. Student will use therapeutic communication skills in assessment of clients in acute healthcare setting.

REGNRSG 125 NURSING PHARMACOLOGY (2) CSU

Lecture: 1.5 hours / Lab: 1.5 hours

This course focuses on the effects of drug therapy on human body systems. The body systems include: the central nervous system, autonomic nervous, cardiovascular, renal, endocrine, respiratory and Gastro-intestinal systems. Also included are anti-infective, anti-inflammatory, immune and biological modifiers, chemotherapeutic, hematological, dermatologic, ophthalmic and otic agents. The students will learn and practice principles of medication administration.

Student Learning Outcome(s):

1.Students will be able to identify uses, actions, side effects, and adverse reactions to commonly used medications. 2.Students will demonstrate administration of oral, enteral, and parenteral medications.

REGNRSG 126 MEDICAL-SURGICAL NURSING I (5) CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Registered Nursing 122 and Registered Nursing 124 and Registered Nursing 125 and Registered Nursing 134

This basic course focuses on the nursing care of the adult client with moderate stress posed by common endocrine, gastrointestinal, cardiac and respiratory disorders. The student will function as a member of the health care team and beginning leadership skills will be presented. Emphasis will be placed on classroom and clinical application of critical thinking and therapeutic nursing interventions in acute, chronic and community health care settings.

Student Learning Outcome(s):

Student will be able to care for clients with fluid and electrolyte imbalances, acid-base imbalances, infections, endocrine disorders, gastrointestinal disorders, cardiovascular disorders, and respiratory disorders in the acute healthcare setting.

REGNRSG 127 MEDICAL-SURGICAL NURSING II (5) CSU

Lecture: 3 hours / Lab: 6 hours

Prerequisite: Registered Nursing 126 and Registered Nursing 129 and Registered Nursing 130 and Registered Nursing 134;

This intermediate level medical/surgical nursing course focuses on nursing care of adult clients with high acuity problems within hospital and community settings. Students will use nursing process and Maslow's Hierarchy of needs to plan and implement nursing care. The course builds on the theory and skills presented in RN 126. Leadership role will be expanded.

Student Learning Outcome(s):

Student will formulate a comprehensive plan of care, organize and prioritize the needs of high acuity clients based upon Maslow's Hierarchy of Needs and nursing process for clients with intermediate high acuity problems, and multi-system illnesses in the acute healthcare environment.

REGNRSG 128 MEDICAL-SURGICAL NURSING III (3) CSU

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Registered Nursing 127 and Registered Nursing 131 and Registered Nursing 134;

This course focuses on the nursing care of medical-surgical clients in a variety of setting. Emphasis will be on classroom and clinical application of critical thinking and caring interventions in chronic, acute, critical care and community health care settings.

Student Learning Outcome(s):

Students will demonstrate classroom and clinical application of critical thinking and caring interventions for medical-surgical clients in chronic, acute, critical care and community health care settings.

REGNRSG 129 GERONTOLOGY & COMMUNITY BASED NURSING (2) CSU

Lecture: 1 hour / Lab: 3 hours

Prerequisite: Registered Nursing 122; Registered Nursing 123; Registered Nursing 125; Registered Nursing 134;

This course focuses on nursing care of the older adult client with common health and illness needs. Emphasis will be on classroom and clinical application of critical thinking and caring therapeutic nursing interventions in acute, chronic and community health care settings for the older adult population.

Student Learning Outcome(s):

Students will assess and provide care for elderly clients in acute and community settings.

REGNRSG 130 PSYCHIATRIC-MENTAL HEALTH NURSING (3) CSU

Lecture: 1.5 hours / Lab: 4.5 hours

Prerequisite: Registered Nursing 122 and Registered Nursing 124 and Registered Nursing 125 and Registered Nursing 134;

This course focuses on nursing care of clients with common psychiatric mental health needs/disorders across the lifespan. Students will apply the nursing process, critical thinking,psychosocial theory and Maslow's Hierarchy of Needs to care of clients in acute, chronic and community-based psychiatric-mental health settings.

Student Learning Outcome(s):

Students will use the nursing process in providing psychiatric and mental health care to patients. Student will use therapeutic communication techniques to form therapeutic alliances with psych-mental health patients.

REGNRSG 131 REPRODUCTIVE NURSING AND WOMENS HEALTH (3.5) CSU

Lecture: 2 hours / Lab: 4.5 hours

Prerequisite: Registered Nursing 126 and Registered Nursing 129 and Registered Nursing 130 and Registered Nursing 134;

This course focuses on the nurse as a provider of care, manager of care and a member of the profession in a variety of maternal/newborn and women's health settings.

Student Learning Outcome(s):

The student will demonstrate an understanding of the reproductive system and the characteristics of normal pregnancy, physiological and psychological elements, process of labor and delivery, post-partum care, and care of the newborn.

REGNRSG 132 CARE OF CHILDREN AND FAMILY (3.5) CSU

Lecture: 2 hours / Lab: 4.5 hours

Prerequisite: Registered Nursing 127 and Registered Nursing 131 and Registered Nursing 134;

This course focuses on the nurse as a provider of care, manager of care and member of the profession in a variety of settings involving children and families. Course content includes physiological, psychological, developmental and socio-cultural needs of children and families. Course content in Pediatric Nursing will be presented within the framework of the wellness/illness continuum of the client and family from birth through adolescence.

Student Learning Outcome(s):

Utilize biopsychosocial concepts and theories, communication skills, and principles of critical thinking to apply the nursing process when caring for children and their families.

REGNRSG 133 NURSING LEADERSHIP & MANAGEMENT (3) CSU

Lecture: 0.5 hours / Lab: 7.5 hours

Prerequisite: Registered Nursing 128 and Registered Nursing 132 and Registered Nursing 134.

This course focuses on the transitioning role of the graduating Associate Degree nurse as a provider of care, manager of care and member of the profession. Concepts and issues to be examined include effective leadership styles, advanced therapeutic communication, delegation, conflict resolution, time management, nursing ethics and professional issues. Clinical experience is in the form of a preceptorship.

Student Learning Outcome(s):

Demonstrate leadership skills and ability to practice as entry-level registered nurse.

REGNRSG 134 NURSING SIMULATION LAB (1) CSU

Lab: 3 hours

This course is designed to allow students to practice nursing skills in a structured setting. It will make use of patient care scenarios in which evidence based practice will be emphasized. It must be taken in semesters 1, 2 and 3. It is optional in semester 4. The class will be individualized to meet students needs.

Student Learning Outcome(s):

Demonstrate proficiency in applying patient care skills to simulated clinical setting.

REGNRSG 135 TRANSITION FROM LVN TO RN (2)

Lecture: 2 hours

This is a bridge course for students who have a valid current California Vocational Nursing License. It focuses on content necessary to make the role transition from LVN to RN. Content will include Professional Nursing, Nursing Process, Maslow's Hierarchy of Needs, communication skills, ethical and legal issues affecting nursing practice, cultural assessment techniques and pharmacology and dosage calculation review.

Student Learning Outcome(s):

Student will compare and contrast current LVN role with RN role. Student will demonstrate competence in applying Nursing Process and Maslow's Hierarchy of needs to RN Nursing Care Plans. Student will demonstrate understanding of basic concepts in pharmacology and dosage calculation.

REGNRSG 136 NURSING SIMULATION LAB INTERMEDIATE (1)

Lab: 3 hours

This course is designed to allow students to practice intermediate nursing skills in a structured setting. It will make use of complex patient care scenarios in which evidence based practice will be emphasized. It must be taken in semester 2. The class will be individualized to meet students needs.

Student Learning Outcome(s):

Demonstrate proficiency in applying patient care skills to simulated clinical setting.

REGNRSG 137 NURSING SIMULATION LAB ADVANCED (1)

Lab: 3 hours

This course is designed to allow students to practice advanced nursing skills in a structured setting. It will make use of patient care scenarios in which evidence based practice will be emphasized. It must be taken in semester 3. The class will be individualized to meet students needs but will focus on administration of care to patient's with complex nursing problems.

Student Learning Outcome(s):

Demonstrate proficiency in applying patient care skills to simulated clinical setting.

OFFICE MACHINES

OFF MCH 002 ADDING AND CALCULATING MACHINES (1) CSU

Lab: 2 hours

Advisory: Mathematics 105.

This course demonstrates the 10-key touch method and explains the various computerized calculator function keys. The methods used help develop the proper skills needed to use computerized 10-key calculators in the workplace. The review of basic math functions, with emphasis on practical business problems.

Student Learning Outcome(s):

1. Understand calculator functions. 2. Calculate complex functions used in business. Calculations will include interest, discounts, investments in stocks and bonds, and converting fractions to percentages. 3. Understand touch method addition, subtraction, decimal point key, percents, constant multiplication, division rounding, mixed operations, and decimals.

PARALEGAL

PALEGAL 003 CIVIL RIGHTS AND THE LAW (3) CSU

Lecture: 3 hours

This course will analyze United States Supreme Court decisions as they relate to civil rights in the context of their historical periods. Its ultimate purpose is to give the student an understanding of how the United States Supreme Court has had to respond to social movements within the United States, including but not limited to movements relating to racial equality, gender equality,religious expression, and sexual orientation, and how its interpretations of associated laws have impacted those movements as to their objectives, carriage, and reach.

Student Learning Outcome(s):

1. Student will be able analyze the sociopolitical impact of Court decisions upon specific societal groups as those groups perceive protections guranteed them by the United States Constitutuion. 2. Student will be able to assess conflicts between U.S. Supreme court mandates and Congressional prescriptions.

PALEGAL 004 LEGAL INTERNSHIP (3) CSU

Lecture: 1 hour / Lab: 6 hours

Prerequisite: Paralegal 10; Advisory: English 101.

Under the instructor's direction and according to guidelines, paralegal student will be assigned to a law related institution, a local court, district attorney's office, city attorney's office, private law firm or a law library to demonstrate their career technical education skills and abilities.

Student Learning Outcome(s):

Student will gain an intimate understanding of how a legal institution operates. Student will experience first-hand the demands of a legal institution such as those of a law office. Student will experience first-hand how to interact with office personnel and clients/customers of diverse interests and socioethnic backgrounds.

PALEGAL 010 INTRODUCTION TO LAW AND LEGAL PROFESSION (3) CSU

Lecture: 3 hours

This introductory course provides an introduction to legal terminology, research of legal problems, law and ethics, and the role of the paralegal as a legal assistant.

Student Learning Outcome(s):

1. Comprehend and use legal terminology. 2. Access and utilize traditional and electronically formatted resources related to legal research. 3. Draft documents outling and/or summarizing their research findings and conclusions based on those findings.

PALEGAL 011 INTRODUCTION TO CIVIL LITIGATION II (3) CSU

Lecture: 3 hours

Focus on civil litigation in California. Student will learn the rules of local California courts and learn to prepare forms required to begin the litigation process and subsequent forms needed until the final settlement/resolution of the civil case. Areas of civil law applications will include Tort law, Family Law, Personal Injury Law, Probate Law, and the Law of Contract.

Student Learning Outcome(s):

1. Student will be able to complete documents needed to begin civil litigation. 2. Student will be able to write motions necessary to advance a the litigation in favor of one party or another. 3. Student will become familiar with and complete other court forms such as subpoenas, etc.

PALEGAL 012 TORT LAW (3)

Lecture: 3 hours

This course provides an overview of the fundamentals of Tort Law including intentional torts to the person and to property, negligence, and strict liability. Additionally students will study personal injury investigation, preparation of legal pleadings, preparation and analysis of discovery materials, and how to prepare for tort litigation.

Student Learning Outcome(s):

1. Comprehend when and under what circumstances another owes them a legal duty to prevent harm to their person and/or property. 2. Initiate and engage an appropriate course of lawful action toward realizing a commensurate remedy for the harm or harms suffered to themselves and/or their property.

PALEGAL 013 WILLS, TRUSTS, AND PROBATE ADMINISTRATION (3)

Lecture: 3 hours

Study of the fundamental principles of the law of wills, trusts, and probate including an examination of the organization and jurisdiction of the California Probate Court and the administration of estates through that court.

Student Learning Outcome(s):

1. Determine legal characteristics of different forms of property possession 2. Devise a plan for the distribution of a decedent's property according to the rules of California Probate Law as it applies to intestacy or contested wills. 3. Compose a legal will or establish a legal trust as to the disposition of a person's personal and/or real properties.

PALEGAL 014 LAW OFFICE MANAGEMENT AND PROCEDURES (3)

Lecture: 3 hours

Advisory: English 101 and Paralegal 010.

Students will examine the role of the paralegal in realizing fundamental objectives of managing a law office including understanding basic accounting principles, client services, personnel oversight, use of office technology, case indexing and filing, and office correspondence between colleagues and between clients.

Student Learning Outcome(s):

At the completion of this course student will be able to: 1. Establish and maintain a client file. 2. Research a case and provide a case brief for that researched case.

PALEGAL 016 CIVIL AND CRIMINAL EVIDENCE (3) CSU

Lecture: 3 hours

Students will examine the rules of court including deposition and interrogatory preparations and how each affects the admissibility of evidence in a civil or criminal proceeding.

Student Learning Outcome(s):

1. Utilize resource materials in determining applicable evidentiary rules as codified at the federal and state levels of the judiciary. . Apply rules of evidence in determining whether offered evidence may be legally admitted for consideration at a civil or criminal proceeding.

PALEGAL 017 LEGAL WRITING (3)

Lecture: 3 hours

Students will be introduced to traditional sources of law related information. Students will also be introduced to electronically-formatted sources of law related information. Students will utilize both source types in researching legal issues and preparing documents related to their findings.

Student Learning Outcome(s):

1). Perform legal research utilizing traditonal and electronically-formatted resources. 2). Draft legal documents including memorandi, briefs, and opinion letters.

PALEGAL 019 PROPERTY AND CREDITOR RIGHTS (3)

Lecture: 3 hours

Students will be introduced to the study of the different classifications of property interests including community property, tenancies, leases and other property interests. Students will also be introduced to the study of systems of recording those interests and how to search those databases. Students will examine secured transactions and bankruptcy laws.

Student Learning Outcome(s):

1). Demonstrate a comprehension of terminology associated with various classifications of property and property interests. 2). Properly assess and evaluate the legal ramifications and attendant rights related to the acquisition and distribution of property interests as an individual possessor or as co-possessor of that interest. 3). Demonstrate a comprehension of and properly evaluate their rights as a creditor or debtor toward resolution of a debt issue.

PALEGAL 045 LITIGATION DOCUMENT PREPARATION (3)

Lecture: 3 hours

Advisory: English 028

This course introduces the student to common litigation documents, terminology, procedures, and document preparation. Topics covered include the development and production of initial client documents, fee agreements, interrogatories, subpoenas, other discovery, deposition summaries, briefs, motions and pleadings. Students will receive hands-on instruction to create these legal documents using word processing software and focus on deadlines and calendaring requirements.

Student Learning Outcome(s):

1. Using technological as well as non-technological resources student will be able to create various legal documents that integrate into the substance of a case towards its juridical resolution. 2. Student will be able to provide an analysis of their research in various summary forms.

PALEGAL 051 LEGAL RESEARCH (3) CSU

Lecture: 3 hours

Corequisite: Paralegal 10; Advisory: English 101.

Student will learn to acquire information from traditional and electronic resources. Student will perform research in law libraries and through computer-based catalogs. Student will be taught to access and utilize primary, secondary, and CALPR research resources to resolve legal problems. Resources will include federal and state statutes, federal and state court decisions, federal and state regulations, digests, law reviews, treatises, and other practice works..

Student Learning Outcome(s):

1. Student will be able to conduct legal research using primary and secondary authorities. 2. Student will be able to utilize traditional and electronically-formatted resources

PHILOSOPHY

PHILOS 001 INTRODUCTION TO PHILOSOPHY (3) UC/CSU

Lecture: 3 hours

This course introduces students to philosophy, covering the topics of ethics, logic and language, metaphysics, theory of knowledge, philosophy of religion, and political philosophy. Some of the questions examined include: 'What is the good life?' ' What is right and wrong, and how do we know?' 'What is knowledge and what are its sources? Is it possible that we know nothing at all?' 'Does God exist?' 'Could we ever know?' 'What is the mind?' 'What is justice?' 'What is the basic nature of reality?' An emphasis is placed on developing critical reasoning skills, and relating the topics to larger cultural issues and debates.

Student Learning Outcome(s):

The student will be able to describe the impact of philosophy on past and present society and to begin to critically examine their own ideas about truth, methods of thinking, and the nature of reality.

PHILOS 008 DEDUCTIVE LOGIC (3) UC/CSU

Lecture: 3 hours

This is an introductory course in logic. The student is introduced to the standards and techniques of correct thought with regular practice with short specimens of correct and incorrect reasoning taken from daily life. Consistency, thoroughness, and other aspects of rational thought are fostered.

Student Learning Outcome(s):

(a) identify parts of simple arguments (premises and conclusions) (b) identify basic logical fallacies in short passages (c) test categorical syllogisms for validity (d) translate simple English sentences into categorical logic.

PHILOS 020 ETHICS (3) UC/CSU

Lecture: 3 hours

Ethics introduces moral thinking by surveying ideas of goodness and rightness, by exploring whether moral decisions come from rules, consequences, or habits, and by considering contemporary ethical dilemmas. Students will learn the vocabulary of ethical (and meta-ethical) discourse, study classical and modern moral thinkers, and discuss relevant topics in normative ethics.

Student Learning Outcome(s):

1. Students will be able to distinguish between various ethical theories.
2. Students will be able to apply various ethical theories to contemporary moral issues.

PHYSICS

PHYSICS 006 GENERAL PHYSICS I (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: Mathematics 240

This course provides a survey of physics at the pre-calculus level, with emphasis on mechanics, wave motion, fluids, heat and thermodynamics. The laboratory consists of engineering applications and problem solving.

Student Learning Outcome(s):

At the completion of this course the student will: 1. Demonstrate understanding of the laws of Physics, and have hands on experience, as applied to linear motion, Newton's laws of Motion, and rotation, the law of conservation of energy, conservation of momentum, conservation of angular momentum.

PHYSICS 007 GENERAL PHYSICS II (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: Physics 6.

This course provides a survey of physics at the pre-calculus level, with emphasis on electricity and magnetism, optics and modern physics. The laboratory consists of engineering applications and problem solving.

Student Learning Outcome(s):

1. At the completion of this course the student will know and understand the Laws of Physics and how to use the laws of Physics to do problem solving in the areas described in 2 below. 2. The student will have a basic understanding of Elasticity, Oscillations and Waves, Electricity, Magnetism, Optics. Theory of Relativity and Modern Physics. 3. The student will be able to perform simple experiments that demonstrate the laws and principles of Physics.

PHYSICS 011 INTRODUCTORY PHYSICS (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Corequisite: Mathematics 114 or Mathematics 115 or Chemical Technology 111 or Chemical Technology 113.

This is a survey course describing the major areas of physics: mechanics, heat, wave motion, electricity and magnetism, electromagnetic radiation and optics. Mathematical solutions of simple problems are covered. This course is not open to students receiving credit for Physics 12.

Student Learning Outcome(s):

Students will: 1)Convert measurements into metric and US system of units. 2)Determine accuracy and precision of a given measurement or calculation.3)To demonstrate knowledge and to solve problems on kinematics, force, momentum, work, energy, power, rotational motion, density, pressure, heat energy, electricity, magnetism, light, sound, and, optics.

PHYSICS 012 PHYSICS FUNDAMENTALS (3) UC/CSU

Lecture: 3 hours

Corequisite: Math 113 or Math 115 or Chemical Technology 111;

This is a survey course describing the major areas of physics: mechanics, heat, wave motion, electricity and magnetism, electromagnetic radiation and optics. Mathematical solution of simple problems are covered. This course is not open to students receiving credit for Physics 11.

Student Learning Outcome(s):

The student will be able to convert measurements into metric or US units.

PHYSICS 014 PHYSICS FUNDAMENTALS LABORATORY (1) UC/CSU

Lab: 3 hours

Corequisite: Physics 12;

This course covers laboratory experiments in basic measurements, mechanical, thermal, sound, electrical and optical phenomena at an introductory level.

Student Learning Outcome(s):

The student will be able to convert measurements into metric or US units.

PHYSICS 101 PHYSICS FOR ENGINEERS AND SCIENTISTS I (5) CSU

Lab: 3 hours/Lab: 6 hours

Corequisite: MATH 265; Advisory: PHYSICS 011 or 012

This course covers elements of Classical Mechanics, including motion in three dimensions, vectors, laws of motion, circular motion, energy and energy transfer, momentum, rigid body rotation, angular momentum, static equilibrium, elasticity, gravitation, and fluid mechanics.

Student Learning Outcome(s):

1. To deduce the value and its uncertainty of physical observables based on empirical values. 2. To deduce the value of the density of a liquid based on measurements of the mass and the volume of the liquid. 3. Use the experimental uncertainties in the measurements of the mass and the volume to determine the uncertainty in the deduced value of the density of the liquid. A level of performance of 60% is expected as a minimum.

PHYSICS 102 PHYSICS FOR ENGINEERS AND SCIENTISTS II (5) CSU

Lab: 3 hours/Lab: 6 hours

Corequisite: PHYSICS 101; Corequisite: MATH 266

The student learns the fundamental principles and applications of introductory thermodynamics (temperature, heat, heat engines, entropy and other topics), and electricity and magnetism (electric forces, electric fields, potential, magnetism, magnetic forces and fields, capacitance, resistance, inductance, DC and AC circuits and other topics) at the beginning calculus level of mathematics. The laboratory includes both quantitative and qualitative experiments that permit students to verify, illustrate, and deduce various laws of physics.

Student Learning Outcome(s):

1. The student will analyze and solve given problem(s) related to a variety of physical systems and situations, including Thermodynamics, Electrostatics, Electric and Magnetic Fields, Induction, Resistance, DC and AC circuits, and Maxwell's Equations.2. The student will conduct experiments involving the principles of physics, analyze data and report results.

PHYSICS 103 PHYSICS FOR ENGINEERS AND SCIENTISTS III (5) CSU

Lab: 3 hours/Lab: 6 hours

Corequisite: PHYSICS 102; Corequisite: MATH 267

Students learn the topics of mechanical waves, electromagnetic waves, light and optics, relativity, introductory quantum mechanics, atomic and nuclear physics. Topics in molecular physics and condensed matter as well as particle physics may also be included. The laboratory includes both quantitative and qualitative experiments which enable students to verify, illustrate, and deduce some of the laws of physics that apply to the topics covered.

Student Learning Outcome(s):

1. The student will analyze and solve given problem(s) related to a variety of physical systems and situations such as mechanical waves, geometric optics, special relativity, quantum mechanics and atomic physics. 2. The student will conduct experiments involving the principles of physics, analyze data, and report results.

PHYSIOLOGY

PHYSIOL 001 INTRODUCTION TO HUMAN PHYSIOLOGY (4) UC/CSU

Lecture: 3 hours / Lab: 3 hours

Prerequisite: ANATOMY 001 and CHEM 051 or CHEM 065 or CHEM 101

A detailed study of the function of major systems of the human body. Laboratory experiments will be based on physiological processes covered in lecture.

Student Learning Outcome(s):

Student will demonstrate technical skills to study physiology including use of computer simulations and ECG recording devices. Student will apply scientific method to lab experiments. Student will describe physiological processes and control mechanisms of the human body. Student will explain health applications and pathologies for each body system.

PLUMBING

PLUMBNG 026 PLUMBING LAYOUT AND ESTIMATING I (3)

Lecture: 3 hours

This course covers fundamentals of blueprint reading for residential plumbing with an introduction to piping layout and design and basic estimating procedures. An overview of piping and fitting nomenclature, measurements and related calculations,as well as techniques in sketching, along with orthographic, and isometric drawing creation are included.

Student Learning Outcome(s):

Student will be able to read a basic blueprint for plumbing symbols and requirements. The student will take information from a set of plumbing plans.

PLUMBNG 027 PLUMBING LAYOUT AND ESTIMATING II (3)

Lecture: 3 hours

This course is a study of blueprints and specifications as related to plumbing layout and estimating. Knowledge and experience of students, including the application of codes and standards, are utilized in the creation of estimates. Principles of estimating, including materials, labor, overhead, and profit are reviewed. Layout procedures for one-and two-story residential, commercial and industrial units are examined as well as estimating procedures for each of these units. Pricing methods and bidding practices are included.

Student Learning Outcome(s):

Plumbing SLO# 1 Water Distribution Design and Material Take off: Student will create an isometric plumbing plan for the water distribution system from a set of blueprints and determine pipe and fittings required to perform job.

PLUMBNG 028 PLUMBING CODE I (3)

Lecture: 3 hours

Introduction is given in plumbing codes and ordinances that affect rough-in work, in city and county areas. Installation of wastes, vents, clean-outs, traps, gas fittings, gas vents and water pipe requirements are reviewed.

Student Learning Outcome(s):

SLO 1: Student will apply plumbing trade calculations and measurements. 2: Student will calculate fixture unit values for DWV. 3: Student will design a basic residential drainage system.

PLUMBNG 029 PLUMBING CODE II (3)

Lecture: 3 hours

Instruction is given in the uniform plumbing code that involves the current regulations of water and gas systems, fixture installation, water heaters, joints and connections, introduction to appendix 'A' and reference standards.

Student Learning Outcome(s):

Student will calculate building available pressure, fixture load values by the application of plumbing trade mathematical techniques.

PLUMBNG 031 BACKFLOW PREVENTION DEVICES (3)

Lab: 6 hours

This course is designed to prepare student for Backflow Prevention Assembly Tester Certification. Instruction is given in fundamentals of cross-connection control including State, County, County Health Department, and Municipal codes. Water Purveyor rules and regulations are also reviewed in this course. Emphasis is given to laboratory work in installing, operating, testing, troubleshooting, and maintaining Pressure, Spill Resistant Pressure, and Two Check Type Pressure, Vacuum Breakers as well as Double Check Valve , Double Check Valve-Detector, Reduced Pressure Principle, and Reduced Pressure Principle-Detector Backflow prevention Assemblies.

Student Learning Outcome(s):

The trainee will use hand tools to perform plumbing operations by using the differential pressure test gauge and the test tubes to fully test a Pressure Vacuum Breaker Assembly. Skill #1 The trainee will: test air inlet using test tube procedure Skill #2 The trainee will: test checking member using test tube procedure. Skill #3 The trainee will: test air inlet using differential test gauge procedure.Skill #4 The trainee will: . test checking member using differential test gauge procedure.

PLUMBNG 033 PLUMBING CODE III (3)

Lecture: 3 hours

This course presents in-depth coverage of plumbing standards, including acceptable installation practices and acceptable materials. All standards are based on the current IAPMO uniform plumbing code.

Student Learning Outcome(s):

It is expected that student will be able to: calculate load values for fuel gas systems design a fuel gas system identify basic materials and agencies convert heat calculations of buts.

PLUMBNG 111 INTRODUCTION TO PLUMBING (3)

Lab: 7 hours

This course surveys the history of the Plumbing Industry; Highlights occupational information, Evokes job ethics and instructs on career information; The course also covers occupational health and safety hazards,provides an overview of Plumbing systems, and introduces the tools of the trade.

Student Learning Outcome(s):

Student will use common power tools to perform basic plumbing operations by drilling holes through wood framing members using the Milwaukee Hole Hawg. Skill #1 The student will Measure and mark stud bay and calculate to locate center of drilled hole in stud bay. Drill hole in center of bay and plumb using Hole Hawg and self-feeding-bit safely without binding drill bit. Mark second hole in simulated fireblock plumb and centered under first hole in top plat Drill second hole centered and plumb through top plate using auger bit safely without binding bit.

PLUMBNG 112 FUNDAMENTALS OF PLUMBING (3)

Lecture: 3 hours

This course studies fundamentals of plumbing calculations and elementary drawings for beginners. Topics include pipe sizes and calculations, flow in pipe, friction design application, Instruction is given in the principles and design of water supply , fuel gas distribution, and D.W.V. (Drain,Waste and Vent).

Student Learning Outcome(s):

1. The student will be able to calculate grade and fall of drainage and building drain to sewer.

PLUMBNG 113 BASIC PLUMBING PRINCIPLES AND PRACTICES (6)

Lecture: 4 hours / Lab: 7 hours

This course introduces fundamentals of plumbing principals and practices. Topics include installation,repair,and nomenclature of pipes, fittings, and fixtures. Instruction is given on elementary drawings, plan reading, general specifications, and trade calculations as related to construction documents.

Student Learning Outcome(s):

The student will be able to scale drawings using an architects scale or a rule. The student will take measurements off a scaled floor plan using the architects scale. The student will use an architect scale and a floor plan to: Measure how far apart, center to center, the stub outs are for the water closets in the Girls Restroom. Measure and calculate number of feet of 2 type L copper tubing required for job plus/minus 20ft. Measure how far apart, center to center, the urinals are in the Boys Restroom. Measure distance from exterior of South Wall West side of building to center line of Plumbing Wall behind water closets on South Side of Girls Restroom.

PLUMBNG 121 WORKING DRAWINGS AND LAYOUT I (3)

Lecture: 3 hours

This course offers instruction in basic blueprints, estimating and drafting related to the plumbing industry; proper methods and procedures of plan interpretation and application. This course also offers exposure to the plumbing code, manufacturer's data sheets, and plumbing specifications.

Student Learning Outcome(s):

Student will utilize basic drawing tools to create and design a basic isometric plumbing systems according to the current UPC. Student will identify and list load values and pipe sizes according to the current UPC.

PLUMBNG 122 PLUMBING MATHEMATICS AND PROCEDURES II (3)

Lecture: 3 hours

This course offers instructions in measuring, material purchases and return procedures, capacity loading, pressure calculations and gas conversions related to the plumbing industry, with emphasis on formulas calculations peculiar to the industry.

Student Learning Outcome(s):

Student will apply plumbing trade calculations and measurements to calculate fixture load values, pipe sizes, and grade and fall.

PLUMBNG 123 PLUMBING PRACTICES AND INSTALLATION (6)

Lab: 15 hours

This course offers the study and practice of the proper methods and procedures used in installing plumbing fixtures and accessories. Installing, fabricating and testing fixtures applicable to residential and commercial plumbing are covered.

Student Learning Outcome(s):

The student will list various plumbing system components: gas, water, and DWV. The student will identify and calculate fixture unit values and capacities for fixtures and pipes. The student will apply current and legal installation methods, procedures, and practices as adopted by the UPC.

PLUMBNG 131 WORKING DRAWING II (3)

Lecture: 3 hours

This course is a study of blueprints, plans, and drawings as related to the plumbing trade. Skills, including the interpretation of applicable code and standards. Basic principles of estimating, including materials and their quantities are reviewed.

Student Learning Outcome(s):

Students will be able to demonstrate knowledge of and proficiency in the study blueprints, plans and drawings including the interpretation of applicable plumbing codes and standards: The student will locate and properly mark the centerline of water closet. The student will locate and properly mark the centerline of the closet flange. The student will locate and properly mark the height and distance for the center of the water closet for the water supply stub out.

PLUMBNG 132 PLUMBING CALCULATIONS AND PROCEDURES II (3)

Lab: 7 hours

Instruction is given in layout procedures involving applied calculations concerning the plumbing trades. Instruction is also given in layout and design criteria with hands on laboratory procedures.

Student Learning Outcome(s):

Student will apply trade calculations related to sizing roof drainage systems, roof drains, conduits, and horizontal pipe usage.

PLUMBNG 133 INSTALLATION AND PLUMBING FIXTURES (6)

Lecture: 4 hours / Lab: 7 hours

This course covers fabrication,erection of piping,layout methods,process piping,blueprint installations and testing of plumbing fixtures and appliances.

Student Learning Outcome(s):

Using technical documents and manuals student will calculate developed lengths on branch lines, pipe sizes, and fittings for a gas system.

PLUMBNG 141 ADVANCE LAYOUT AND PROCEDURES (3)

Lecture: 3 hours

This course covers proper methods of layout and installation procedures, fabrication, and erection of piping in commercial buildings in compliance with local and national codes.

Student Learning Outcome(s):

Students will apply information in plumbing manuals to determine adequate size DWV piping utilizing correct correct table.

PLUMBNG 142 SERVICING OF PLUMBING FIXTURES AND APPLIANCES (3)

Lab: 6 hours

This course covers proper methods of repairing plumbing fixtures and appliances, preparing for the repair job, and estimating the job.

Student Learning Outcome(s):

Finding Information in manufacturers manuals to repair basic parts of a water closet Student will correctly identify different parts in a water closet Student will correctly find replacement parts in manufacture manual Student will correctly find and total price of replacement parts.

PLUMBNG 143 PLUMBING CODE I (3)

Lab: 6 hours

This course covers building codes as they relate to plumbing,with emphasis on the effective use of applicable codes and hands-on laboratory projects.

Student Learning Outcome(s):

Students will be able to use Technical Plumbing Manual to calculate support systems for piping systems: Students will be able to correctly calculate support of ABS DWV piping systems Students will be able to correctly calculate support for copper potable water piping. Students will be able to correctly calculate support for PEX potable water piping.

PLUMBNG 144 SPECIAL PURPOSES INSTALLATION (3)

Lab: 6 hours

This course covers fabrication and erection of piping for the proper installation of special appliances and fixtures and special methods used in the construction of these fixtures, as well as testing procedures.

Student Learning Outcome(s):

Students will be able to demonstrate knowledge and proficiency in finding and applying information from technical plumbing manuals. The student will be able to identify wet vented sections. The student will be able to determine correct fixture unit values. The student will be able to determine proper pipe size.

PLUMBNG 185 DIRECTED STUDY-PLUMBING (1)

Lecture: 1 hour

This course allows students to pursue a directed study in plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

PLUMBNG 185L DIRECTED STUDY, PLUMBING TECHNOLOGY (LAB) (1)

Lab: 3 hours

This course allows students to pursue a directed study in plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in plumbing technology.

PLUMBNG 246 PRINCIPLES AND PRACTICES OF PLUMBING DESIGN AND LAYOUT (4)

Lecture: 3 hours / Lab: 4 hours

Students are trained on skills such as measuring with an architect's scale, construction drawings that include piping layout, fixture layout, disability requirements, orthographic drawings and basic isometric drawings

Student Learning Outcome(s):

Apply basic plumbing calculations Utilize basic drawing tools Name basic plumbing tools.

PLUMBNG 285 DIRECTED STUDY - PLUMBING (2)

Lecture: 2 hours

This course allows students to pursue a directed study in Plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

PLUMBNG 285L DIRECTED STUDY, PLUMBING TECHNOLOGY (LAB) (2)

Lab: 6 hours

This course allows students to pursue a directed study in plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in plumbing technology.

PLUMBNG 385 DIRECTED STUDY - PLUMBING (3)

Lecture: 3 hours

This course allows students to pursue a directed study in plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

PLUMBNG 385L DIRECTED STUDY, PLUMBING TECHNOLOGY (LAB) (3)

Lab: 9 hours

This course allows students to pursue a directed study in plumbing technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will design and construct a lab project based on a topic in plumbing technology.

PLUMBNG 941 COOPERATIVE EDUCATION - PLUMBING (4)

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

POLITICAL SCIENCE

POL SCI 001 THE GOVERNMENT OF THE UNITED STATES (3) UC/CSU

Lecture: 3 hours

Advisory: English 28;

Political Science 1 is an introductory course in the principles, institutions and policy processes of the American Political System and an examination of major tenets in Federalism, Representative Government and the scope of the Executive, Legislative and Judicial powers. It offers an overview of local, state and national governance.

Student Learning Outcome(s):

Students will be able to evaluate current political situations and develop defendable positions on the events.

POL SCI 002 MODERN WORLD GOVERNMENTS (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will explore a selected variety of major nation-states to develop a comparative overview of political philosophies, constitutions, political processes, systems and institutions. Emphasis is placed on geographic, cultural, historic, economic, and demographic factors that contribute to differences in the development and establishment of nation-states.

Student Learning Outcome(s):

To increase knowledge of diverse political systems around the world, including empirical area-based knowledge; broader theoretical understanding of different political systems, institutions and processes; and the changing domestic and global contexts within which they operate.

POL SCI 007 CONTEMPORARY WORLD AFFAIRS (3) UC/CSU

Lecture: 3 hours

Advisory: English 28.

This course will focus on the relationships of nations in modern times emphasizing the nation-state system, diplomacy, international law, and international organizations. Students will explore the causes, consequences, and methods of resolving international conflicts, and the impact of internal economic, political, and military factors on foreign policy.

Student Learning Outcome(s):

Students will demonstrate an ability to analyze relations between nations, international government and non-governmental organizations, and global actors, organize ideas and synthesize the critical overall objectives of the assignment or presentation.

POWERLINE MECHANIC TRAINEE

ELECL 601 POWER LINE MECHANIC - TRAINEE (600 HOURS) (15)

Lecture: 6 hours / Lab: 27 hours

Prerequisite: Electrical Construction and Maintenance 119 or Electrical Construction and Maintenance 173 and Electrical Construction and Maintenance 116.

The goal of this course is to produce qualified candidates for various Power Line Mechanic training programs. Development of basic pre-apprentice skills needed to be successful will be emphasized. These skills include: overall safety considerations, power pole and tower climbing skills, knowledge of the basic tools and materials involved with the electrical line crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. A power pole-climbing certificate of competencies is granted to students who successfully complete this course. This course meets or exceeds the equivalent industry recognized 600 hour programs. Special Note: Students during the course of instruction will be required to lift up to 60 lbs with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered.

Student Learning Outcome(s):

SLO: Students will complete pole climbing certificate including successful completion of three climbs: Climb 1 - Free climb, circle, adjust belt. Climb 2 - Combination free climb and belted climb over obstructions. Climb 3 - 55 foot pole climb with maximum reach left and right.

ELECL 601A POWER LINE MECHANIC - TRAINEE (600 HOURS) PART A (6)

Lecture: 6 hours

Prerequisite: Electrical Construction and Maintenance 119 or Electrical Construction and Maintenance 173.

The goal of this course is to produce qualified candidates for various Power Line Mechanic training programs. Development of basic pre-apprentice skills needed to be successful will be emphasized. These skills include: overall safety considerations, power pole and tower climbing skills, knowledge of the basic tools and materials involved with the electrical line crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. A power pole-climbing certificate of competencies is granted to students who successfully complete this course. This course meets or exceeds the equivalent industry recognized 600 hour programs. Special Note: Students during the course of instruction will be required to lift up to 60 lbs with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered. Part A is the lecture module of the standard 601 class, allows for offering the program over an extended period.

Student Learning Outcome(s):

SLO: 1. Solving Series Circuits using Ohms Law and the Power Equation. SLO 2. Solving Parallel Circuits using Ohms Law and the Power Equation. SLO 3. Solving Combination Circuits using Ohms Law and the Power Equation.

ELECL 601B POWER LINE MECHANIC - TRAINEE (600 HOURS)PART B (3)

Lab: 9 hours

Prerequisite: Electrical Construction and Maintenance 116.

The goal of this course is to produce qualified candidates for various Power Line Mechanic training programs. Development of basic pre-apprentice skills needed to be successful will be emphasized. These skills include: overall safety considerations, power pole and tower climbing skills, knowledge of the basic tools and materials involved with the electrical line crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. A power pole-climbing certificate of competencies is granted to students who successfully complete this course. This course meets or exceeds the equivalent industry recognized 600 hour programs. Special Note: Students during the course of instruction will be required to lift up to 60 lbs with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered. Part B is first of 3 laboratory modules of the standard 601 class, allows for offering the program over an extended period.

Student Learning Outcome(s):

SLO: Students will complete first 1/3 of pole climbing certificate including successful completion of one climb: Climb 1 Free climb, circle, adjust belt.

ELECL 601C POWER LINE MECHANIC - TRAINEE (600 HOURS) PART C (3)

Lab: 9 hours

Prerequisite: Electrical Construction and Maintenance 116.

The goal of this course is to produce qualified candidates for various Power Line Mechanic training programs. Development of basic pre-apprentice skills needed to be successful will be emphasized. These skills include: overall safety considerations, power pole and tower climbing skills, knowledge of the basic tools and materials involved with the electrical line crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. A power pole-climbing certificate of competencies is granted to students who successfully complete this course. This course meets or exceeds the equivalent industry recognized 600 hour programs. Special Note: Students during the course of instruction will be required to lift up to 60 lbs with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered. Part C is the second of 3 laboratory modules of the standard 601 class, allows for offering the program over an extended period.

Student Learning Outcome(s):

SLO: Students will complete second 1/3 of pole climbing certificate including successful completion of one climb: Climb 1 Combination free climb and belted climb over obstructions.

ELECL 601D POWER LINE MECHANIC - TRAINEE (600 HOURS) PART D (3)

Lab: 9 hours

Prerequisite: Electrical Construction and Maintenance 116.

The goal of this course is to produce qualified candidates for various Power Line Mechanic training programs. Development of basic pre-apprentice skills needed to be successful will be emphasized. These skills include: overall safety considerations, power pole and tower climbing skills, knowledge of the basic tools and materials involved with the electrical line crafts, general construction standards, basic rigging principles, and basic electrical theory that is specific to this trade. A power pole-climbing certificate of competencies is granted to students who successfully complete this course. This course meets or exceeds the equivalent industry recognized 600 hour programs. Special Note: Students during the course of instruction will be required to lift up to 60 lbs with repetition and will be required to climb and perform installation and maintenance operations at the top of 30 foot power poles. Physical or psychological impairments that might limit your abilities to succeed should be considered. Part D is the third of 3 laboratory modules of the standard 601 class, allows for offering the program over an extended period.

Student Learning Outcome(s):

SLO: Students will complete third 1/3 of pole climbing certificate including successful completion of one climb: Climb 1 55 foot pole climb with maximum reach left and right.

PROCESS TECHNOLOGY

PRPLTEK 100 INTRODUCTION TO INDUSTRIAL PROCESS (3) CSU

Lecture: 3 hours

The purpose of this course is to provide an overview or introduction into the field of Process Operations within the Chemical Process Industries, such as the oil refinery and wastewater industries. Students will be introduced to the roles and responsibilities of Process Technicians, the environment in which they work, and the equipment and systems in which they operate.

Student Learning Outcome(s):

1. Define key terms used in process technology. 2. Explain the basic principles of safety, health, and environment in the process industry. 3. Describe the basic hand tools, equipment and instruments used in industry. 4. Describe various systems operated in industry. 5. Describe the fundamental principles of chemistry and physics.

PRPLTEK 102 PROCESS MEASUREMENT AND CONTROL FUNDAMENTALS (3) CSU

Lecture: 3 hours

The purpose of this course is to provide an introduction to the fundamentals of process variables and a variety of instruments used to sense, measure, transmit, and control process plant operations within chemical manufacturing, oil refineries and wastewater treatment industries.

Student Learning Outcome(s):

Define terms associated with industrial instrumentation Describe the major process variables controlled in the Process Industry Explain the relationship between common process variables Describe the components of control loops Explain the function of process control loops Define and describe the symbols used in Process and Instrumentation Diagrams and Process Flow diagrams.

PRPLTEK 103 PROCESS PLANT EQUIPMENT (3) CSU

Lecture: 2 hours / Lab: 3 hours

This course introduces the student to the generic equipment used in the process plant industry. Students will learn the fundamental principles of operation, construction, and application of piping, pipe fitting, steam traps, valves, pumps compressors, steam turbines, electric motors, furnaces, heat exchangers, cooling towers, storage tanks, distillation towers reactors and process instrumentation.

Student Learning Outcome(s):

Define terms associated with process equipment Explain the function of process equipment Describe the internal components of the equipment.. Explain the operating principles of the equipment Explain the operators role in safe operation of equipment Explain the operators role in troubleshooting equipment malfunction. Describe the general maintenance procedures that operators are expected to perform.

PRPLTEK 104 INTRODUCTION TO APPLIED SCIENCES (4)

Lecture: 1 hour/Lab: 6 hours

This course provides an introduction to the field of environmental, safety, and health within the chemical laboratory, biotechnology, biomanufacturing, waste water treatment and chemical process industries. Students will be introduced to various types of laboratory and plant safety techniques and hazards. In addition, multiple field visits will provide an overview of various job functions and career paths in the chemical laboratory, biotechnology, biomanufacturing, waste water treatment and chemical process industries.

Student Learning Outcome(s):

1. Students will ID and describe four main types of hazards 2. Students will recognize physical and chemical hazards in the chemical, bio-manufacturing and process industries 3. Students will ID and describe GLP and cGMP regulations.

PRPLTEK 200 PROCESS PLANT SYSTEMS (3) CSU

Lecture: 3 hours

The purpose of this course is to provide an introduction to the unique combinations of equipment and systems used to separate materials in chemical manufacturing, oil refineries, wastewater treatment, pharmaceutical industries, biomanufacturing and others. The study will include process systems such as, reactions, water treatment, distillation, absorbing/stripping, evaporation, extraction and fundamental organic chemistry principles involved in process systems.

Student Learning Outcome(s):

Define terms associated with process systems Explain the function of process systems Describe the components and equipment in process systems Explain the operating principals of the process systems Explain the operators role in safe operation of process systems Explain the operators role in troubleshooting process system malfunction. Identify the different equipment systems used to make up a distillation system. Explain how the methods of heat transfer apply to the distillation process.

PRPLTEK 202 INTRODUCTION TO PROCESS PLANT TROUBLESHOOTING (3)

Lecture: 3 hours

This course introduces students to the troubleshooting processes involved in the investigation, identification and eliminating of the type of faults which are common to process plant operations.

Student Learning Outcome(s):

o Recognize the difference between trial and error and systematic troubleshooting methodologies. o Differentiate the categories of potential causes: probable, plausible and possible. o Describe the phases and steps that constitute an effective troubleshooting methodology. o Successfully apply the phases of the troubleshooting process to a variety of operational problems. o Recognize the adverse impact that human, organization and system behavior have on effective troubleshooting.

PRPLTEK 204 PTECH INSTRUMENTATION - COMPUTER APPLICATIONS (2)

Lecture: 2 hours

This advanced course introduces students to the computerized software used to manipulate process operations in chemical industries including petrochemical, wastewater, pharmaceutical and numerous other operations.

Student Learning Outcome(s):

1) Define terms associated with industrial instrumentation 2) Describe the major process variables controlled in the proces industry 3) Explain the relationship between common process variables 4) Describe the components of control loops 5) Explain the function of process control loops 6) Define and describe the symbols used in process and instrumentation diagrams and process flow diagrams 7) Define terms associated with process control 8) Demonstrate the following Console Operator duties: -change controller mode -change setpoint -change valve output -access process history

PRPLTEK 206 PTEC-ADVANCED INSTRUMENTION II (3)

Lecture: 3 hours

This course provides students with exposure to advanced process operation variables and a variety of instruments used to sense, measure, transmit, and control plant operations within the chemical manufacturing, biopharma/ manufacturing, oil refinery, wastewater treatment and other chemical industries.

Student Learning Outcome(s):

Define terms associated with process control and controllers. Describe the relationship between measuring instruments and their role in control loops. Explain the purpose and operation transmitters and transducers. Describe/ demonstrate the operation of local, remote, split range, cascade and ratio controllers. Describe / demonstrate how to switch between control modes. Given a process control schematic, explain how the control loop functions Identify the components of a control valve. Describe how the components of a control valve interact. Explain fail Safe positions for various types of control scheme. Describe and explain the operation of regulators. Describe common switches and their function. Explain how relays are used in process industries. Describe methods for maintaining integrity and reliability of signal transmission. Perform scaling calculations. Identify and describe the various control schemes used in process industries. Describe/demonstrate bumbless transition between control modes.

PRPLTEK 210 APPLIED INSTRUMENTATION ANALYSIS - I (4)

Lecture: 3 hours / Lab: 2 hours

This class offers students hands-on experience with the analytical instruments used in typical laboratories such as gas chromatography and chemical titrating equipment. Students will learn to apply various methods of sampling and analyzing to determine the composition of typical liquids, solids, and gases used by the chemical industry.

Student Learning Outcome(s):

Describe the types of petrochemical and refining industry drawings that contain instrumentation. Explain the importance of process knowledge in troubleshooting. Describe the differences between analog and digital control. Explain and define the terms associated with PLCs. Define terms associated with advanced control schemes. Define terms associated with instrumentation power supply. Explain advantages of a DCS system. Define terms associate with ESD. Recall the methods used for determining if a sensing device funtions properly.

PRPLTEK 214 INDUSTRY TRENDS: EMPLOYMENT AND REGULATIONS (3)

Lecture: 3 hours

The purpose of this course is to provide a career preparation through a relevant introductory overview involving process and laboratory validation and quality performance regulations for product and process operations in the biotechnology, biomanufacturing/biopharmaceutical, waste water treatment, cosmetic, food and beverage, biofuels, quality control, petroleum refining and other chemical and health industries. Some topics covered will be monitoring quality and process performance, operating consistency, continuous improvement, government regulations and guidelines. Additionally instruction will be offered in personal appearance, employment trends, professional organizations. The course also includes writing resumes, cover and thank you letters, as well as job search techniques.

Student Learning Outcome(s):

1. Students will describe the origin of validation and its function in the pharmceutical and biopharmaceutical processes. 2. Students will discuss the various aspects and importance of validation principles and practices including total quality control and econonmics involved in successful chemical and biotech/biomanufacturing industries. 3. Students will describe the development studies and validation that are carried out through pre-approved protocols. 4. Students will discuss analytical methods scientifically developed to evaluate product residual reduction and other pre-determined acceptance limits.

PSYCHOLOGY

PSYCH 001 GENERAL PSYCHOLOGY I (3) UC/CSU

Lecture: 3 hours

Prerequisite: English 28 or English 101 or Placement in English 101

This is an introductory course in psychology as the scientific study of behavior and mental processes. Topics treated include history and systems of psychology, biological bases of behavior, sensation and perception, states of consciousness, learning, memory, cognition, personality, human development, motivation and emotion, health and stress, psychological disorders, and therapies.

Student Learning Outcome(s):

Per the APA Guidelines: Demonstrate psychology information literacy a. Read and summarize general ideas and conclusions from psychological sources accurately b. ;Describe what kinds of additional information beyond personal experience are acceptable in developing behavioral explanations (i.e., popular press reports vs. scientific findings c. Identify and navigate psychology databases and other legitimate sources of psychology information d. Articulate criteria for identifying objective sources of psychology information e. Interpret simple graphs and statistical findings.

PSYCH 002 BIOLOGICAL PSYCHOLOGY (3) UC/CSU

Lecture: 3 hours

Prerequisite: Psychology 1; Advisory: English 28.

This course introduces the scientific study of the biological bases of behavior and its fundamental role in the neurosciences. Physiological, hormonal, and neurochemical mechanisms, and brain-behavior relationships underlying the psychological phenomena of sensation, perception, regulatory processes, emotion, learning, memory, and psychological disorders will be addressed. The course also notes historical scientific contributions and current research principles for studying brain-behavior relationships and mental processes. Ethical standards for human and animal research are discussed in the context of both invasive and non-invasive experimental research.

Student Learning Outcome(s):

Per APA Guidelines: Goal 1: Knowledge Base of Biological Psychology Students will be able explain behavior and mental processes using neurophysiological and neuroanatomical concepts, principles and theories. Goal 2: Critical Thinking Skills in Psychology Students will be able to demonstrate an attitude of critical thinking that includes persistence, open-mindedness, tolerance for ambiguity, and intellectual engagement.

PSYCH 013 SOCIAL PSYCHOLOGY (3) UC/CSU

Lecture: 3 hours

Prerequisite: PSYCH 001

This course considers individual human behavior in relation to the social environment. The power of the situation, other individuals, and the social group will be examined. Emphasized topics include: aggression, prejudice and stereotypes, interpersonal attraction, attitudes and attitude change, conformity, group phenomena, gender roles, cultural norms, person perception, and social cognition.

Student Learning Outcome(s):

1. Analyze elements of a scientific approach to understanding human behavior in a psycho-social context. 2. Identify biological and cultural influences on social behavior. 3. Discriminate between individual differences and socio-cultural influences. 4. Explain the major scientific studies which form the basis for current theories of social psychology. 5. Describe the ways in which principles gleaned from social psychological research apply to real world problems and issues. 6. Apply models of intervention into social behavior designed to address social problems (e.g., those based on gender, ethnic, racial, or cultural differences and those based on disability). 7. Compare basic concepts and theories across the areas of social psychology.

PSYCH 014 ABNORMAL PSYCHOLOGY (3) UC/CSU

Lecture: 3 hours

Prerequisite: PSYCH 001; Advisory: ENGLISH 028

This course examines the definition, possible causes, signs and symptoms and treatment of psychological disorders. Topics such as anxiety, mood disorders, schizophrenia, substance-related disorders, and personality disorders are emphasized. Additional topics will include cognitive disorders, disorder's of childhood and adolescence, as well as sexual dysfunctions and substance-related disorders.

Student Learning Outcome(s):

Per APA Guidelines: Knowledge Base of Psychology: Students will demonstrate familiarity with the major concepts,theoretical perspectives, empirical findings, and historical trends in Abnormal psychology.

PSYCH 032 PSYCHOLOGY OF WOMEN (3) UC/CSU

Lecture: 3 hours

Advisory: English 28

This course explores the biological and cultural determinants of women's personality development. Explores cultural stereotypes, sex role development, female sexuality, and women's health issues in terms of the implications for personal and social change.

Student Learning Outcome(s):

Students will demonstrate their knowledge of the biological and cultural determinants of women's personality development, including cultural stereotypes, sex role development, female sexuality, and women's health issues in terms of the implications for personal and social change.

PSYCH 041 LIFE-SPAN PSYCHOLOGY: FROM INFANCY TO OLD AGE (3) UC/CSU

Lecture: 3 hours

Prerequisite: Psychology 1; Advisory: English 28;

This course examines the interaction of physical, psychological, and social factors and their impact on human development and behavior from conception to death.

Student Learning Outcome(s):

Students will demonstrate their knowledge in the physical, cognitive, and socio-emotional domains at various points throughout the human lifespan.

PSYCH 069 PSYCHOLOGY IN FILM (3) UC/CSU

Lecture: 3 hours

Advisory: English 28

This course will survey a variety of films that portray specific human behaviors, characteristics, and disorders as discussed in Gereral Psychology I. A lecture/discussion will accompany each film that provides a more in depth analysis of the relevant topics than are covered in General Psychology I. Topics covered will be drawn from research methods, biological psychology, sensation & perception, states of consciousness, learning, memory, intelligence, motivation, human development, personality, emotions & stress, human sexuality & gender, social psychology, abnormal psychology, and clinical psychology.

Student Learning Outcome(s):

Students will demonstrate critical observational skills through a rubric designed to evaluate students' ability to deconstruct and analyze films for accuracy in their depictions of the associated psychological topics discussed.

PSYCH 074 RESEARCH METHODS IN THE BEHAVIORAL SCIENCES (3) UC/CSU

Lecture: 3 hours

Prerequisites: Psych 001 and Math 227

This course surveys various psychological research methods with an emphasis on research design, experimental procedures, descriptive methods, instrumentation, and the collection, analysis, interpretation, and reporting of research data. Research design and methodology will be examined through a review of research in a variety of the subdisciplines of psychology.

Student Learning Outcome(s):

1. Select and conduct statistical experiments, and analyze and evaluate the resulting data. 2. Analyze the properties of probability and probability distributions and their role as the foundation for statistical inference using appropriate statistical software for data analysis (SPSS Statistical Package for the Social Sciences-SPSS).

PUBLIC RELATIONS

PUB REL 001 PRINCIPLES OF PUBLIC RELATIONS (3) CSU

Lecture: 3 hours

This course provides students an understanding of the broad aspects of relationships with the public as they apply to business, education, public agencies, and other organizations. It includes methods of either promoting favorable relations with various segments of the public or coping with situations involving adverse public opinion.

Student Learning Outcome(s):

Apply public relations communication theory in order to create essential public relations tools including news releases and a strategic public relations plan for a client. Formulate a publicity campaign using effective communication strategies.

PUB REL 002 PUBLIC RELATIONS TECHNIQUES (3) CSU

Lecture: 3 hours

Advisory: PUB REL 001.

This course is a comprehensive study of various public relations techniques utilized in campaigns by businesses, educational institutions , public agencies, and other organizations. Case histories are used to stimulate student initiative in problem solving. The social impact of the various communications media and their role in public relations will also be stressed. The accompanying practicum gives students the opportunity to work with an on-campus or non-profit organization to create and implement a public relations plan.

Student Learning Outcome(s):

Students will be able to understand the broad aspects of relationships with the public as they apply to business, education, public agencies, and other organizations. Demonstrate a clear understanding of the basic four-step process of public relations, and its role in forming public opinion, as well as comprehend the history and ethics of public relations.

PUB REL 003 WRITING FOR PUBLIC RELATIONS (3)

Lecture: 3 hours

Advisory: PUB REL 001.

This course will provide students with the persuasive powers of the written and spoken words that are explored and utilized in creating viable communicative messages, such as, news releases, feature stories, interviews, public service announcements, speeches, and institutional advertising.

Student Learning Outcome(s):

Students will be able to demonstrate excellent oral and written communication skills using print, broadcast, digital and social media.

REAL ESTATE

REAL ES 001 REAL ESTATE PRINCIPLES (3) CSU

Lecture: 3 hours

This course covers the nature of real property, types of estates and tenancy, real estate and contract law, types of agency, title and title insurance, trust deeds/mortgages, liens/encumbrances, taxes, zoning, community property, financing and real estate math concepts. This course is one of three required courses as preparation for the examination given by the State of California for real estate brokers and salespersons.

Student Learning Outcome(s):

Student will describe and analyze the real estate industry with regards to residential sales in California. Students will understand the nature of encumbrances, liens, easements and encroachments.

REAL ES 003 REAL ESTATE PRACTICES (3) CSU

Lecture: 3 hours

This course covers office procedures and practices in listings, advertising, prospecting, financing, exchanges, property management, salesmanship, land utilization and public relations. This course also provides students necessary information and materials a real estate agent utilizes in the day-to-day operations of a real estate business.

Student Learning Outcome(s):

Students will be able complete basic contracts used in residential real estate transactions. Student will learn the basics in conducting effective sales of lease transactions with clients. Students will construct a rent roll for commercial properties.

REAL ES 005 LEGAL ASPECTS OF REAL ESTATE I (3) CSU

Lecture: 3 hours

This course covers the principles of property ownership and management with special emphasis on the law as it applies to community property, conveyances, deeds, trust deeds, leases, brokerage activities, liens, homesteads, wills, estates and taxes. Attention is also given to logical reasoning and the application of rules of law to everyday affairs in business.

Student Learning Outcome(s):

Students will understand the options for vesting and holding title in a real estate transaction. Students will understand the elements of contract formation. Students will be able to differentiate between single and dual agency.

REAL ES 007 REAL ESTATE FINANCE I (3) CSU

Lecture: 3 hours

This course provides and explains the real estate lending process in detailâ€"from the initial loan application to the closing of the transaction. It provides a practical, step-by-step guide to the most popular real estate financing programs available in the country today. Subjects include: the loan application process, loan underwriting standards, conventional, FHA, and VA loans, seller financing, fair lending practices, and predatory lending.

Student Learning Outcome(s):

Student will identify different types of mortgages available in the market and explain their characteristics. Student will understand how to calculate fixed-rate mortgages (FRM) and adjustable-rate mortgages (ARM) as monthly payments. Student will identify the major players in the United States secondary mortgage market and explain how the market is functioning.

REAL ES 009 REAL ESTATE APPRAISAL I (3) CSU

Lecture: 3 hours

The principles and methods for the estimation of value and price of land and improvements, factors affecting income and values of real estate, and trends in real property values are covered in this course. The role of the appraiser in determining the highest and best use for a particular site is presented. The importance of appraisal to the lender, insurer, seller, and potential buyer are discussed as are appraisal of partial real estate interests.

Student Learning Outcome(s):

1. Student will be able to identify various methods of appraising real property. 2. The student will be able to prepare the Sales Comparison Appraisal Report (page) of the Freddie Mac Standardized Appraisal Form for a single family home. 3.The student will recognize , evaluate, and explain the appraisal process as to the appropriate classical approach for the different types of property.

REAL ES 014 PROPERTY MANAGEMENT (3) CSU

Lecture: 3 hours

This course will give students an in-depth view of practical issues facing practitioners, such as maintenance, accounting, administrative, and legal activities, and has up-to-date content on federal regulations, such as civil rights, fair housing, ADA issues, and environmental concerns.

Student Learning Outcome(s):

Students completing this course will understand the legal relationship between a landlord and a tenant. Students completing this course will know what a trust fund is and the importance of maintaining records on trust fund receipts.

REFRIGERATION & AIR CONDITIONING MECHANICS

REF A/C 100 AIR CONDITIONING PROJECT MANAGEMENT (3)

Lecture: 3 hours

This course provides HVAC Industry Project Manager instruction. Topics covered will include blueprint reading, Microsoft spreadsheets, Microsoft Word documents, Microsoft Project, design build criteria, estimating, change orders, request for information, GANTT Charts, scheduling, schedule of values, purchase orders, submittals, transmittals, reading of air balance reports, warranty letters and close out packages.

Student Learning Outcome(s):

The student will be able to correctly identify different mechanical symbols that would appear on a blue print. The student will be able to give a 5 minute oral presentation on a subject related to project management The student will be able to identify the tools used by a project manager.

REF A/C 101 AIR CONDITIONING AND REFRIGERATION PRINCIPLES AND PRACTICES-FIRST SEMESTER (9)

Lab: 21 hours

This course covers Refrigeration and Air Conditioning Theory, Fundamentals, and practices for entry level students. Topics discussed include refrigeration and air conditioning system components, maintenance procedures, service procedures, and Thermodynamics.

Student Learning Outcome(s):

1. Students properly identify the 4 major components of a refrigeration system. 2. Students will use technical manuals to select appropriate compression system components. 3. Students will identify the operating characteristics of the (5) major compressor types. 4. Students will identify appropriate maintenance procedures for air and water cooled condensers.

REF A/C 105 SOLAR WATER & POOL HEATING SYSTEM PRINCIPLES (3)

Lecture: 3 hours

This is an introductory lecture course on Solar Thermal. The need for renewable energies, along with planning and installing solar thermal systems will be covered. The solar heating of swimming pools,domestic hot water, and building air will be emphasized.

Student Learning Outcome(s):

The student will be able to: List the reasons for Solar and Green Technologies List the Components of a Solar Thermal System Recite the sequence of operation of a solar thermal system.

REF A/C 110 SOLAR WATER & POOL HEATING SYSTEM PRACTICES (2)

Lab: 6 hours

This course is designed for students interested in a career in the solar thermal industry. The fundamental practices and functions of the solar thermal industry will be introduced. This course covers the skills and practices for planning, installation, and maintenance of all the necessary components for a solar thermal water system.

Student Learning Outcome(s):

1. Discuss the history of solar thermal as a renewable energy and its development. 2. List the regions of the globe where solar thermal as a renewable option is most or least viable. 3. List the components needed for various solar thermal renewable energy sources and systems.

REF A/C 123 PIPE AND TUBE JOINING PROCESSES (1)

Lab: 3 hours

This course assesses assembly of components into operating systems using techniques employed by the industry.

Student Learning Outcome(s):

After students construct a copper form, called a “monster”, using the various tube joining methods, the monster will be pressure tested and vacuum tested.

REF A/C 124 REFRIGERATION ELECTRICAL CIRCUITS AND CONTROLS (5)

Lab: 15 hours

This course covers the application of electrical principles and practices, including safety and PPE, utilized in the performance of the duties required of a HVACR Technician.

Student Learning Outcome(s):

The Student Learning Outcome consists of reading an electrical schematic that simulates the TV show “Jeopardy” and constructing a project board that functions properly.

REF A/C 125 REFRIGERATION SYSTEM COMPONENTS (3)

Lecture: 3 hours

Instruction is given in basic electricity and electrical components as they relate to the HVAC&R industry. The use of electrical schematic diagrams is stressed throughout the semester.

Student Learning Outcome(s):

1. List the types of copper tubing and appropriate applications, along with connection and leak detection techniques. 2. List refrigeration and A/C electrical systems, furnace ignition systems, and other related controls. 3. List the types of electric motors used in the HVAC&R industry and their applications.

REF A/C 133 REFRIGERATION SERVICE PROCEDURES I (3)

Lab: 9 hours

This course involves servicing procedures applied to commercial and domestic refrigeration systems including restaurants, supermarkets and industrial process cooling. Students are required to inspect and analyze coolers,freezers and ice makers.

Student Learning Outcome(s):

133 Student Learning Outcomes The student will be able to use test equipment in order to diagnose a refrigeration and air conditioning system. The student will use refrigerant gages and thermometers to calculate superheat subcooling, and air temperature readings, and interpret their meaning. The student will use volt, ohm, and amperage readings to check the function of individual refrigeration system components.

REF A/C 134 SERVICE FOR COMMERCIAL REFRIGERATION (3)

Lab: 9 hours

This course focuses on troubleshooting procedures in diagnosing and repairing malfunctions in domestic and commercial refrigeration systems. The lab work emphasizes the analyzing and repairing of mechanical and electrical components,with the proper use of tools and test equipment.

Student Learning Outcome(s):

The student will gain mastery of Refrigeration and Air Conditioning Tools. The student will use a torch safely. The student will take amperage, voltage, and ohm readings. The student will evacuate a system with a vacuum pump. The student will utilize a gage manifold safely.

REF A/C 135 AIR CONDITIONING AND REFRIGERATION (3)

Lecture: 3 hours

This course focuses on refrigeration principles including theory of heat, automatic controls, electric motors, and commercial refrigeration. This course gives an in depth look at the refrigeration cycle and refrigeration components. This course discusses thermodynamics, including the pressure temperature chart, latent heat, and system efficiency.

Student Learning Outcome(s):

The student will evaluate various air conditioning and refrigeration symptoms. The student will evaluate how different heat load conditions affect a refrigeration system. The student will utilize superheat and subcooling readings to determine system performance.

REF A/C 141 APPLIED REFRIGERATION AND AIR CONDITIONING PRINCIPLES (3)

Lecture: 3 hours

Prerequisite: Refrigeration and A/C Mechanics 133; Refrigeration and A/C Mechanics 134; Refrigeration and A/C Mechanics 135 ; Corequisite: Refrigeration and Air Conditioning Mechanics 143;

This course focuses on Chemistry as applied to the HVAC and R industry. Areas covered include Hydronics, heating and cooling load calculations, control wiring, introduction to the Uniform Mechanical Code,pneumatic controls,troubleshooting approaches, and employment.

Student Learning Outcome(s):

Students will calibrate a direct acting thermostat.

REF A/C 143 REFRIGERATION SERVICING PROCEDURES II (3)

Lab: 9 hours

Prerequisite: Refrigeration and A/C Mechanics 133; Refrigeration and A/C Mechanics 134; Refrigeration and A/C Mechanics 135 ; Corequisite: Refrigeration and Air Conditioning Mechanics 141; and Refrigeration and Air Conditioning Mechanics 145;

Troubleshooting procedures in diagnosing and repairing malfunctions in refrigeration systems are studied in this course with emphasis on mechanical problems.

Student Learning Outcome(s):

Students will install a time clock.

REF A/C 145 AIR CONDITIONING AND REFRIGERATION MECHANICS (3)

Lab: 9 hours

Prerequisite: Refrigeration and A/C Mechanics 133; and Refrigeration and A/C Mechanics 134; and Refrigeration and A/C Mechanics 135 ; Corequisite: Refrigeration and Air Conditioning Mechanics 141; and Refrigeration and Air Conditioning Mechanics 143;

This is a study on diagnosis and repair of refrigeration, air conditioning,and gas heating systems with emphasis on the correct application of electrical theory.

Student Learning Outcome(s):

Students will replace a three phase hermetic compressor.

REF A/C 159 PRINCIPLES AND PRACTICES OF ELECTRICAL CIRCUITS AND CONTROLS (4)

Lecture: 3 hours / Lab: 4 hours

This course covers basic electricity, magnetic starters, contactors, and relays. Pressure and temperature controls, millivolt and low voltage systems, modulating controls, time clocks, and defrost systems are studied.

Student Learning Outcome(s):

SLO #1 Gather information on the various components of a HVACR control system using; but not limited to volt, ohm, and amperage reading to check the function of an individual refrigeration system. Relates to REF A/C Program PLO #1: Properly selecting and safely using tools and #2 locating and reading for information. Relates to CDM Department PLO's: #1. Locating Information and Reading for information. #2. Working safely with tools. Relates To College Core SLOs: A: Critical Thinking D: Communications.

REF A/C 160 REFRIGERATION SYSTEM PRINCIPLES AND PRACTICES (4)

Lecture: 3 hours / Lab: 4 hours

Students learn the fundamental refrigeration system principles,including system components refrigerants, basic electricity, motors, controls, and test equipment in domestic and commercial systems.Students get an introduction to air conditioning with an emphasis on the refrigeration cycle, and appropriate temperatures.

Student Learning Outcome(s):

The student will be able to identify and describe the function of the compressor, metering device and evaporator. The student will be able to identify the compressor, condenser, metering device,and evaporator. The student will be able to state the locations of the suction line, discharge line.

REF A/C 161 AIR CONDITIONING SYSTEM PRINCIPLES AND PRACTICES (4) CSU

Lecture: 3 hours / Lab: 4 hours

This is a study of human comfort,psychometrics and heat loads.Air distribution and duct sizing, air conditioning equipment,test instruments and measurements and servicing are explored.

Student Learning Outcome(s):

Students will troubleshoot and replace a defective contactor.

REF A/C 162 PIPING PRINCIPLES AND PRACTICES (4) CSU

Lecture: 3 hours / Lab: 4 hours

Instruction is given on refrigerant tubing and fittings, water piping and fittings, pipe sizing, soft soldering, silver brazing and schematic drawings.

Student Learning Outcome(s):

After students construct a copper form, called a "monster", using the various tube joining methods, the monster will be pressure tested and vacuum tested.

REF A/C 164 GAS HEATING SYSTEMS (4) CSU

Lecture: 3 hours / Lab: 4 hours

This course will provide the necessary skills needed for proper installation, servicing and troubleshooting of natural gas furnaces. Topics include principles of gas combustion, gas ignition, controls, installation, and ventilation.

Student Learning Outcome(s):

Students will replace a defective gas valve.

REF A/C 165 ICE STORAGE AIR CONDITIONING (4) CSU

Lecture: 3 hours / Lab: 4 hours

Thermal Energy Storage theory and component selection based on load profile and cost.

Student Learning Outcome(s):

Analyze heat recovery load profile and explain the ramifications of electric cost.

REF A/C 166 WATER TOWERS, EVAPORATIVE CONDENSERS AND CHEMICAL TREATMENT (4)

Lecture: 4 hours

This course will focus on the fundamentals of water towers and evaporative condensers used to obtain high efficiency performance of refrigeration and air conditioning systems. Students will learn how to select the proper size depending on local humidity and desired operating conditions, proper maintenance, additives and procedures and techniques available to the technician.

Student Learning Outcome(s):

Students will develop water treatment procedures for cooling towers and evaporative condensers.

REF A/C 176 HEATING AND AIR CONDITIONING I (3)

Lecture: 3 hours

Instruction is given in heating for workers in the heating and air conditioning field. Fundamentals of fuels, venting, and heat transfer are covered. An introduction to natural gas furnaces, hot water systems and heat pumps are emphasized.

Student Learning Outcome(s):

The student will be able to differentiate the main types of heating systems and explain their operation. The student will state the sequence of operation of a residential furnace. The student will define the major components of a heat pump.

REF A/C 177 HEATING AND AIR CONDITIONING II (3)

Lecture: 3 hours

The cooling portion of the air conditioning field for employed mechanics is explored in this course. Types of systems, the refrigeration cycle, heat gain and heat loss calculations, air distribution equipment, selection of controls, and sales procedures are reviewed.

Student Learning Outcome(s):

1. Perform heat gain and heat loss calculations. 2. Perform air duct sizing of air ducts in a residential A/C system.

REF A/C 185 DIRECTED STUDY - AIR CONDITIONING/ REFRIGERATION (1)

Lecture: 1 hour

This course allows students to pursue a directed study in Air conditioning & Refrigeration on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in HVACR.

REF A/C 187 SERVICING I (3)

Lecture: 3 hours

This course reviews servicing procedures, manufacturer's recommendations, installation and servicing of commercial and industrial refrigeration and air conditioning systems.

Student Learning Outcome(s):

Students will describe the operation of a water-source heat pump.

REF A/C 188 SERVICING II (3)

Lecture: 3 hours

Topics covered in this course include: electrical diagrams for testing control circuits; the total electrical system and protection devices on package units; analysis of failure and compressor motor burnout cleanup procedures.

Student Learning Outcome(s):

1. Discuss soldering and brazing techniques as they relate to servicing. 2. Discuss refrigeration and A/C electrical schematics,

REF A/C 199 MECHANICAL CODE I -HVACR (3)

Lecture: 3 hours

Basic heating, air-conditioning and refrigeration (HVACR) mechanical codes and ordinances are the focus of this course. General codes, installation methods and equipment, electrical requirements and other specified areas in the various ordinances are reviewed.

Student Learning Outcome(s):

1. List mechanical codes by topic and article. 2. Identify topic specific HVACR code requirements such as; tubing size, circuit protection, branch circuits, and equipment sizing. 3. Interpret various mechanical codes applied to various installation examples.

REF A/C 202 REFRIGERATION FUNDAMENTALS (3) CSU

Lecture: 3 hours

This course covers applied thermodynamics, types of energy, gas laws, sensible and latent heat transfer.

Student Learning Outcome(s):

1. Students properly identify the 4 major components of a refrigeration system. 2. Students will use technical manuals to select appropriate compression system components.

REF A/C 203 COMPRESSION SYSTEMS OF REFRIGERATION (3) CSU

Lecture: 3 hours

Instruction is given in the vapor cycle of refrigeration systems, including the study of refrigerants and their behavior in the system.

Student Learning Outcome(s):

Students will develop a checklist for leak checking vapor refrigeration systems.

REF A/C 204 TECHNICAL ASPECTS OF REFRIGERATION SYSTEM COMPONENTS (3)

Lecture: 3 hours

This Course covers the technical aspects of all major refrigeration system components. Topics covered include the principles of operation of various types of compressors, refrigerant flow controls, and system design.

Student Learning Outcome(s):

1. Students will select the correct type of compressor for various applications. 2. Students will select the most appropriate metering device for various refrigeration systems.

REF A/C 208 REFRIGERENT MANAGEMENT - EPA SECTION 608 CERTIFICATION (4) CSU

Lecture: 4 hours

This course covers Refrigerant Management including the EPA Section 608 ruling, the Montreal Protocol, Ozone depletion and Global Warming. Preparatory course for the EPA section 608 technician certification. Type I, II, III, and Universal Certification. NOTE: Certification test will be available at the end of the semester for an additional fee.

Student Learning Outcome(s):

1. Students will define the three Rs, Recovery, Recycle and Reclaim. 2. Students will identify TYPE I, Type II, and TYPE III equipment. 3. Students will describe the EPA Section 608 ruling.

REF A/C 209 NORTH AMERICAN TECHNICIAN EXCELLENCE (NATE)-AIR CONDITIONING SPECIALIST CERTIFICATION PREPARATION (4)

Lecture: 4 hours

This course is a preparatory course for the industry standard NATE A/C Specialist certification examination. Topics covered in this course include safety, thermodynamics, electrical system diagnostics, airflow measurements, mechanical code, installation, service, tools, and more!

Student Learning Outcome(s):

1. Students will identify refrigerant types and appropriate application. 2. Students will define recovery, recycle, reclaim. 3. Students will define high, medium, and low temperature ranges.

REF A/C 210 REFRIGERATION SYSTEM EFFICIENCY FACTORS (3)

Lecture: 3 hours

This course will cover refrigerant, pressure enthalpy diagram, refrigeration piping, system evacuation, charging, and maintenance. The beginning of the class will include a review of terminology and the refrigeration cycle.

Student Learning Outcome(s):

Students will develop a checklist for performing preventive maintenance on a packaged air conditioning unit.

REF A/C 250 INDOOR AIR QUALITY (3)

Lecture: 3 hours

This course emphasizes on operation of systems to provide quality air to indoor environments. AQMD requirements and pending regulations are reviewed. Organizing and implementing maintenance programs that include indoor air quality assessment and air balancing HVAC systems are covered.

Student Learning Outcome(s):

SLO 1. Discuss the health aspects of IAQ. SLO 2. Discuss airflow as it relates to IAQ. SLO 3. Discuss chemicals that can have a negative impact on IAQ.

REF A/C 255 ENERGY MANAGEMENT (4)

Lecture: 4 hours

The course covers the use of computers in the HVACR industry and the application of energy management technology in the improvement of energy efficiencies. The goal is to prepare the HVACR Technician in the use of modern technology, including computers in the continuing quest for improved energy management.

Student Learning Outcome(s):

SLO #1 The student will gather information on the various components of an energy management system. SLO #2 The student will critically analyze and then organize information on the application of a energy mangement system. SLO #3 The student will properly apply the English language to write an explanatory paper about rationals for using various energy mangement systems or practices. system.

REF A/C 285 DIRECTED STUDY - AIR CONDITIONING/ REFRIGERATION (2)

Lecture: 2 hours

This course allows students to pursue a directed study in the HVACR industry on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in HVACR.

REF A/C 301 AIR CONDITIONING AND REFRIGERATION PRINCIPLES AND PRACTICES-THIRD SEMESTER (9)

Lecture: 3 hours / Lab: 18 hours

This course covers Refrigeration and Air Conditioning for those who already have a fundamental understanding of thermodynamics and electricity. This course builds on HVAC/R basics and advances the students understanding and their ability to perform service procedures

Student Learning Outcome(s):

1. The student will use technical manuals to identify all the major types of heating and cooling equipment and their component parts. 2. The student will be able to use test equipment in order to diagnose refrigeration and air conditioning systems.

REF A/C 385 DIRECTED STUDY - AIR CONDITIONING/ REFRIGERATION (3)

Lecture: 3 hours

This course allows students to pursue a directed study in HVACR on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in HVACR.

REF A/C 941 COOPERATIVE EDUCATION-REFRIGERATION & AIR CONDITIONING MECH (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

RESTAURANT MANAGEMENT

RESTMGT 100 RESTAURANT MANAGEMENT (3) CSU

Lecture: 3 hours

Introduction to managing in the restaurant industry. Effective communication, goal setting, management theory, problem solving and creating a team work environment will be discussed.

Student Learning Outcome(s):

Student will identify proper Hospitality Restaurant Management styles, techniques, goal setting, problem solving. motivating and protocol. Student will compare and contrast legal issues as they pertain to the hospitality industry. Student will evaluate proper management practices in the hospitality industry.

SIGN GRAPHICS

SGNGRPH 101 INDIVIDUAL LETTERING (10)

Lab: 20 hours

Instruction covers identification of materials, tools, and brushes. Training is offered in drawing and brush lettering Gothic, Roman, Script, and casual letter styles. This course also includes training in techniques of layout, letter spacing, color mixing in reference to the production and sale of temporary signs. Students prepare showcards, paper signs, and other temporary display saleable items.

Student Learning Outcome(s):

Students will be able to design and execute a show card using basic layout and design techniques using industry standard tools to produce a finished product. Students will be able to design and execute a paper banner using basic layout and design techniques and employing the proper materials and tools to complete a finished product.

SGNGRPH 102 EXTERIOR DISPLAY SIGNS (10)

Lab: 20 hours

Prerequisite: Sign Graphics 101;

This course covers the tools and materials used to produce outdoor signs. In addition, students design, paint, and letter signs inside and outside the classroom. Students will work on a variety of materials including; canvas, plywood, aluminum, and plastic substrates, Introduction to computer generated lettering and application techniques for vinyl letters. Instruction will emphasize sign layout and design. Students will produce a 4/X8' plywood sign and an exterior wall sign.

Student Learning Outcome(s):

Student will design, layout and create a 4' X 8' plywood sign. Students will produce a plaque and gild with 24 karat gold.

SGNGRPH 103 WINDOW SIGNS (10)

Lab: 20 hours

Prerequisite: Sign Graphics 102;

Instruction covers the use of specialized tools and materials used to produce window signs. Training includes painting on exterior and reverse windows, stippling techniques, and applications of vinyl letters on glass, both exterior and reverse . In addition, students will paint a temporary splash window and apply 23K gold leaf (water gilding). Intermediate computer design including the use of plotters and application techniques.

Student Learning Outcome(s):

Students will produce an exterior window sign using computer generated vinyl letters. Students will hand paint a reverse window sign.

SGNGRPH 104 ADVANCE COMPUTER & DESIGN (10)

Lab: 20 hours

Prerequisite: Sign Graphics 103;

Students will learn advanced design techniques, backgrounds, and color theory. Practical experience will be gained on advanced computer study, applications, and a variety of computer sign software. In addition, information will be given on small business practices - including management and pricing. Students will produce a sandblasted sign, a custom contour-cut sign, and an antique sign,

Student Learning Outcome(s):

Students will design and layout a sandblasted dimensional sign, Students will research design and hand paint an antique sign. Students will design and print a digital ink jet sticker or decal.

SGNGRPH 201 FUNDAMENTALS OF MURAL PAINTING (2)

Lab: 6 hours

This course will teach basic mural painting techniques including; design, layout, and execution. Students will be introduced to the proper tools and paints for exterior, long term murals.

Student Learning Outcome(s):

Students will research historical material and contemporary mural designs to facilitate layout and design of a large wall mural. Students will grid off and participate in the direct layout to the wall. Students will paint a finished wall mural as p[art of a team.

SGNGRPH 203 SCREEN PRINTING I (2)

Lab: 6 hours

This course will provide an introduction to the screen printing trade. Students will learn to prepare screens and will learn about copy preparation, mesh selection, frames, stencil systems, printing techniques, ink & substrate compatibility, reclamation of screens. Students will print on a variety of surfaces.

Student Learning Outcome(s):

Students will create a finished screen and printed project including two color using photo emulsion. Students will set up and print a multi color textile.

SGNGRPH 204 SCREEN PRINTING II (2)

Lab: 6 hours

Prerequisite: SGNGRPH 203; Advisory SGNGRPH 205.

Students will be introduced to the use of solvent based inks; including; color mixing, application, and clean-up. This course also offers practice on a variety of substrates and uses including four color process printing.

Student Learning Outcome(s):

Students will create artwork using Photoshop for photo reproduction and execute finished screen and print a minimum of 25 consistent copies. Students will develop a multi color design using a dark textile substrate.

SGNGRPH 205 SCREEN PRINTING COMPUTER TECHNIQUES (2)

Lecture: 1 hour / Lab: 2 hours

This is a computer course that will provide the basic skills necessary for students to prepare files for output to be used in the silk screen process. Topics covered; spot color, trapping, 4 color process and simulated color separations.

Student Learning Outcome(s):

Student will create an electronic file for single and multi color screen printing output.

SGNGRPH 212 SIGN DESIGN AND LAYOUT (2)

Lecture: 1 hour / Lab: 2 hours

Student will learn layout and design of commercial signs. Use of basic rules, appropriate fonts, proper emphasis and the effective utilization of panels will be covered in the course. Hand drawing and sign specific software will be practiced.

Student Learning Outcome(s):

Students will design a finished layout sketch for a potential customer using sign specific software.

SOCIOLOGY

SOC 001 INTRODUCTION TO SOCIOLOGY (3) UC/CSU

Lecture: 3 hours

This course is designed to acquaint students with the major principles of sociology as they are applied to contemporary social issues. With the use of several theoretical perspectives it examines social structures within American society and other cultures from macro and micro perspectives. There are extensive references to contemporary research findings on social structure, group dynamics, social stratification, and social institutions.

Student Learning Outcome(s):

1. Students will utilize basic theoretical perspectives and identify their strengths and weaknesses.

SOC 002 AMERICAN SOCIAL PROBLEMS (3) UC/CSU

Lecture: 3 hours

This course provides identification and analysis of contemporary social problems in the United States with an attempt to establish criteria by which an individual can judge the probable effectiveness of various schemes for social betterment.

Student Learning Outcome(s):

Students will be able to answer the following questions: 1. What is a Social Problem and discuss the objectives and subjective elements of social problems. 2. Be able to define and give examples of the following elments of social structure and culture (institutions, social groups, status, roles, beleifs, values, norms, sanctions and symbols). 3. Be able to explain “social imagination” and discuss its relevance to the study of social problems.

SOC 004 SOCIOLOGICAL ANALYSIS (3) CSU

Lecture: 3 hours

Students examine the fundamental principles and methods of sociological research design and implementation. Students analyze the key types of evidence—including qualitative and quantitative data, data gathering and sampling methods, logic of comparison, and causal reasoning. The work of several scholars is evaluated, and students create their own research design related to a sociological issue.

Student Learning Outcomes:

1. Analyze the main research approaches in sociology and apply them to an array of social issues.

2. Explain survey research and construct a survey questionnaire.

3. Appraise illustration/presentation of results and findings of the qualitative/ quantitative study.

SOC 011 RACE AND ETHNIC RELATIONS (3) UC/CSU

Lecture: 3 hours

Explores the social, political, and economic forces that shape race relations in the United States. Focuses on the sociological analysis of race, ethnicity, and racism. Examines the social, cultural, political, and economic practices and institutions that support or challenge racism, racial and ethnic inequalities, as well as the factors that impact racial/ethnic group relations.

Student Learning Outcome(s):

1) Describe and analyze various sociological theories and how each is applied to the topic of racial inequality. 2) Describe the relationship between race/ethnicity and indicators of well-being (i.e., income, health, education, environment) in the United States. 3) Evaluate the connection between dominant ideologies (e.g., white privilege, capitalism), social institutions (e.g., education, the media, and political/judicial arenas), and race/ethnicity.

SOC 028 THE FAMILY: A SOCIOLOGICAL APPROACH (3) UC/CSU

Lecture: 3 hours

Advisory: ENG 028

This course provides a sociological analysis which contributes to an understanding of the origin, structure, and functions of marriage and family life. This course includes, but is not limited to, studies of gender roles, legal controls, religious attitudes, mixed marriages and financial and family planning.

Student Learning Outcome(s):

Students will be able to do understand family trends from the past sixty years and analyze the changes in family dynamics.

SOC 031 SOCIOLOGY OF GENDER (3) UC/CSU

Lecture: 3 hours

Students examine the social significance of gender in contemporary US society and analyze the social construction of gender ideology and how people's experiences are affected by social institutions such as work, education, the family, and the criminal justice system. People's differential experiences are analyzed within the context of race, class, and sexual orientation. Students learn how the experiences of people are created through social institutions and can, therefore, be transformed through social and institutional change.

Student Learning Outcome(s):

Students will be able to analyze the interaction of societal and individual factors in relation to gender.

Students will embody the qualities of an open-minded but critical thinker in the examination of sociological topics and problems related to gender. This includes the ability to critical analyze their own positions of privilege and subjugation.

SOLID WASTE MANAGEMENT TECHNOLOGY

SWM TEK 101 INTRODUCTION TO SOLID WASTE MANAGEMENT (3)

Lecture: 3 hours

This course offers instruction in the fundamentals of solid waste management including characteristics of solid wastes, refuse storage, collection, transportation, disposal methods, financing methods, and solid waste planning.

Student Learning Outcome(s):

1. Be able to describe the characteristics of solid waste 2. Be able to describe different solid waste disposal methods 3. Be able to discuss the proper collection, transportation, and storage of refuse 4. Be able to discuss the accepted financing and planning methods in solid waste management.

SWM TEK 102 COLLECTION SYSTEMS, ROUTING, AND MANAGEMENT (3)

Lecture: 3 hours

This course offers in-depth instruction in the techniques and fundamentals involved in efficient solid waste routing, including topographical variables such as: alleys, one-way streets, hilly areas, downtown areas, and residential communities. The course studies routing for mechanized solid waste collection activities, routing to affect increased productivity, cost reduction, and improved public relations through proper route planning and safety.

Student Learning Outcome(s):

1. Be able to demonstrate the understanding of how to communicate with the public in a positive manner 2. Be able to identify and list the purpose of public information exchange as it affects his/her responsibility in Solid Waste Management 3. Be able to demonstrate the understanding of organized refuse collection through efficient routing techniques 4. Be able to demonstrate the knowledge of different types of collection systems and vehicles 5. Be able to demonstrate the understanding of how to measure productivity and routing and how to specify equipment to maximize route productivity.

SWM TEK 107 WASTE REDUCTION AND RECYCLING (3)

Lecture: 3 hours

This course is an introduction to the science of solid resource recovery. It presents a broad overview of the methods and techniques, equipment and facilities required in recovery processes. Emphasis is placed on costs and management of the recovery process. Nuclear and non-nuclear types of resource recoveries are studied.

Student Learning Outcome(s):

1. Be able to demonstrate an understanding of solid waste characteristics as it pertains to resource recovery 2. Be able to differentiate various methods of collection, handling and disposal of a multi-faceted municipal solid waste stream 3. Be able to demonstrate the understanding of increasing prominence of recycling programs along with resultant regulatory developments in the solid waste field.

SWM TEK 108 SOLID WASTE FACILITIES (3)

Lecture: 3 hours

This course covers history and legislation of solid waste generation, and the need for effective transfer stations and landfills. It contains an overview of the handling of materials for both resource recovery and disposition of hazardous and non-hazardous waste. The future needs of the public and private sectors are studied.

Student Learning Outcome(s):

1. Be able to demonstrate an understanding of the history, concept, and development of landfills 2. Be able to discuss the concept, importance, and design of transfer stations 3. Be able to describe the concept of materials recovery facilities 4. Be able to demonstrate an understanding of compost and mulch processing facilities 5. Be able to discuss the concept of waste-to-energy and conversion technology.

SWM TEK 911 COOPERATIVE EDUCATION - SOLID WASTE MANAGEMENT TECHNOLOGY (1)

Lecture: 1 hour

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

SWM TEK 921 COOPERATIVE EDUCATION - SOLID WASTE MANAGEMENT TECHNOLOGY (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

SWM TEK 931 COOPERATIVE EDUCATION - SOLID WASTE MANAGEMENT TECHNOLOGY (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

SPANISH

SPANISH 001 ELEMENTARY SPANISH I (5) UC/CSU

Lecture: 5 hours

This course stresses the fundamentals of pronunciation and grammar, practical vocabulary, useful phrases, and the ability to understand, read, write and speak simple Spanish. It includes basic facts on geography, customs, and culture of Spain and Latin America.

Student Learning Outcome(s):

Students will communicate in Spanish, orally and in writing, at a novice high level (see ACTFL), using the present tense, the present progressive, the periphrastic future tense and the preterite tense: 1) Students will be able to hold a conversation at a novice high level, 2) Students will be able to read a graded paragraph containing elementary vocabulary, and 3) Students will be able to write sentences in Spanish dealing with daily life.

SPANISH 002 ELEMENTARY SPANISH II (5) UC/CSU

Lecture: 5 hours

Prerequisite: Spanish 001 or Spanish 035;

This course is a continuation of Spanish 1. It stresses further aspects of pronunciation and grammar, practical vocabulary, useful phrases, and the ability to understand, read, write and speak Spanish. It includes further facts on geography, customs, and culture of Spain and Latin America.

Student Learning Outcome(s):

1. Students will be able to describe their childhood in the imperfect tense of the indicative mood.

SPANISH 035 SPANISH FOR SPANISH SPEAKERS I (5) UC/CSU

Lecture: 5 hours

This course is intended for fluent Spanish speakers who have had no formal instruction in Spanish. Students are introduced to Spanish grammar and spelling rules with a focus on reading and writing skills and vocabulary expansion. Students practice the four language skills in the context of the geography, customs, and cultures of the Spanish-speaking countries and of the Latino experience in the United States. No prerequisites. Credit is given for either Spanish 35 or Spanish 2, but not both.

Student Learning Outcome(s):

The student will write a short essay in Spanish about a cultural tradition or a family celebration that is personally meaningful.

SPANISH 036 SPANISH FOR SPANISH SPEAKERS II (5) UC/CSU

Lecture: 5 hours

This course is a continuation of Spanish 35 and it completes the study of grammar and continues the development of reading and writing skills.

Student Learning Outcome(s):

The student will write a 3 page essay analyzing a short story in spanish.

STREET MAINTENANCE

ST MAIN 103 STREET MAINTENANCE (APPLIED CALCULATIONS IN PUBLIC WORKS) (3)

Lecture: 3 hours

This course is a practical mathematics exploration with an emphasis on application problems encountered in 'Street Maintenance', 'Street Services', and other areas of 'Public Works'.

Student Learning Outcome(s):

1. Apply appropriate mathematical rules to solving electrical calculations such as; whole numbers, fractions, percentages, ratios and proportions, basic algebra, order of operations, multiplication, division, addition, and subtraction, etc. 2. Apply appropriate units of measure such as; percentages, volt, ohms, amperes, watts, sq ft. cubic volume, etc. 3. Select situational appropriate formula and or apply proper measurements and calculations to solve various word problems such as: inventories, material estimates, volume, area, size, etc.

ST MAIN 200 SURVEY OF STREET SERVICES (3)

Lecture: 3 hours

This course provides an introduction to all common functions of Street Services, as an element of 'Public Works'. The history,current practices in Street Services,trends,and programs will be covered.

Student Learning Outcome(s):

1. Discuss the history and development of the "Bureau of Street Services." 2. Identify the principles and practices of Urban Forestry. 3. Describe resurfacing operations.

ST MAIN 201 STREET MAINTENANCE I (3)

Lecture: 3 hours

This course covers the history and current practices in street maintenance techniques and programs. This is a basic course in the general theory of street maintenance as applied to concrete and asphalt.

Student Learning Outcome(s):

1. Discuss principle and prcatices for asphalt and concrete usage as a road material. 2. Describe the cleaning and sanitation of roadwork equipment. 3. Describe the laws and ordinances pertaining to resurfacing operations.

ST MAIN 202 STREET MAINTENANCE II (3)

Lecture: 3 hours

This course provides an in depth study of asphalt, preventative maintenance of asphalt and of concrete pavements, and applicable codes for improvement and repair. Also included is the introduction of estimating and calculations for materials usage.

Student Learning Outcome(s):

1. Discuss the history and development of asphalt and concrete pavements. 2. Identify tool & techniques for preventive maintenance on asphalt and concrete pavements. 3. Identify appropriate codes related to asphalt and concrete maintenance work.

ST MAIN 203 STREET MAINTENANCE III (3)

Lecture: 3 hours

This course covers engineering plan reading and math concepts necessary for the calculation of amounts of material required for public works maintenance operations. Emphasis on solving practical math problems in estimating concrete, asphalt, and other materials necessary for the completion of street, sidewalk and other types of maintenance work.

Student Learning Outcome(s):

1. Discuss the principles and practices of estimating. 2. Demonstrate estimating for a classroom defined job requirement.

ST MAIN 204 REPORT WRITING FOR PUBLIC WORKS (3)

Lecture: 3 hours

This course covers report writing in the public works arena. The basic mechanics of the English language and analysis and preparation of reports for public works will be covered.

Student Learning Outcome(s):

1. Write clear and concise public work reports. 2. Improve basic grammar and apply the grammar rules to writing public work reports.

ST MAIN 205 ISSUES AND PRACTICES IN PUBLIC WORKS (3)

Lecture: 3 hours

This course covers street use, street lighting, street trees, lot cleaning, sanitation, engineering and personnel management. State and Municipal Codes, property descriptions and public relations will also be covered.

Student Learning Outcome(s):

1. Using a map, locate severl location for calls of service. 2. Drive to various predeterminded map locations.

ST MAIN 206 STREET MAINTENANCE VI (3)

Lecture: 3 hours

This course provides an overview along with hands on experiences with heavy equipment used in street maintenance. Safety and preventative maintenance included.

Student Learning Outcome(s):

1. Discuss the principles and practices of heavy equipment operations. 2. List safety concerns and discuss mitigation when operating heavy equipment.

ST MAIN 207 STREET MAINTENANCE VII - HAZARDOUS MATERIALS EMERGENCY MANAGEMENT (3)

Lecture: 3 hours

This course covers the prescribed responses in the first hour of a hazardous materials incident. This course satisfies OSHA â€œStandards in Hazardous Waste Operations Code 29 CFR 1910.120â€. The course includes specific training requirements of hazardous waste workers and emergency responders.

Student Learning Outcome(s):

1. List hazardous materials. and describe how to identify and limits exposure. 2. Describe how to mitigate various hazardous material under normal and emergency situations.

ST MAIN 208 STREET MAINTENANCE TECHNOLOGY (3)

Lecture: 3 hours

The basic concepts of management and supervision in the area of public works are introduced. Topics include motivating employees, effective communication, problem solving, leadership skills and current practices.

Student Learning Outcome(s):

1. Discuss the principles and practices of organizational management. 2. List the pros and cons of various management approaches.

ST MAIN 209 DRIVERS LICENSE PREPARATION (CLASS "B") (2)

Lab: 4 hours

This class prepares the student to successfully obtain a California Class B Drivers License. Information is provided to prepare the student for the written portion of the exam and laboratory/field driving is provided to prepare the student for the driving portion of the exam.

Student Learning Outcome(s):

1. Obtain a Class "B Drivers License.

ST MAIN 210 MOTOR SWEEPER OPERATOR (3)

Lecture: 2 hours / Lab: 4 hours

Motor Sweeper Operator School is to serve as the focal point for the development and training of Street Services personnel to enhance the capability and effectiveness of street cleaning operations. This course spans the entire spectrum of safety, maintenance, and operations.

Student Learning Outcome(s):

1. Discuss the safety aspects of sweeper operation. 2. Discuss maintenance aspects of sweeper operation. 3. Demonstrate proper set up, operation, and shut down of a motor sweeper unit.

ST MAIN 240 INTRODUCTION TO MANAGEMENT IN PUBLIC WORKS (3)

Lecture: 3 hours

The course will address the scope and nature of the field of public administration with attention given to the Public Works field as well as to practical elements of the current conceptual framework within which American Public Administration is practiced. The general format for the class will be discussion/participation with student analysis of selected articles and case studies taken from American Public Administration literature.

Student Learning Outcome(s):

1. Discuss the theory of Mangement as applied to Public Woks." 2. Identify the principles and practices Common Public Works Management.

ST MAIN 241 PROJECT MANAGEMENT IN PUBLIC WORKS (3) CSU

Lecture: 3 hour(s)

The course will provide students with a solid foundation and the necessary theoretical and practical application skills of a project manager. The focus will be on the application and skill as applied to the Public Works project management process.

Student Learning Outcome(s):

1. Discuss the theory of Project Management as applied to Public Works.
2. Identify the principles and practices Common to managing a Public Works project.

ST MAIN 242 MANAGEMENT IN PUBLIC WORKS (3)

Lecture: 3 hours

The course will develop skills that address the scope and nature of the field of public administration with attention given to the Public Works field as well as to practical elements of the current conceptual framework within which American Public Administration is practiced. The general format for the class will be discussion/participation with student analysis of selected articles and case studies taken from American Public Administration literature.

Student Learning Outcome(s):

1. Discuss the theory of Mangement as applied to Public Works.." 2. Identify the principles and practices Common Public Works Management.

ST MAIN 245 LEADERSHIP IN PUBLIC WORKS (3)

Lecture: 3 hours

This course is designed to provide students with a solid foundation about leaders, the leadership process, and motivation. Topics include the theories of leadership and motivation, leadership power, leader behavior, leadership characteristics, the role of gender, substitutes for leadership, and dysfunctional leadership. SM 245 serves as a self-assessment of the student's own leadership and motivation skills, knowledge, and attitudes, and addresses the questions: Who am I as a leader? What are my most distinguishing leadership traits? What leadership style am I most comfortable being around? How do I influence others? How do I motivate others?

Student Learning Outcome(s):

1. Compare & Contrast the theories of leadership as applied to Public Works.
2. Re-State the principles and practices Common to Public Works leadership.

ST MAIN 252 MANAGEMENT IN PUBLIC WORKS II (3)

Lecture: 3 hours

The course will increase the depth, scope and nature of the principles and practices in the field of public administration that was gained from the introduction to management course ST MAIN 242. In this course there will be increased attention given to the Public Works field as well as to practical elements of the current conceptual framework within which American Public Administration is practiced.

Student Learning Outcome(s):

1. Compare & Contrast the theories of Management as applied to Public Works. 2. Re-State the principles and practices Common to Public Works Management.

SUPERVISION

SUPV 001 ELEMENTS OF SUPERVISION (3) CSU

Lecture: 3 hours

This course covers the theory and principles of supervision, as well as the supervisor's responsibilities for organization, human relations, training, rating, quality-quantity control, and management-employee relations.

Student Learning Outcome(s):

Student will identify and address key issues in supervision.

SUPV 003 HUMAN RELATIONS (DEVELOPING SUPERVISORY LEADERSHIP) (3)

Lecture: 3 hours

Instruction will focus on those human relation skills the supervisory student needs to be well rounded and thoroughly prepared for a work environment characterized by economic volatility, constant change and a new level of competitiveness. This interpersonal skills approach places greater emphasis on the application of knowledge through practice, followed by feedback and reinforcement.

Student Learning Outcome(s):

Students will demonstrate an understanding of the impact of human relations from a supervisory and personal perspective in the workplace. Students will be able to describe and apply the major themes in human relations. Students will be able to assess and develop techniques for managing interpersonal relationships in the workplace. Students will understand and implement the elements of Emotional Intelligence and create a plan for continual improvement.

SUPV 004 SUPERVISOR'S RESPONSIBILITY FOR MANAGEMENT OF PERSONNEL (3) CSU

Lecture: 3 hours

This course teaches personnel techniques for the supervisor. Selection, placement, orientation, training, counseling, promotion, evaluation, discipline, grievance handling, and affirmative action are topics included in this course.

Student Learning Outcome(s):

1. Students will be able to apply supervision principles and skills in a variety of situational settings. 2. Students will be able to identify the skills and examine the roles and responsibilities of a supervisor 3. Students will demonstrate problem solving and appropriate decision-making skills.

SUPV 011 ORAL COMMUNICATIONS (3)

Lecture: 3 hours

This course will focus on the basics of the oral communication process and how it is intertwined with the work of a supervisor. Students will plan, compose, and deliver oral presentations designed to strengthen verbal and nonverbal skills. Finally, the student will be exposed to the basic principles of management and supervision and how successful communication is fundamental to the success of supervisors.

Student Learning Outcome(s):

Students will use critical thinking skills to gather, identify, analyze synthesize information, and evaluate problems. Students will demonstrate effective communication and comprehension skills.

SUPV 385 DIRECTED STUDY - SUPERVISION (3) CSU

Lecture: 4 hours

This non-traditional course provides for challenging educational engagement through in-depth study and practice on an approved project-based or service-based topic within the business discipline under the direction of a supervising instructor. One purpose of this course is to assist the individual student or a cohort of students to develop and enhance discipline-specific intellectual skills. The nature of directed study coursework is one of applied conceptualization and its level of rigor, intensity, and difficulty is commensurate with this expectation. The proposed project/subject matter may be contextualized within a specific industry and must have prior approval before commencing work under the instructor's direction.

Student Learning Outcome(s):

Analyze a particular topic in business.

SUPV 941 COOPERATIVE EDUCATION - SUPERVISION (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

TAILORING

TAILRNG 250 TAILORING TECHNIQUES I (2)

Lab: 6 hours

Advisory: Fashion Design 222 or Fashion Design 111;

Training is offered in basic tailoring techniques. Students be instructed in welt pockets, hand tailored stitching, and finishing techniques. This course will consist of a basic and stylized tailored vest.

Student Learning Outcome(s):

Student will be able to construct a basic tailored vest. Student will be able to construct a stylized vest including; bound buttonholes, collar, lapel, and hand 'pick stitching'.

TAILRNG 251 TAILORING TECHNIQUES II (2)

Lab: 6 hours

Prerequisite: Tailoring 250.

Students will receive training on trousers and casual men's style jackets. Instruction will include fly closures, welt pockets, and half linings, and jacket tailoring techniques.

Student Learning Outcome(s):

Student will be able to construct a pair of men's style pants with fly front, slash pockets, tailored waistband. Students will be able to construct a basic man's style jacket.

TAILRNG 252 TAILORING TECHNIQUES III (2)

Lab: 6 hours

Prerequisite: Tailoring 251.

Students receive training in tailored coats, men's style shirts. Instruction will include stylized seams, cold weather techniques.

Student Learning Outcome(s):

Students will be able to construct a basic man's style shirt. Students will be able to construct a basic tailored coat.

TAILRNG 253 TAILORING TECHNIQUES IV (2)
Lab: 6 hours

Prerequisite: Tailoring 252.

Students will receive instruction on man's style tailored jacket including inner construction using traditional tailoring techniques.

Student Learning Outcome(s):

Students will be able to construct a man's style tailored jacket.

TAILRNG 255 MEN'S PATTERN DRAFTING I (2)
Lab: 6 hours

In this course students will learn the fundamentals of taking and using men's measurements for pattern making. Students will draft patterns for basic trousers, men's sport shirts, and a basic man's vest. Each pattern will be tested for fit.

Student Learning Outcome(s):

Students will draft trousers including fly front and other required elements. Students will draft a shirt to personal or standard measurements incorporating required elements. Students will draft a classic or contemporary lined vest incorporating required elements.

TAILRNG 256 MEN'S PATTERN DRAFTING II (2)
Lab: 6 hours

This course in men's pattern making will introduce students to advanced styling including, jackets, and stylized pants. Students will make complete patterns for each element of a three piece suit.

Student Learning Outcome(s):

Students will draft a classic or contemporary jacket with easy or close fit incorporation required elements, and will construct a muslin sample.

THEATER

THEATER 100 INTRODUCTION TO THE THEATER (3) UC/CSU
Lecture: 3 hours

This course surveys the history of theater from the ancient Greek to modern times. Stage vocabulary, production crafts and acting techniques are introduced. Students will analyze how theater relates to motion pictures, television, and radio in contemporary American life, as well as compare themes in literature, compare and contrast adaptations of famous plays to their original written form and apply critical analysis to live dramatic productions.

Student Learning Outcome(s):

1. Students will have knowledge of the various genres of theater as determined by historical period or time. 2. Students develop a critical perspective of what it takes as theater artists to create a play, including the actor, playwright, director and technical personnel. 3. Students will research a play to their interest, make reservations to the play, the proper etiquette for attending the performance and critically evaluate the play in a written essay as their final project.

VISUAL COMMUNICATIONS

VISCOM 100 GRAPHIC DESIGN I (2) CSU
Lecture: 0.5 hours / Lab: 4.25 hours

An introduction to the profession of Graphic Design. Projects will stress design basics, typography, the computer as a design tool, the basics of visual problem solving, and art production and advertising.

Student Learning Outcome(s):

Student Learning Outcome: 1. Students will apply color systems to their graphic design solutions that provide color harmony. 2. Students will be able to utilize typography for the purpose of effective visual communication. 3. Students will create a self mailer for a current MOCA exhibition. This mailer must incorporate the Principles and Elements of Design.

VISCOM 103 BASIC COMPUTER SYSTEMS (2) UC/CSU
Lab: 5 hours

Introduction to using the Macintosh computer for graphic design. Students will learn basic computer functionality, with an emphasis on an understanding of the operations systems, configuration for use with graphic applications, file management and working in a network environment.

Student Learning Outcome(s):

Students will design and create a business card on Macintosh computer using Apple and Adobe applications.

VISCOM 105 DIGITAL PREPRESS I (2) UC/CSU
Lab: 5 hours

Beginning level course in the preparation of art for the reproduction process, and its application to the industries of Advertising and Graphic Design. Students will study the history of graphic design, typesetting, paste-up to digital prepress (in black and white and two color reproduction) as an emphasized focus within the course.

Student Learning Outcome(s):

Student will design and print Personal Idenity stationery with the use of Adobe Creative Suites.

VISCOM 106 DRAWING I (2) CSU
Lab: 5 hours

Students will draw images of 3-D space correctly using Two Point Perspective. Students will draw from life and from photographs for the purpose of creating camera ready illustrations. Students will execute finished line art in various ink techniques.

Student Learning Outcome(s):

1. Students will draw images of 3D space correctly using Two Point Perspective. 2. Students will draw from life and from photographs for the purpose of creating camera ready illustrations. 3. Students will execute finished line art in various ink techniques.

VISCOM 108 2-D DESIGN FUNDAMENTALS (2) CSU

Lecture: 2 hours

A course in the principles and elements of 2D design. Principles of unity, variety, emphasis, balance and proportion guide every mark a designer creates. Elements of line, shape, form, value, color, and texture provide for a control that all visual artists seek as they manipulate their work.

Student Learning Outcome(s):

1. Apply organization and compose with visual relationships. 2. Create projects that consider the most appropriate use of design principles and elements. 3. Utilize typography and visual elements together in a single document and provide for clear readership and unified compositional layouts.

VISCOM 112 DIGITAL PREPRESS II (2) UC/CSU

Lab: 5 hours

Intermediate level course where students design and produce projects that utilize the Macintosh computer and Apple applications. Printing processes, techniques and requirement for digital and offset lithography will be covered.

Student Learning Outcome(s):

Students will and produce images and material preparing for a printed project. Pantone and process color printing and photography, proofing, separations and package.

VISCOM 114 DIGITAL TYPESETTING (2) CSU

Lab: 5 hours

Introduction of the principles of computer typesetting as a career. The course will cover the standards and guidelines used to set type for ads, brochures, and stationary. Proofreading and setting copy in multiple computer programs will be stressed.

Student Learning Outcome(s):

Students will produce design principles, design techniques, and essential aesthetics that are utilized in a clear and powerful ad.

VISCOM 115 GRAPHIC DESIGN II (2) CSU

Lab: 5 hours

Intermediate level course that will stress Graphic Design as a profession. Problems will emphasize the development of creativity, typography as communication, art production and the computer, and methods for developing brochures, ads and web pages.

Student Learning Outcome(s):

1. Student will organize and present textual information demonstrating gestalt and visual hierarchy of different typestyles for the viewer to navigate and easily access the information he seeks.

VISCOM 116 ADVERTISING CONCEPTS (2) CSU

Lab: 5 hours

Introduction to the development of advertising concepts for magazines, television, and the internet. Use research, brainstorming and standard advertising methodology to plan, design and produce an advertising campaign.

Student Learning Outcome(s):

1. Students will compare and assess both the editorial and advertising content of a cross section of retail magazines and then prepare a written summary of their findings and write a general description of the magazines readership based on those findings. The student will them present this information orally to the class and answer spontaneous questions from the teacher and class members.

VISCOM 118 DIGITAL DRAWING (2) CSU

Lab: 5 hours

Advisory: Visual Communications 103;

Basic training in computer illustration using the Adobe software application Illustrator. Toolbox familiarity and manipulation, menu items, and general skill application will constitute the criteria for the course.

Student Learning Outcome(s):

1. Students will utilize Toolbox Tools and Menus to create and manipulate images and typography 2. Students will save files in multiple formats (AI to PDF) for the purpose of working cross platform Mac to PC) and in different application versions (CS5 to CS6). 3. Students will develop Vector concepts and translate bitmapped images to Vector formats.

VISCOM 119 DIGITAL PAGE LAYOUT (2) CSU

Lecture: 2 hours

A hands on course in the digital page layout application Adobe InDesign. Students will learn to construct page layouts for print, including the specification of typographic fonts, setting type in columns and wrap-arounds, working with spreads and long copy documents, using photographs and illustrations, and the preflight preparation of finished document files for print reproduction.

Student Learning Outcome(s):

Students will understand typesetting terms. Students will comprehend layout and design of magazine articles in relation to advertising and graphic design.

VISCOM 120 DRAWING II (2) CSU

Lab: 5 hours

An advanced drawing course in which indoor and outdoor observational drawing concepts are linked with magazine and book publishing for the creation of cover art and feature article page layouts.

Student Learning Outcome(s):

Students will be able to draw from observation with correct proportions, value variations in their line applications, and with an overall understanding of composition including positive and negative space.

VISCOM 124 COMPUTER ILLUSTRATION I (2) CSU

Lab: 5 hours

An advanced level course in digital picture-making techniques. It combines the Adobe software applications “Illustrator” and “Photoshop” for the creation of digital illustrations that include drawing, photo manipulations, and typography stylizations for advertising and editorial purposes.

Student Learning Outcome(s):

1. Students will redesign the packaging graphics for a consumer food product, or the #10 brochure for a SoCal theme park. 2. Students will create photography and illustration for container packaging. 3. Students will create digital files for all packaging components.

VISCOM 126 PORTFOLIO DEVELOPMENT I (2) CSU

Lab: 5 hours

This is a course in the production of a finished portfolio; all course projects will be reviewed for portfolio consideration. Some projects will require reworking. Preparation of 10 completed works with preliminary developmental books culminates in a simulated job interview with Advisory Board members.

Student Learning Outcome(s):

1. Students will apply organizational and design systems to a multi page portfolio book document. 2. Students will create original digital files in Photoshop, Illustrator, Indesign, and other visual digital software applications and format each as PDFs for the purpose of printing. 3. Students will build the first half of a marketable portfolio.

VISCOM 127 DIGITAL PREPRESS III (2) UC/CSU

Lab: 5 hours

An advanced course in digital prepress. Students will utilize photographic images, typography, and original artwork to create printing files for advertising and graphic design. Advanced Macintosh based theories will be covered to include Adobe Creative Suites.

Student Learning Outcome(s):

Students will design and produce a 6 color poster with type and images and prepare for offset printing.

VISCOM 128 DESIGNING LOGOS AND TRADEMARKS (2) CSU

Lab: 5 hours

Introduction to the principles of trademark design and computer stationary production. Research, marketing, color theory, and corporate identity principles will be stressed. Logos, letterheads, business cards and envelopes will be designed for a variety of clients.

Student Learning Outcome(s):

1. Manipulate typography for the purpose of creating original letterform constructions. 2. Create small, simple graphic images for incorporation into logos and trademarks. 3. Create original logo designs for a variety of clients and business organizations.

VISCOM 129 DIGITAL PHOTO MANIPULATION (2) CSU

Lab: 5 hours

An introductory course that concentrates on the software application Adobe Photoshop. Students will be instructed on how to use this application to create original art and graphics by manipulating scanned photography and other imagery.

Student Learning Outcome(s):

1. Students will utilize Toolbox Tools to manipulate images and typography. 2. Students will utilize Menus to alter and manipulate color and transformations. 3. Students will utilize default Photoshop Brushes and create and use new brushes.

VISCOM 130 DRAWING III (2) CSU

Lab: 5 hours

Students will be able to compose and design a multiple image montage illustration. The incorporation of scale change, strong positive and negative shapes and line variations will provide depth to the illustration content and suggest a strong graphic composition.

Student Learning Outcome(s):

Students will be able to compose and design a multiple image montage illustration. The incorporation of scale change, strong positive and negative shapes and line variations will provide depth to the illustration content and suggest a strong graphic composition.

VISCOM 131 COMPUTER ILLUSTRATION II (2) CSU

Lab: 5 hours

An advanced level course in digital picture-making techniques. It combines the Adobe software applications “Illustrator” and “Photoshop” for the creation of digital illustrations that include drawing, photo manipulations, and typography stylizations for advertising and editorial purposes.

Student Learning Outcome(s):

1. Students will redesign the packaging graphics for a consumer food product, or the #10 brochure for a SoCal theme park. 2. Students will create photography and illustration for container packaging. 3. Students will create digital files for all packaging components.

VISCOM 132 PORTFOLIO DEVELOPMENT II (2) CSU

Lab: 5 hours

An advanced course in the production of a finished portfolio. Preparation of 10 completed works with preliminary developmental books culminates in a simulated job interview with Advisory Board members.

Student Learning Outcome(s):

1. Students will apply organizational and design systems to a multi page portfolio book document. 2. Students will create original digital files in Photoshop, Illustrator, Indesign, and other visual digital software applications and format each as PDFs for the purpose of printing. 3. Students will complete the production files of all finished, marketable portfolio book.

VISCOM 133 DIGITAL PORTFOLIO PREPARATION (2) UC/CSU

Lab: 5 hours

Plan and produce a digital portfolio of course projects to up-load to the Internet. Write a résumé based on graphic design and advertising standards.

Student Learning Outcome(s):

Students will produce a Digital portfolio including a resume and reevaluation of past designs. Portfolio will include projects that display acquired design skills from courses.

VISCOM 134 GRAPHIC DESIGN BUSINESS PRACTICES (2) CSU

Lab: 5 hours

Introduction to the financial aspects of running a Graphic Design business. Lecture and projects will include billing procedures, business overhead costs, taxes and retirement planning. Taxes, small business legal issues and understanding business ethics are stressed.

Student Learning Outcome(s):

Students will study, learn, identify and examine the legal and changing world of Graphic art. Studio and alternative careers and strategies are explored and examined. Students will develop, design and create contracts, business models and a campaign that analyzes project costs, supply and art negotiations and bargaining agreements that make a structured and practical business.

VISCOM 135 WEB GRAPHICS - PREPRODUCTION FOR WEBSITES (2) CSU

Lab: 5 hours

This course will review Adobe Illustrator and Adobe Photoshop procedures, and introduce Adobe Fireworks beginning with the exploration of tools and panels. The semester long project will encompass the designing of a personal website for the artist/student. Emphasis will be placed on page design, site unity, and the use of graphics and images. Students will generate Animated GIFs and engage Fireworks drag and drop environment.

Student Learning Outcome(s):

Students will design and create a website for portfolio presentation using Adobe Illustrator, Photoshop, and Fireworks.

VISCOM 185 DIRECTED STUDY - VISUAL COMMUNICATIONS (1)

Lecture: 1 hour

This course allows students to pursue directed study in Visual Communications on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Visual Communications and related topics.

VISCOM 204 FLASH MOTION GRAPHICS (BEGINNING LEVEL) (2) CSU

Lecture: 1 hour / Lab: 3 hours

This course concentrates on the basic fundamentals of Adobe Flash software it's tools and techniques. Ad banners and animations will be covered through project development throughout the class.

Student Learning Outcome(s):

Students will create animated movie for web advertisement using Flash Motion Graphics.

VISCOM 285 DIRECTED STUDY - VISUAL COMMUNICATIONS (2)

Lecture: 2 hours

This course allows students to pursue directed study in Visual Communications on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Visual Communications and related topics.

VISCOM 385 DIRECTED STUDY - VISUAL COMMUNICATIONS (3)

Lecture: 3 hours

This course allows students to pursue directed study in Visual Communications on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a project based on a topic in Visual Communications and related topics.

VISCOM 911 COOPERATIVE EDUCATION – VISUAL COMMUNICATIONS (1) CSU

Lecture: 1 hour

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

VISCOM 921 COOPERATIVE EDUCATION – VISUAL COMMUNICATIONS (2) CSU

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

VISCOM 931 COOPERATIVE EDUCATION – VISUAL COMMUNICATIONS (3) CSU

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/

internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/ occupational goals of the student.

VISCOM 941 COOPERATIVE EDUCATION – VISUAL COMMUNICATIONS (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to ensure that the student receives on the job training and the unit credit for work experience or volunteer work/ internship. The place of employment needs to be related to the student's educational goals. Work experience may be repeated for a maximum of 6 total units, subject to a maximum of 3 units per one enrollment period. Each 60 hours of non-paid work equals one unit of credit. Each 75 hours of paid work equals one unit of credit. *Title 5, section 55253 states that a student may earn up to a maximum of 16 semester units or 24 quarter units of General & Occupational work experience education combined (Board Rule 6405.10). Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/ interning in order to participate in program.

Student Learning Outcome(s):

1 The student will develop at least three learning

WASTEWATER TECHNOLOGY

WASTE 012 WASTEWATER OPERATIONS I (3)

Lecture: 3 hours

This course is a survey and introductory course into wastewater systems for operations and maintenance personnel. Administrative, engineering and laboratory personnel may benefit from this course.

Student Learning Outcome(s):

1. Students will discuss the origin, chemical and biological compositions, and treatment methods of wastewater.

WASTE 013 WASTEWATER OPERATIONS II (3)

Lecture: 3 hours

A comprehensive study is made of preliminary, primary, and secondary treatment systems and operations including selected field studies.

Student Learning Outcome(s):

1. Students will describe the origins, composition and characteristics of wastewater.

WASTE 014 WASTEWATER OPERATIONS III (3)

Lecture: 3 hours

This is a comprehensive study of disinfection methods, tertiary treatment, water reclamation, solids treatment, solids and effluent disposal practices.

Student Learning Outcome(s):

1.The student will be able to convert measurements from US units to metric.

WASTE 016 WASTEWATER OPERATIONS V (3)

Lecture: 3 hours

This course is a comprehensive study of the practical application of engineering fundamentals, such as hydraulics, mechanics, electricity and instruments as practiced in wastewater treatment.

Student Learning Outcome(s):

1. Be able to discuss direct and alternating current, terms, definitions, power, and motors in elementary electricity.

WASTE 017 WASTEWATER OPERATIONS VI (3)

Lecture: 3 hours

Public health, the environment, regulations, management/ supervision and report writing as practiced in wastewater and water reclamation plants safety are covered.

Student Learning Outcome(s):

1. Be able to describe pre-treatment, collection system, public treatment system, and disposal system in a wastewater system. 2. Be able to discuss energy levels for various treatment methods, the costs involved, and social impacts of the effects on energy and natural resources. 3. Be able to describe the different levels of operator certification including the educational and experience requirements. 4. Be able to discuss public relations and professional organizations. 5. Be able to describe oral and written forms of communications, and the importance of record keeping. 6. Be able to discuss the administrative methods, human relations, Cal-OSHA, and labor relations in plant management. 7. Be able to describe how to fill out job applications, what to do in job interviews and discuss personnel practices.

WASTE 018 WATER AND WASTEWATER MATHEMATICS (3)

Lecture: 3 hours

This is a review and practice of basic mathematical concepts required to solve wastewater treatment problems. (Note: this is not a remedial math class).

Student Learning Outcome(s):

1. Be able to discuss basic mathematics concepts such as fractions, decimals, exponents, percentages, averages, ratios, proportions, and unit conversions.

WASTE 921 COOPERATIVE EDUCATION - WASTEWATER TECHNOLOGY (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

WASTE 931 COOPERATIVE EDUCATION - WASTEWATER TECHNOLOGY (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

WATER SUPPLY TECHNOLOGY

WATER 001 WATER DISTRIBUTION I (3) CSU

Lecture: 3 hours

This course provides instructions to water works design and operation for operators and others involved in the operation and design of water distribution systems. All major components of the distribution system including wells, storage reservoirs, pumps, water mains, valves, meters and fire hydrants are fully discussed.

Student Learning Outcome(s):

1. The student will describe the components of the drinking water distribution system and their functions.

WATER 002 WATER DISTRIBUTION II (3) CSU

Lecture: 3 hours

This is an advanced course in water distribution systems. Included are special considerations of pipe types and uses, reservoirs, maps, records applied hydraulics as applied to Distribution Systems. Emphasis will be placed on the practical layout, operation and maintenance of a water distribution system. Students are prepared for a Grade 2 Distribution Operation Certification of the AWWA.

Student Learning Outcome(s):

1. The student will compare and contrast treatment processes such as blending, iron and manganese removal, and organic chemical treatment.

WATER 004 WATER PURIFICATION I (POTABLE WATER) (3) CSU

Lecture: 3 hours

This beginning course in water treatment covers regulations related to water treatmen and water quality control, basics of water treatment plant processes and inter-relationship of processes, and introduction to operation and maintenance of water tratment plant. One of the objectives of the course is to prepare students for Grade 1 and Grade 2 Water Treatment Operator Certification by the Department Of Public Health (CDPH).

Student Learning Outcome(s):

1. The student will be able to Identifie drinking water regulations related to Surface Water Treatment Rule (SWTR) and Total Coliform Rule (TCR). 2. The student will be able to discuss the basic design and operation of the Water Treatment Plant (WTP) including coagulation, flocculation, and sedimentation.

WATER 005 WATER TREATMENT II (POTABLE WATER) (3)

Lecture: 3 hours

This is a more detailed and more in-depth course (compared to the beginning course) in water treatment. this course covers public healh, water quality control, elements and functions of the water treatment plant processes. It covers in detail the water treatment plant performance in relation to Surface Water Treatment Rule. Also, covers the operation and maintenance of water tratment plant. One of the objectives of the course is to prepare students for Grades 3 and 4 Water Treatment Operator Certification by the State Department Of Public Health(CDPH).

Student Learning Outcome(s):

1. Students will differentiate storage reservoirs and drinking water wells, and their purposes and function. 2. Students will apply distribution system calculations and measurements.

WATER 101 INTRODUCTION TO SUPPLY WATER TECHNOLOGY (3) CSU

Lecture: 3 hours

The purpose of this course is to introduce the basics of water supply, sources of water supply, water chemistry, drinking water regulations, water microbiology, water quality control, and some basic arithmetics related to water distribution and water treatment problems.

Student Learning Outcome(s):

1. Student will discuss measurements and calculations used in the water industries. 2. Students will list components of water supply systems.

WATER 102 CALCULATIONS AND MEASUREMENT FOR WATER TECHNOLOGY PROGRAMS (3)

Lecture: 3 hours

This course covers the basic math skills needed to perform in the supply & waster water fields. Emphasis is placed on the basic operations and how they are applied to the industry. Measurement calculations will be performed in both standard and metric measurements.

Student Learning Outcome(s):

Students will complete national certification test for Introduction to Construction Math.

WATER 921 COOPERATIVE EDUCATION - SUPPLY WATER TECHNOLOGY (2)

Lecture: 2 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

WATER 931 COOPERATIVE EDUCATION - SUPPLY WATER TECHNOLOGY (3)

Lecture: 3 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

WATER 941 COOPERATIVE EDUCATION - SUPPLY WATER TECHNOLOGY (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

WELDING GAS AND ELECTRIC

WELDG/E 020 WELDING LABORATORY - GAS & ELECTRIC (1)

Lab: 3 hours

In Welding Gas and Electric 020, students refine their hands-on skills with gas cutting, welding, and basic electric arc welding processes. Additionally this course is often used in preparation for outside welding certification exams.

Student Learning Outcome(s):

SLO #1 Students will complete twelve basic weld to AWS standard D 1.3

WELDG/E 030 WELDING LABORATORY - ELECTRIC I (1)

Lab: 3 hours

In Welding Gas and Electric 030, students pursue additional hands-on time with the electric stick welding process. Additionally, it is often used in preparation for outside welding certification exams.

Student Learning Outcome(s):

SLO #1 Student will complete four basic welds to AWS standard D 1.3

WELDG/E 040 WELDING LABORATORY - ELECTRIC II (1)

Lab: 3 hours

In Welding Gas and Electric 040, students pursue additional hands-on time with the electric stick welding process. Additionally, It is often used in preparation for outside welding certification exams.

Student Learning Outcome(s):

SLO #1 Student will complete four basic welds to AWS standard D 1.3

WELDG/E 050 WELDING LABORATORY - ELECTRIC III (1)

Lab: 3 hours

In Welding Gas and Electric 050, students pursue additional hands-on time with electric Mig, Tig, and shielded metal ARC welding processes. Additionally, It is often used in preparation for outside welding certification exams.

Student Learning Outcome(s):

Students will weld a lap joint in flat position on aluminum using GTAW process.

WELDG/E 100 METAL SCULPTURE I (3)

Lab: 6 hours

Expand beginning welding skills and metal working techniques into an exploration of metal sculpture. This course covers hot and cold working of steel. Shielded metal arc welding, oxy-fuel and plasma arc cutting, weld design and finishing techniques. Technical skills will be emphasized through hands on instruction and practice. There will be opportunity for creative expression and practical application.

Student Learning Outcome(s):

Students will complete metal sculpture using welding processes such as oxy-fuel and SMAW.

WELDG/E 101 FLUX CORED ARC WELDING (3) CSU

Lab: 7 hours

This course provides instructions on the principles,equipment, welding techniques,mode of operations, and safety for flux cored arc welding used for structural steel.The course content follows the FCAW competencies published in American Welding Society Guide for the Training of Welding Personnel: Level I-Entry.This course prepares student for the performance portion of the Los Angeles Department of Building and Safety Structural Steel Certified Field Welder Examination.

Student Learning Outcome(s):

SLO 1: Conduct a safety inspection for Flux Cored Arc Welding Process. SLO 2: Preform minor external repairs on FCAW equipment and accessories. SLO 3: Perform assigned weldments using the FCAW-G and FCAW-S processes to detailed in the American Welding Society Structural Steel D1.1 Section 4.

WELDG/E 102 PIPE WELDING HORIZONTAL(2G) AND UPHILL(5G) (3)

Lab: 6 hours

This course provide instruction on welding carbon steel pipe to requirements of the American Society of Manufacturing Engineers Boiler and Pressure Vessel Code- Section 9 Welding and Brazing Qualification using the shielded metal arc welding process. The course objective requires proficiency in producing high quality welds on 6 inch diameter schedule 80 pipe in the 2G and 5G welding positions.

Student Learning Outcome(s):

Students will be able to produce a high quality weld on carbon steel 6 inch, schedule 80 pipe using the SMAW in the 2G and 5G welding positions.

WELDG/E 103 SEMI-AUTOMATIC WELDING II (FCAW) IN ADVANCED MANUFACTURING (1)

Lecture: 1 hour

This course provides detailed knowledge including welder's performance qualifying skills using the Flux-Cored Arc Welding process used in the modern manufacturing industry. This course follows the American Welding Society Curriculum Guide for the Training of Welding Personnel: Level I-Entry Welder leading to qualifications outlined in American Welding Society (AWS) D1.1-Structural Steel Welding Code and the American Society of Manufacturing Engineers(ASME) Section IX Code.

Student Learning Outcome(s):

1. All students will preform a safety inspection while identifying GMAW and FCAW equipment components. 2. Upon completion of this course all students will make metric system measurements, geometric measurements, angular measurements, and bends, stretchouts, economical layout, and takeoffs. 3. All students will pass the FCAW welder performance qualification test (AWS EDU-1) on carbon steel using both FCAW-S and FCAW-G processes.

WELDG/E 104 GAS TUNGSTEN ARC & SHIELDED METAL ARC WELDING (3)

Lab: 6 hours

This course provide instruction on welding carbon steel pipe to requirements of the American Society of Manufacturing Engineers Boiler and Pressure Vessel Code- Section 9 Welding and Brazing Qualification using the Gas Tungsten Arc and the Shielded Metal Arc welding processes. The course objective requires proficiency in producing high quality welds on 6 inch diameter schedule 80 pipe in the 6G welding positions.

Student Learning Outcome(s):

Students will be able to produce a high quality weld on carbon steel 6 inch, schedule 80 pipe using the GTAW process for the root pass,and SMAW process for the fill and cover passes in the 6G welding position. Student will be able to produce a high quality weld on carbon steel 6 inch schedule 80 pipe using the GTAW process in the 5G welding process.

WELDG/E 111 ACETYLENE WELDING, CUTTING AND BRAZING (5) CSU

Lab: 15 hours

Basic applications in Oxy-Acetylene Gas Welding, brazing and cutting in flat and vertical positions. Students will weld with SMAW process on light gauge material in all positions. Safety procedures and characteristics of Mild carbon Steel.

Student Learning Outcome(s):

SLO #1 Complete twelve basic weld to AWS standard D 1.3.

WELDG/E 112 WELDING RELATED TECHNICAL INSTRUCTIONS I (3)

Lecture: 3 hours

This course will cover the principles of oxy-acetylene welding, brazing and cutting; safety, material selection, equipment assembly, fuels torch adjustments, and movements.

Student Learning Outcome(s):

Students will describe how to safely light and adjust an oxyacetylene flame.

WELDG/E 113 APPLIED MATHEMATICS I (3)

Lecture: 3 hours

This is an entry level course in welding calculations and measurements with special emphasis on the application problems encountered in the welding industry.

Student Learning Outcome(s):

SLO: Students will interpret and solve; Common Fraction, Decimal Fractions, Percent, Algebraic, and Ration & Proportion problems.

WELDG/E 121 ELECTRIC WELDING I (5) CSU

Lab: 15 hours

Students perform basic manipulative exercises in Shielded Metal Arc Welding (SMAW) process using Mild Carbon Steel materials in all positions, safety precautions, and fire prevention.

Student Learning Outcome(s):

Students will set up and safely light and adjust oxyacetylene flame.

WELDG/E 124 BLUEPRINT READING I (3) CSU

Lecture: 3 hours

This course covers the principles of reading and interpreting basic industrial blueprints as applied to the welding trade.

Student Learning Outcome(s):

Outcome: Students will sketch oblique, isometric and pictorial views.

WELDG/E 125 APPLIED MATHEMATICS II (3)

Lecture: 3 hours

Related mathematical problems in welding in project design and construction using the fundamental principles of algebra, right angle trigonometry, and basic geometry.

Student Learning Outcome(s):

SLOs: 1. Interpret and solve complex common fraction, decimal fraction problems, percent, algebraic, basic trigonometry, and geometry problems.

WELDG/E 131 ELECTRIC WELDING II (5) CSU

Lab: 15 hours

This course will offer students an opportunity to prepare for LA. City Structural Steel Code AWS D1.1 Certification. There will be supervised practice and individual coaching in the Shielded Metal Arc Welding (SMAW) process.

Student Learning Outcome(s):

SLOs: Students will use shielded metal arc welding (SMAW) techniques to weld in vertical position using a 7018 electrode.

WELDG/E 132 BLUEPRINT READING II (3) CSU

Lecture: 3 hours

Prerequisite: Welding 113;

The course covers the principles of lines, view, size, description, print formats, fasteners, and different types of fabrication drawings; review of industrial welding prints.

Student Learning Outcome(s):

Students will sketch oblique, isometric and pictorial views.

WELDG/E 133 WELDING RELATED TECHNICAL INSTRUCTION III (3)

Lecture: 3 hours

The course places an emphasis on materials, design, assembly procedures, electrodes selection, equipment, welding joints, terminology, welding metallurgy, and certification preparation for AWS D1.1 Structural Steel welding examination.

Student Learning Outcome(s):

SLO: Identify five types of welding joints and seven common structural steel shapes used in industry.

WELDG/E 141 ELECTRIC WELDING III (5) CSU

Lab: 15 hours

Students complete activities using the Gas Tungsten Arc Welding (TIG) & Gas Metal Arc Welding (MIG)Process. Students will weld on Mild Carbon Steel, Aluminum and Stainless Steel.

Student Learning Outcome(s):

SLO #1 Students will weld a lap joint in flat position on aluminum using GTAW process.

WELDG/E 142 GAS TUNGSTEN ARC WELDING (TIG) & GAS METAL ARC WELDING (MIG) (3) CSU

Lecture: 3 hours

The course covers the principles of welding Aluminum, Stainless Steel, Carbon Steel, the maintenance and operation of (TIG) & (MIG) welding equipment.

Student Learning Outcome(s):

Identify three types of shielding gases used in GMAW and explain the functions of the shielding gasses.

WELDG/E 143 WELDING RELATED TECHNICAL INSTRUCTION IV (3)

Lecture: 3 hours

The course covers the principles and theory of operating manual and semi-automatic welding equipment, Sheet Steel D1.3 certification preparation and the metallurgy of metals.

Student Learning Outcome(s):

Identify three types of shielding gases used in GMAW and explain the functions of the shielding gasses.

WELDG/E 151 INTRODUCTION TO ROBOTIC WELDING AND AUTOMATION (3) CSU

Lab: 7 hours

The course provides fundamental theory and hands-on application of robotic welding and automation. Emphasis is placed on safety awareness, programing techniques, and basic gas metal arc welding applications using a six-axis robotic welding systems.

Student Learning Outcome(s):

1. At the completion of this course all students will select an electric arc welding process covered in the course and demonstrate a common knowledge of basic operating principles, component identification, equipment setup and performance.

WELDG/E 185 DIRECTED STUDY - WELDING GAS AND ELECTRIC (1)

Lecture: 1 hour

This course allows students to pursue a directed study in welding technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

WELDG/E 200 METAL SCULPTURE II (2) CSU

Lecture: 2 hours / Lab: 4 hours

Expand beginning welding skills and metal working techniques into an exploration of metal sculpture. This course covers hot and cold working of steel. Sheilded metal arc welding, oxy-fuel and plasma arc cutting, weld design and finishing techniques. Technical skills will be emphasized through hands on instruction and practice. There will be opportunity for creative expression and practical application.

Student Learning Outcome(s):

Students will complete metal sculpture using welding processes such as oxy-fuel and SMAW,and GTAW.

WELDG/E 201 TUNGSTEN ARC WELDING I (2)

Lab: 7 hours

This course is designed to provide students with basic performance qualification skills in Gas Tungsten Arc Welding (TIG) needed for employment in the modern manufacturing industry. This course follows AWS standardized curriculum leading to students performance qualifications to the AWS Specifications for Fusion Welding for Aerospace Applications.

Student Learning Outcome(s):

1. All students will preform a safety inspection while identifying GTAW equipment components. 2. All students will interpret basic elements of a drawing or sketch. 3. All students will pass the welder performance qualification test (Module 3) on carbon steel.

WELDG/E 201A WELDING-GAS AND ELECTRIC IA (1)

Lab: 3 hours

Basic manipulative exercises in electric welding using low alloy and mild steel materials in all positions, safety precautions, and fire prevention.

Student Learning Outcome(s):

Student will set up and weld an overhead but joint using 6010 rod.

WELDG/E 201B WELDING-GAS AND ELECTRIC IB (1)

Lab: 3 hours

This course will offer students an opportunity to prepare for AWS D1.1 Certification testing in SMAW. There will be opportunities for improvement through supervised practice and individual coaching in SMAW process.

Student Learning Outcome(s):

Students use shielded metal arc welding (SMAW) techniques to weld in vertical position using a 7018 electrode.

WELDG/E 210 METAL SCULPTING LABORATORY (2) CSU

Lab: 6 hours

Prerequisite: Welding 100.

Expand beginning welding skills and metal working techniques into an exploration of metal sculpture.

Student Learning Outcome(s):

Student will weld a Vee Groove in the vertical position using 3/8 steel plate with 100% joint penetration, using a baking strip.

WELDG/E 251 INTERMEDIATE ROBOTIC WELDING AND AUTOMATION (2)

Lab: 7 hours

This course provides the advance knowledge needed to weld pressure vessels using the Gas Tungsten Arc Welding (TIG) process. This course follows the American Welding Society Curriculum Guide for the Training of Welding Personnel: Level II-Advance Welder, leading to welder's qualifications outlined in the American Society of Manufacturing Engineers (ASME) Section IX Code.

Student Learning Outcome(s):

1. All students will interpret advanced elements of a drawing or sketch. 2. All student will pass the GTAW Welder's Performance Qualification Test on Pipe in the Fixed 45Â° Position to AWS Standard- Level II- Advance Welder- Workmanship Test, (AWS2-5) and (AWS2-6).

WELDG/E 285 DIRECTED STUDY - WELDING GAS AND ELECTRIC (2)

Lecture: 2 hours

This course allows students to pursue a directed study in welding technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

WELDG/E 385 DIRECTED STUDY - WELDING GAS AND ELECTRIC (3)

Lecture: 3 hours

This course allows students to pursue a directed study in welding technology on a contract basis under the direction of a supervising instructor.

Student Learning Outcome(s):

The outcome will vary depending on the contract with the instructor. The student will formulate a research paper based on a topic in plumbing technology.

WELDG/E 941 COOPERATIVE EDUCATION - WELDING GAS AND ELECTRIC (4) CSU

Lecture: 4 hours

Cooperative Education is a work experience program involving the employer, the student-employee and the college to insure that the student receives on the job training and the unit credit for work experience or volunteer work/internship. Completion of at least seven units, including Cooperative Education, at the end of the semester is required. Students must be employed or volunteering/interning in order to participate in program.

Student Learning Outcome(s):

The student will develop at least three learning objectives to be accomplished on the job. The objectives will be related to the educational/occupational goals of the student.

Non Credit Courses

ACADEMIC PREPARATION

Note: There are no specific limitations on noncredit course repetition (PCAH, 6th Edition).

ACAD PR 001CE LANGUAGE ARTS: WRITING MECHANICS (0)
Lecture: 1.5 hour(s)

Students review the essential elements of the structure of Standard American English necessary for college success. Students are introduced to grammar basics (parts of speech, clauses, and phrases) in context of assigned readings and writing projects. This class can be taken as a stand-alone introduction or refresher and may be taken in conjunction with credit classes.

Student Learning Outcome(s):

Students will write a 100 - 200 word essays using sentence variety, parallelism, noun and adverb clauses, restrictive and non-restrictive phrases and clauses, and academic vocabulary.

ACAD PR 002CE LANGUAGE ARTS: WRITING SENTENCES (0)
Lecture: 1.5 hour(s)

Students develop writing and grammar skills necessary for college success. This course is designed to improve the writing of sentences, paragraphs, and short essays. The course emphasizes the ability to read analytically and think logically. This class can be taken as a stand-alone-introduction or refresher and may be taken in conjunction with credit English classes.

Student Learning Outcome(s):

Student will write a 250 - 350 word essays using sentence variety, parallelism, noun and adverb clauses, restrictive and non-restrictive phrases and clauses, and academic vocabulary.

ACAD PR 003CE LANGUAGE ARTS: WRITING ESSAYS (0)
Lecture: 1.5 hour(s)

Students review the process of writing, from coming up with ideas, organizing these ideas into a well-structured essay, to editing and revising their ideas into final form. Students are introduced to grammar basics (parts of speech, clauses, and phrases) in context of assigned readings and writing projects. This class can be taken as a stand-alone introduction or refresher and may be taken in conjunction with credit English classes.

Student Learning Outcome(s):

Upon successful completion of the course, the student will be able to write in various writing formats while enacting appropriate rhetorical and comprehension strategies such as summary, analysis, response, comparison contrast, causality; projects will include introductory knowledge of appropriate citation and format rules, such as MLA, APA, Chicago Manual of Style.

ACAD PR 004CE LANGUAGE ARTS: READING FICTION (0)
Lecture: 5 hour(s)

Students will review reading strategies necessary for college success. Students will explore fiction designed to sharpen skills as critical readers (structure, narrative voice, character development, historical and political contexts and reader response). Students are introduced to literature in its various genres such as short story and poetry. This class can be taken as a stand-alone-introduction or refresher on literature. It may also be taken in conjunction with credit classes in other disciplines.

Student Learning Outcome(s):

Upon successfully completing the course, students should critically analyze literary works and discuss the works and the literary techniques.

ACAD PR 005CE LANGUAGE ARTS: READING NON-FICTION (0)
Lecture: 1.5 hour(s)

Students review reading strategies necessary for college success. Students are introduced to advanced critical reading skills (determining author's purpose, tone, point of view, and intended audience) and literary concepts (interpreting figures of speech and theme). Readings may include newspapers, magazines, and longer genres such as biography. This class can be taken as a stand-alone-introduction or refresher and may be taken in conjunction with credit English classes.

Student Learning Outcome(s):

Unpack selected readings for topics, main ideas, logical conclusions, and organization of supporting details. Distinguish fact from opinion and author's point of view.

BASIC SKILLS

Note: There are no specific limitations on noncredit course repetition (PCAH, 6th Edition).

BSICSKL 002CE BASIC ENGLISH SKILLS (0) NDA
Lecture: 3 hour(s)

This course focuses on basic listening, reading, speaking, and writing skills for students with minimum English language skills.

Student Learning Outcome:

Students will be able to:

1. Demonstrate knowledge of introductory grammatical conventions in their writing.

BSICSKL 008CE FOUNDATIONS: CRITICAL THINKING (0) NDA
Lecture: 5 hour(s)

This course will help foster students' habits of mid and character that are required to develop a generous receptivity to new ideas, from whatever source and a disposition for applying the most rigorous criticism to all ideas and institutions. Critical thinking is central to student success in college, career and in life-long communication and leadership.

Student Learning Outcome:

Student will be able to:

1. Carefully interpret, analyze, and evaluate evidence, statements, graphics, questions, etc. 2. Construct well supported, clearly articulated, and sustain arguments to justify conclusions. 3. Construct clearly defined vision of success in college and career.

BSICSKL 019CE TECHNICAL ENGLISH WRITING (0) NDA

Lecture: 3 hour(s)

In this noncredit Technical English Writing course, students will learn the fundamentals of Technical Writing required for occupations. Students will learn and review a variety of topics ranging from reading job descriptions, writing resumes and cover letters, to writing technical reports. This course counts towards the Pathway Readiness Certificate.

Student Learning Outcome:

Demonstrate ability to seek employment through writing coherent and relevant emails, letters, and resumes.

Produce technical report including identifying the problem, explaining the problem and resolving the problem-and confirming completion of the repair/ p□rsistence of the problem.

BSICSKL 023CE COLLEGE AND SCHOLASTIC ASSESSMENT PREPARATION (0) NDA

Lecture: 4 hour(s)

This course provides students with study, computational, writing, and critical thinking skills to prepare for the college assessment test.

Student Learning Outcome:

Students will be able to:

1. Writing – Students will compose a grammatically correct and coherent written summary and response to assigned material.

2. Reading—Students will identify authorial intent, main ideas, and supporting details in various texts read silently and aloud.

3. Students will develop effective study, note-taking, organization, communication, critical thinking, and learning skills that support their success in college and vocation.

4. Calculate whole numbers, fractions, mixed numbers, and decimals through addition, subtraction, multiplication and division functions.

5. Determine and employ the necessary sequence of steps to solve and graph algebraic linear equations.

6. Select and use appropriate units to estimate and calculate measurements of an area and volume of geometric figures.

7. Recognize and interpret math vocabulary and cues to set up and correctly solve math word problems related to whole numbers, fractions, decimals, signed numbers, algebra and geometry.

BSICSKL 035CE BASIC MATH SKILLS (0) NDA

Lecture: 1 hour(s) / Lab: 2 hours

This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems.

Student Learning Outcome:

Students will be able to:

1. Perform basic computations and solve relevant mathematical problems.

BSICSKL 036CE PATHWAY MATH (0)

Lecture: 1 hour(s) / Lab: 2 hours

This course is designed for students working in Pathways with existing math content to reinforce math competencies required for their AA degree. Students work primarily in a lab setting on a customized curriculum. Students are taught self-assessment skills and independent learning skills utilizing mathematics technology tools. Mathematical topics in this course include objectives including but not limited to: calculations in whole numbers, integers, rational, irrational and complex numbers; solving linear, quadratic, rational, radical, exponential and logarithmic equations and inequalities; graphing functions in two variables; and their applications.

BSICSKL 041CE SOFTSKILL BASICS 1A-JOB SEARCH PLANNING (0) NDA

Lecture: 0.5 hour(s)

This course covers the basic knowledge and skills necessary for finding and gaining employment. Topics include job search planning, clarifying work/ professional goals, identifying work opportunities using many resources, and developing a Work Opportunity Plan.

BSICSKL 042CE SOFTSKILL BASICS 1B - THE SUCCESSFUL JOB SEARCH (0) NDA

Lecture: 0.5 hour(s)

This course covers the basic knowledge and skills necessary for gaining employment. Topics include telephone contact of prospective employers, resume writing, employer expectations, and job interviewing skills. This course will cover topics related to 21st Century Skills including: communication, entrepreneurial mindset, social & diversity awareness, adaptability, collaboration, and self-awareness.

Student Learning Outcome:

Students will be able to create a portfolio that includes resume, cover letter, and reference sheet.

BSICSKL 043CE SOFTSKILL BASICS 1C - PRE-EMPLOYMENT READINESS (0) NDA

Lecture: 0.5 hour(s)

This course provides an introduction for starting successful employment or a new job. Topics include: making good first impressions, basic workplace expectations, developing good work habits, time management, communication skills, dealing with jobrelated stress, and techniques for good interpersonal relationships.

Student Learning Outcome:

1. What they need to prepare for a new job. 2. Professional verbal, nonverbal and written communication skills for the workplace. 3. Basic listening and conflict resolution skills.

BSICSKL 045CE MICROSOFT OFFICE APPLICATION BASICS (0) NDA

Lecture: 2 hour(s)

Students are introduced to and practice using the basic functions of Microsoft Office applications namely Word, Excel, and PowerPoint for college assignments and career preparation.

Student Learning Outcome:

Students will be able to:

1. Students can identify and utilize the main parts of the computer: monitor, keyboard, mouse, tower, port, disk, drive, printer, etc.; install software, and identify and use computer Icons. 2. Students will strengthen their skills in text entry, formatting, spell check and grammar checking; bulleting, numbering and making tables and saving their documents onto a memory stick. 3. Students will learn how to enter data, formatting, cell alignment, fonts, mathematical calculations and functions and transform data tables into charts and graphs. 4. Students will create a PowerPoint presentation that demonstrates their ability to create slides, apply templates, print handouts, and imbed videos, music and links.

BSICSKL 046CE MICROSOFT WINDOWS BASICS (0) NDA

Lecture: 0.5 hour(s)

An introduction to basic functions of Microsoft Windows®. Topics include: Windows® terminology; screen elements such as toolbars, title bars, and task bars; navigating in Windows®; start button functions; file management; control panel; and basic Windows® applications such as Wordpad®. Peoplesoft & CANVAS.

Student Learning Outcome:

1. Student will be able to identify the purpose of various navigation menus. 2. Student can create a file management system using folders and subfolders.

BSICSKL 055CE SOFTSKILLS BASICS 3B - INTERPERSONAL COMMUNICATIONS (0) NDA

Lecture: 0.5 hour(s)

This course covers the interpersonal and professional image skills necessary for succeeding in the workplace. Topics include basic business manners and etiquette, interacting with people or 'people skills', how to develop a professional image, problem-solving, and handling workplace conflict.

Student Learning Outcome:

Students will learn:

1. Basic business manners and etiquette. 2. The concepts, attributes and importance of professional self-image. 3. Effective communication, interpersonal and listening skills. 4. Effective steps and techniques to resolving conflict in the workplace.

BSICSKL 060CE BASIC COMPUTER LITERACY (0) NDA

Lecture: 1 hour(s) / Lab: 2 hours

Fundamentals of computer hardware, software, and the internet for computer novices, introducing computer components and functions including hardware, operating systems, software applications, (e.g. word processing, spreadsheets, email and communications) and web browsers to access information on the world wide web.

BSICSKL 065CE FINANCIAL LITERACY - CREDIT BASICS (0) NDA

Lecture: 0.5 hour(s)

This course develops a foundation of credit management concepts to enable students to understand credit management, credit risk management, lending objectives, and how to measure credit risk. The course also describes the credit rating systems and discusses the impact of deferred and defaulted education loans on credit scores.

Student Learning Outcome:

Students will be able to develop a plan for improving credit scores and managing education loans within a one-year timeline.

BSICSKL 066CE FINANCIAL LITERACY - PERSONAL MONEY MANAGEMENT (0) NDA

Lecture: .5 hour(s)

This course develops a foundation of money management concepts to enable students to understand how to develop a financial plan to meet their educational goals using various strategies: FAFSA, BOGG, scholarships, social fund raising and banking products, such as checking and savings accounts.

Student Learning Outcome:

Students will be able to identify the various strategies to fund higher education while balancing personal financial responsibilities.

BSICSKL 073CE INDUSTRY OVERVIEW AND CAREER OPPORTUNITIES (0) NDA

Lecture: 1 hour(s)

This course provides students with information on the targeted industry and sectors including essential facts, key institutions, history, career pathways and trends. This course provides students with the basic research and networking skills to become well-informed job seekers and to effectively prepare them for career options.

Student Learning Outcome:

After successful completion of this course, students will be able to identify and describe industry career options.

BSICSKL 074CE EMPLOYMENT TEST PREPARATION (0) NDA

Lecture: 4 hour(s)

This course is designed to review construction and utility sector employment entry requirements and expectations. The course will include the review of test-taking, math, reading, writing skills, and industry expectations to prepare students for employment in various construction and utility sector job classifications. This course includes a module specific to civil service exam preparation.

Student Learning Outcome:

Students will be able to:

1. Compose a grammatically correct and coherent multi-paragraph response to a prompt. 2. Develop and utilize effective study, note-taking organization, communication, critical thinking, and learning skills that support their success in college and in their career. 3. Correctly solve numerical and word problems related to whole numbers, fractions, decimals, signed numbers, algebra and geometry.

BSICSKL 075CE INTRODUCTION TO POST-SECONDARY EDUCATION (0) NDA

Lecture: 0.5 hour(s)

This course introduces students to the opportunities and benefits post-secondary education offers them. This course helps dispel many of the myths

and reduce information overload that may discourage students and their caregivers from applying to and attending post-secondary education institutions. Students will learn tips and strategies that will help them select and successfully apply to post-secondary institutions that best fit their education and career goals and needs.

Student Learning Outcome:

Upon successful completion of this course, the student will be able to:

1. Exhibit an increased awareness of post-secondary options and methods to create a college-going home environment. 2. Identify personal attributes that hinder and support the planning and preparation for college success.

BSICSKL 077CE FUNDAMENTALS OF WORKPLACE SUCCESS - TEAMWORK (0) NDA

Lecture: 2 hour(s)

This course will prepare students to successfully collaborate and work effectively with their colleagues and co-workers in diverse settings by strengthening their employability, interpersonal and leadership skills. Students will gain insights about themselves and learn new tools and strategies that optimize their strengths and help them increase their effectiveness and efficiency at work.

BSICSKL 078CE FUNDAMENTALS OF WORKPLACE SUCCESS II -EFFECTIVE COMMUNICATION AND LEADERSHIP (0) NDA

Lecture: 2 hour(s)

This course gives students the opportunity to develop their listening, communication and leadership skills appropriate for the workplace in a supportive and interactive environment. Students will be introduced to skills that can help them become active, purposeful listeners and more effective communicators and leaders for career success.

ENGLISH AS A SECOND LANGUAGE - NONCREDIT

Note: There are no specific limitations on noncredit course repetition (PCAH, 6th Edition).

ESL NC 006CE ENGLISH AS A SECOND LANGUAGE - 0 (0) NDA

Lecture: 3 hour(s)

This open entry open exit course emphasizes listening/speaking skills, and reading/writing skills at a literacy level. The focus of the course Is on basic survival English skills, English sound/symbol correspondence, and reading and writing of simple English sentences.

Student Learning Outcome:

1. Demonstrate the rules of reading and comprehension of the basic written and spoken English language related to daily life in America. 2. Demonstrate the proper punctuation, mechanics and grammar for the English language related to daily life In America.

ESL NC 007CE ENGLISH AS A SECOND LANGUAGE - (0) NDA

Lecture: 3 hour(s)

This is an open entry, open exit course that emphasizes listening/speaking and reading/writing skills at a beginning-low level. The focus of the course is on understanding and participating in basic communication and conversation skills in routine social situation. Students read simple passages and generate and write sentences related to housing, food, health, transportation, employment, and other resources.

Student Learning Outcome:

Students will be able to:

1. Demonstrate the rules of reading and comprehension of the basic written and spoken English language related to daily life in America.

2. Demonstrate the proper punctuation, mechanics and grammar for the English language related to daily life In America.

ESL NC 008CE ENGLISH AS A SECOND LANGUAGE - 2 (0) NDA

Lecture: 3 hour(s)

This is an open-entry open-exit course, which emphasizes listening/speaking skills and reading/ writing skills at a high-beginning level. This class focuses on comprehending and engaging in extended conversations related to familiar contexts. Students read simple authentic or adapted narrative and descriptive passages and use basic grammatical structures to write short, clearly organized paragraphs and messages.

Student Learning Outcome:

1. The rules of reading and comprehension of the basic written and spoken English language related to daily life in America. 2. The proper punctuation, mechanics and grammar for the English language related to daily life in America.

ESL CIVICS

Note: There are no specific limitations on noncredit course repetition (PCAH, 6th Edition).

ESLCVCS 010CE ESL AND CIVICS 1 (0) NDA

Lecture: 1 hour(s)

Ability to articulate or prepare for credit coursework. This is an open-entry/ open exit course. This course is intended for beginning high and intermediate low English speakers. Speaking, listening, reading, and writing skills are emphasized. Learners engage in discussions on living in the United States, housing issues, and U S. history in preparation for greater civic engagement and responsibilities.

Student Learning Outcome:

1. Students will be able to identify and correctly pronounce the 50 states and capitals. 2. Students will be able to identify the different types and options for housing evaluate their related documents and assess the benefits and challenges with regard to their own situation. 3. Students will be able to correctly recite the Pledge of Allegiance and accurately connect U.S. major holidays and historical events related to the founding of the United States.

ESLCVCS 013CE ESL AND CIVICS IV (0) NDA

Lecture: 3 hour(s)

This is an open-entry/open-exit course. This course is intended for English speakers at an intermediate level. Intermediate low listening, speaking, reading, and writing skills are emphasized. Learners engage in discussions on education and early United States history.

Student Learning Outcome:

1. Students will identify and differentiate the public education system from preschool through the community college system.

2. Students will be able to evaluate and correctly respond to questions related to U.S. history.

3. Students will be able to express thoughts and ideas in well-developed paragraphs and short essays using proper grammar.

VOCATIONAL EDUCATION

Note: There are no specific limitations on noncredit course repetition (PCAH, 6th Edition).

VOC ED 008CE PRE-EMPLOYMENT SKILLS/CONSUMER TRAINING (0) NDA

Lecture: 3 hour(s)

Students will acquire conceptual, intra-, and inter-personal skills to prepare them for the world of work. Topics include communication skills, group effectiveness, problem-solving skills, and teamwork while working in "simulated" vocational settings.

Student Learning Outcome:

1. Define and apply the six career readiness competencies. 2. Demonstrate necessary communication and organizational skills for presentations by sharing clear, accurate and concise information. 3. Reflect on personal career journey as it relates to mentoring relationships with fellow students.

VOC ED 060CE CUSTODIAL TECHNICIAN TRAINING (0) NDA

Lecture: 1 hour/Lab: 2.5 hour(s)

This course validates training in tool, equipment, chemical and personal safety, use of proper and appropriate cleaning and maintenance equipment and supplies, and proper handling of diverse chemicals Students successfully completing this course will be qualified for entry level custodial and building maintenance employment.

Student Learning Outcome:

1.Apply custodial terminology, directions, units of mesaurement and instructions to complete custodial tasks. 2. Recognize and apply appropriate tool, equipment, chemical, and toxic waste safety and handling. 3. Identify and demonstrate recommended practices for the use of custodial tools, machines, chemicals, and specialized equipment.

VOC ED 080CE BANK TELLER TRAINING (0) NDA

Lecture: 4 hour(s)

This course provides basic training in the activities and required skills for someone seeking an entry-level position as a bank teller. It includes topics in both general work-place personal behavior and interpersonal relationships, specific common financial transaction procedures, and fundamental record processing principles.

VOC ED 190CE PATHWAY TO SOCIALLY RESPONSIBLE ENTREPRENEURSHIP (0) NDA

Lecture: 2 hour(s)

Have you ever wanted to start your own small business? This course is an introduction to the entrepreneurial leadership traits and socially responsible behaviors that are the foundation for developing the skills and resources involved in transforming an innovative idea into a sustainable entrepreneurial product or service. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

1. Students will identify their leadership strengths. 2. Students will be able to explain a pathway for an entrepreneurial idea that is sustainable and socially responsible. 3. Students will defend the benefits and realistic activities of their startup idea against the criticism.

VOC ED 191CE STARTING YOUR OWN SMALL BUSINESS (0) NDA

Lecture: 2 hour(s)

An introduction to starting a small business. Topics include: Concept kick start, key decisions and considerations when creating a business, protecting the value of your idea, types of ownership, legal obligations, networking resources, writing a business plan outline, small business information resources, and business readiness assessment. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

Students will determine the readiness of their small business idea for launching it in the marketplace.

VOC ED 192CE MANAGING SMALL BUSINESS OPERATIONS (0) NDA

Lecture: 2 hour(s)

This course reviews the operational logistics that small business start-ups should consider prior to launching. The course identifies management concerns unique to small businesses and presents information on establishing administrative controls and managing business operations, risk, growth and change to increase sustainability. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

Students will be able to identify, understand, and seek sustainable solutions to the operational problems of small businesses, such as insufficient capital.

VOC ED 193CE MARKETING AND SALES FOR SMALL BUSINESS (0) NDA

Lecture: 2 hour(s)

This course relates both marketing and sales strategies to today's fast-paced, competitive and segmented business environment, with the emphasis on relating marketing concepts to practical and effective real-world solutions that are sustainable. Both corporate and consumer situations will be considered with a strong focus on new product/service introduction, and product/service life cycle extension. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

Students will be able to apply green marketing strategies in an elevator pitch of a new entrepreneurial product or service.

VOC ED 194CE TECHNOLOGY FOR SMALL BUSINESS (0) NDA

Lecture: 1 hour(s) / Lab: 1 hour(s)

Topics covered in this course build the essential technology skills for entrepreneurs to run a small business more efficiently and save time. This course introduces website development and management, search engine optimization, blogging, social media platforms, databases and data security, and point of sale and crowdfunding tools. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

Students will be able to explain and apply technology tools for small business efficiency.

VOC ED 195CE ENTREPRENEURIAL FINANCE (0) NDA

Lecture: 2 hour(s

This course examines the elements of entrepreneurial finance, focusing on startup ventures and the early stages of company development. The course addresses key questions, which challenge all entrepreneurs: how much money can and should be raised; when the money should be raised, and from whom; what is a reasonable valuation of the company. It aims to prepare aspiring entrepreneurs to make these decisions and develop a basic, effective pitch of an entrepreneurial idea to a potential investor for startup capital. This course fulfills a requirement for a certificate of completion in Sustainable Small Business Development.

Student Learning Outcome:

Students will be able to: 1. Analyze and record financial transactions and postto ledgers. 2. Analyze and prepare basic financial statements. 3. Demonstrate an effective pitch for startup capital.

VOC ED 214CE ADVANCED LIFELONG FITNESS CENTER (0) NDA

Lab: 3 hours

Orientation to fitness and lifelong health for students to achieve and help others to achieve goals of lifelong fitness. This course includes discussion on importance of pre-test fitness tests which includes cardio respiratory endurance, muscle endurance, flexibility, body composition (% fat), and muscle strength. Students will learn to implement and develop personal exercise programs and will learn about diet and exercise, cholesterol screening, breast health and cancer, weight management, and stress management.

VOC ED 218CE COSTUME CERTIFICATION (0) NDA

Lab: 0.5 hours

This course is designe to review elements of the Costume Industry and the related Guilds. Elements include costume industry classifications, safety, and the general information about the industry.

Student Learning Outcome:

1. Students will gain certification for entry level employment in the costume industry.

VOC ED 252CE EXPLORATION OF CONSTRUCTION AND MAINTENANCE CAREERS (0)

Lecture: 3 hour(s) / Lab: 3 hours

This course introduces students to careers, basic skills and common practices in the construction and maintenance industries; helping them discover their aptitudes and interests in the construction field and make more informed decisions about their future careers, education and training. Students will learn and perform basic carpentry, masonry and mechanical skills and tasks.

Student Learning Outcome:

1. Students will demonstrate driving nails with hammers.

2. Measure various construction trade materials and using multiple types of measuring tools.

VOC ED 255CE SIGNIFICANT CHANGES TO INDUSTRY CODES(0)

Lecture: 3 hour(s)

This course covers the changes to the various National Codes made during each 3-year code revision cycle. Each change to the code will be highlighted and how the change will impact the industry practices will be covered.

Student Learning Outcome:

1. List electrical codes by topic and article.

2. Identify topic specific electrical code changes, such as; grounding, OCP, motors, transformers, hazardous locations, healthcare facilities.

3. Interpret and discuss the trade impact of various electrical codes changes.

VOC ED 257CE CRAFT HELPER (0)

Lecture: 4 hour(s)

This course is designed as entry level preparation for a student interested in careers in the electrical power industry. This introductory course covers the basic fundamentals of planning, installation and maintenance of high and low voltage electrical systems. Basic functions of generation, both hydro and steam are covered. The transmission and distribution of electrical power will be reviewed. Fundamentals of electricity, identification, function, and operation of components will be surveyed. Ohms law, safety, ropes, knots, rigging, and tools required in the trade will be reviewed. Civil service exam assistance will also be covered.

Student Learning Outcome:

Selection of proper PPE for use in various work related applications.

Identification of proper tools and materials to facilitate the proper installation and operations of a distribution system.

VOC ED 259CE (O.S.H.A.) SAFETY STANDARDS: CONSTRUCTION & INDUSTRY (0)

Lecture: 2 hour(s)

This course provides instruction on industry safety and health rules as it applies to workers and employers within the construction industry. Topics such as fall protection, lock out tag out procedures, PPE, excavations, etc. are covered. Participants that meet the required hourly attendance and successfully pass the final exam will be eligible to receive their OSHA (30 hr) safety-training certificate.

Student Learning Outcome:

1. Recognize appropriate training requirements and training methods.

2. Define OSHA specific construction terms such as; competent person, construction work, confined space, working space, general duty clause.

3. Select situational appropriate PPE.

VOC ED 311CE WORKPLACE SAFETY: FIRST AID/CPR BASICS (0)

Lecture: 0.5 hour(s) / Lab: 0.5 hours

This course combines lecture, demonstrations, video and hands-on practice to provide students with the knowledge and skills necessary to obtain their OSHA 10 hour safety certification and to recognize and provide basic care for injuries and sudden illnesses at their workplace until advanced medical personnel arrive and take over. The course materials and hours are consistent with and meet American Heart Association, American Red Cross and National Safety Council certification requirements.

Student Learning Outcome:

1. Recognize appropriate training requirements and training methods for CPR/First Aid/AED

2. Define OSHA specific construction terms such as; competent person, construction work, confined space, working space, general duty clause.

VOC ED 312CE WORKPLACE SAFETY: WATER SAFETY (0)

Lab: 2 hours

This course teaches safety and rescue skills to students working in and around water. This course focuses on developing students' swimming techniques and fitness for their personal safety as well as their capacity to prevent and properly respond to water-related accidents and hazards.

VOC ED 313CE WORKPLACE FITNESS AND CONDITIONING (0) NDA

Lab: 1.5 hours

Introduction to basic concepts and techniques associated with body conditioning. Including Pilates, Core Strengthening, Cardiovascular Exercise and Muscular Strength and Endurance exercises.

Student Learning Outcome:

Students will learn basic fitness principles and techniques and will be able to show fitness progress.

VOC ED 314CE WATER SAFETY INSTRUCTION (0) NDA

Lecture: 3 hours/Lab: 3 hours

This course analyzes all swimming strokes and skills found in recreational swimming and includes some common competitive swimming skills. Emphasis is placed on personal water safety, fitness, and includes stroke modifications for disabled swimmers. Motor learning theory, instructional drills, teaching/learning progressions and program development are included for those learning to become swimming instructors.

Student Learning Outcome:

1. Create, discuss and analyze lesson plans for variouso skills, ages and special populations. 2. Analyze swimming performance and provide constructive feedback. 3. Demonstrate common swimming skills at proficient level of performance.

VOC ED 325CE INTRODUCTION TO AUTOMOTIVE MAINTENANCE AND SERVICE (0)

Lecture: 3 hour(s) / Lab: 3 hour(s)

This is a preparation course combining lecture and hands-on shop work for most major automotive systems. Introduction to theory, maintenance, troubleshooting, repair, automotive and maintenance terminology.

Student Learning Outcome:

Describe and perform basic automotive vehicle service and maintenance.

VOC ED 326CE AUTOMOTIVE DIAGNOSTICS AND REPAIR (0)

Lecture: 3 hour(s) / Lab: 3 hour(s)

This is a preparation course combining lecture and hands-on shop work for most major automotive systems. Emphasis on automotive diagnostics and remedial maintenance and repair.

Student Learning Outcome:

Describe and perform basic automotive diagnostics and repair.

VOC ED 450CE OVERVIEW OF UNIONS (0)

Lecture: 0.5 hour(s)

Introduction to unions in the United States: how they function, methods of representation, i.e. legislation and workers' rights, grievance procedure, bargaining. Unions effect on its members, community and the U.S. economy and politics. How unions work in specific industries.

Student Learning Outcome:

1. Describe the role of unions in our economy. 2. List advantages & impact of unions for their members. 3. Explain how unions opearte in a specific industry.

VOC ED 504CE SEWING MACHINE BASICS (0)

Lab: 6 hour(s)

Students learn the basics of safely operating an industrial single needle sewing machines including adjusting all machine settings, selecting correct needles and thread, and practicing with commonly used feet and attachments. Factors to consider when purchasing and maintaining a machine are discussed.

Student Learning Outcome(s):

Student will construct basic shapes and patterns using an industrial machine.

VOC ED 506CE SEWING SPECIAL FABRICS (0)

Lab: 6 hour(s)

Students develop clothing alteration skills in recognizing and achieving a perfect fit through an exploration of the following topics: evaluating figures, evaluating fit, applying pattern and garment alteration procedures, and fitting methods.

Student Learning Outcome(s):

Student will be able to alter a finished garment for proper fit.

VOC ED 507CE CLOTHING ALTERATIONS (0)

Lab: 6 hour(s)

Students explore the history and characteristics of a wide range of fabrics including silk, faux fur, leather, lace and many more, to understand how to use these special fabrics effectively in clothing design and construction. Students learn how to select styles, choose tools, and apply specialized sewing and finishing methods for each fabric.

Student Learning Outcome(s):

Student apply proper construction techniques to specialized fabrics.

VOC ED 601CE RAIL SAFETY (0)

Lecture: 1 hour(s)/Lab: 1 hour(s)

This course covers safety practices related to rail vehicle and equipment repair and maintenance. It addresses: general shop safety, electrical safety, fall protection, and handling and disposing of dangerous materials.

Student Learning Outcome(s):

Students will adhere to basic safety and personal protection rules related to rail vehicle and equipment repair and maintenance.

VOC ED 602CE SHOP TOOLS (0)

Lecture: 1 hour(s)/Lab: 1 hour(s)

This course covers shop tools, including electric and pneumatic tools and their accessories, as well as the size and configuration of various types of fasteners. It addresses the use and maintenance of measuring devices such as the micrometer and torque wrench.

Student Learning Outcome(s):

Students will be able to use common shop tools in accordance with industry professional and safety standards.

VOC ED 603CE ELECTRICAL THEORY AND CONCEPTS (0)

Lecture: 4 hour(s)/Lab: 4 hour(s)

This course covers fundamentals of electric theory, including atomic theory and Ohm's Law. The principles of battery, transformer, and motor operation are also discussed. Both analog and digital instruments used to measure voltages, current, and resistance, and sizing of conductors are discussed along with overcurrent principles and practices. Hands on exercises involve splicing wire, wiring high voltage circuits, and wiring motor control circuits. Wiring schematics are taught and used throughout the module.

Student Learning Outcome(s):

1. Students will be able to explain the fundamentals of electrical theory. 2. Students will be able to apply electrical theory and mechanical principles to troubleshoot electrical wiring and equipment.

VOC ED 604CE MECHANICAL SYSTEMS (0)

Lecture: 6 hour(s)/Lab: 6 hour(s)

This course covers basic knowledge of mechanical principles and safety practices related to heavy-duty vehicle equipment repair and maintenance. It discusses the following topics: general shop safety, gears (reduction, ratios, lash coupling, etc.), principles of pneumatic and hydraulic systems, different types of lubricating oils, lubrication systems and bearings, and theory and function of different brake systems. The course addresses the principles of operation, troubleshooting and repair of a basic HVAC system.

Student Learning Outcome(s):

1. Students will describe mechanical principles and safety practices related to heavy-duty vehicle equipment repair and maintenance. 2. Students will diagnose and repair heavy-duty vehicle equipment in accordance with industry professional and safety standards.

VOC ED 605CE CAR MONITORING AND COMMUNICATION (0)

Lecture: 1 hour(s)/Lab: 1 hour(s)

This course covers using Original Equipment Manufacturer (OEM) and other troubleshooting software to retrieve fault codes on electronically controlled engines. Heavy duty vehicle brake systems, electrical controls, and how to identify different types of sensors used as inputs by an ECM, electronic control module are also covered. The ECM processing cycle will also be discussed and how it processes different outputs.

Student Learning Outcome(s):

1.Students will use diagnostic equipment to troubleshoot issues with electronically monitored controlled engine and brake system. 2. Students will interpret problem codes and take appropriate action to maintain or repair rail systems.

VOC ED 606CE ELECTRONIC PRINCIPLES (0)

Lecture: 7 hour(s)/Lab: 7 hour(s)

This course covers fundamental electronic principles and theory. It also addresses reading electrical and electronic schematics as they relate to common electronics and rail systems. Relay logic is also discussed as it relates to motor control and applies toward writing simple programs with programmable logic controllers. Microprocessor terminology and functionality is covered along with basic networking principles and practices. The course has an emphasis on hands-on tasks and includes extensive practice in conductor splicing, soldering and removing components from circuit boards.fabric.

Student Learning Outcome(s):

1. Students will discuss fundamental electronic principles and theory related to common electronics and rail systems. 2. Students will diagnose and repair electronics in accordance with industry and safety standards.

VOC ED 607CE ADVANCED DIAGNOSTIC EQUIPMENT (0)

Lecture: 3 hour(s)/Lab: 3 hour(s)

This course covers the use of the function generator, the oscilloscope, Simpson 260, and digital meters. It addresses troubleshooting to component level, analyzing schematic diagrams, and using the Nida software to study oscilloscopes, and troubleshooting the microprocessor. The course discusses frequencies as it pertains to electronics communications.

Student Learning Outcome(s):

Students will be able to use advanced diagnostic equipment for the maintenance of rail vehicles in accordance with industry and safety standards.

Glossary of Terms

Academic Probation

After attempting 12 units, a student whose cumulative grade-point average falls below 2.0 is placed on academic probation. A student whose cumulative grade point average falls below 2.0 for three consecutive semesters is subject to dismissal from the College.

Academic Renewal

A student may initiate a petition to have his/her record reviewed for the removal of grade(s) from their permanent record for the purpose of computing the grade-point average. A student must meet specific conditions and may have a maximum of 18 units removed.

Advisory

An advisory is condition of enrollment that a student is advised (but not required) to meet before, or in conjunction with, enrollment in a course.

Appeal

A student request for reconsideration of a decision made affecting disciplinary action, grade change, prerequisite challenge, etc.

Articulation Agreement

An agreement with another institution that certifies that courses will be accepted for credit upon transfer.

ASSIST

An online student-transfer information system that shows how course credits earned at one public California college or university can be applied when transferred to another. ASSIST is the official repository of articulation for California's public colleges and universities and provides the most accurate and up-to-date information about student transfer in California (assist.org).

Assessment

Assessment is the process the college uses to evaluate student skills in areas such as Reading, English and English as a Second Language (ESL), and Mathematics.

ASO (Associated Student Organization)

A organization which all enrolled students are eligible to join.

Associate Degree

A degree (Associate in Arts, A.A., or Associate in Science, A.S). granted by a community college which recognizes a student's satisfactory completion of an organized program of study consisting of a minimum of 60 degree applicable semester units.

Audit

A student's attendance in a class with permission of the instructor and payment of a fee. No college credit nor grade is given.

CalWORKS Program

CalWORKs (California Work Opportunity and Responsibility to Kids) program offers training and support services to students receiving TANF (Temporary Assistance to Needy Families), previously AFDC.

Catalog Rights

Catalog rights refer to the right of every continuing student to choose one, and only one, catalog under whose course requirements the student is to be evaluated for the purpose of determining whether the student meets the requirements for graduation or for certification to transfer to UC or CSU. The continuing student may select the catalog which was in effect when the student initially enrolled at LATTC, or the catalog in effect when the student petitions for graduation or transfer certification.

Certificate of Achievement

Programs designed for students who are looking for instruction with a high degree of specialization. Certificates of Achievement vary in length and may require less than two years of full-time study, and may be pursued on a part-time basis. At the point of completion, students may request the issuance of a Certificate of Achievement.

Certificate of Completion

A document confirming that a student has completed a program or sequence of noncredit courses that prepares him or her to progress in a career path or to undertake degree-applicable or nondegree-applicable credit courses.

Certification of CSU General Education Requirements

Completion of a body of transfer courses which meet the general education requirements of the California State University system (CSU).

Concurrent Enrollment

A student may enroll in two mutually dependent courses within the same semester and/or may be simultaneously enrolled at both LATTC and a K-12 or another college.

Continuing Student

A student who maintains continuous attendance which is defined as no more than one semester absence within a school year, excluding Summer sessions and Winter intersessions.

Cooperative Education

An instructional program that is designed to complement the student's academic training with on-the-job experiences.

Corequisite

A condition of enrollment consisting of what course a student is required to simultaneously take in order to enroll in another course.

Counseling

Guidance provided by professional counselors in academic, vocational, and personal matters.

Course

A subject of study identified by Title and Number; for example: Art 101.

Credit by Examination

Credit granted for proficiency accomplished through testing.

Dismissal

A student on academic or progress probation for three semesters may be dismissed from the College. Once dismissed, the student may not attend any college within the Los Angeles Community College District for a period of one year and must petition for re-admittance at the end of that period of time.

Drop

A student's official withdrawal from a class.

Elective

Courses recommended for a given major in addition to prescribed requirements.

EW (Excused Withdrawal)

The EW symbol may be used to to denote excused withdrawal. The purpose of the EW non-evaluative symbol is to permit a student to withdraw from a course for reasons beyond their control.

Full-Time Student

A student enrolled and active in 12 or more units during the Fall or Spring Semester.

General Education Requirements

A group of courses from several subject areas which are required for graduation by state law.

Grade Point

The numerical value of a college letter grade. A=4, B=3, C=2, D=1, F=0, times the number of units of the course: An "A" in a 5 unit course equals 20 points.

Grade-Point Average (GPA)

The GPA is determined by dividing the total grade point earned by the number of attempted units.

IGETC (Intersegmental General Education Transfer Curriculum)

Completion of all the requirements in the Intersegmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from a community college to a campus in either the California State University or the University of California system.

INC (Incomplete)

The administrative symbol "INC" is recorded on the student's permanent record in special situations in which the student has not been able to complete a course due to circumstances beyond the student's control.

IP (In Progress)

A symbol which indicates a course which continues over parts or all of two semesters.

Lower Division

College courses at the freshman and sophomore levels.

Major (Program of Study)

A concentration of study in a specified discipline.

MW (Military Withdrawal)

This occurs when a student who is a member of an active or reserve United States military service receives orders compelling a withdrawal from courses. Upon verification of such orders, a withdrawal symbol may be assigned at any time after the last day of the fourteenth week of instruction or 75% of the time the class is scheduled to meet, whichever is less.

NDA (Non-Degree Applicable)

Credit courses that do not apply toward a degree and are not transferable.

Non-Penalty Drop Period

The first two weeks of a regular Fall or Spring semester during which a student's enrollment in a class is not recorded on the student's permanent record if the student drops by the deadline. This deadline will be different for short term and summer session courses.

Pass/No-Pass

A form of grading whereby a student receives a grade of Pass (P) or No Pass (NP) instead of an A, B, C, D, or F. A grade of "P" is assigned for class work equivalent to a "C" or above. "NP" denotes work below a grade of "C."

Prerequisite

A condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program.

Progress Probation

A student will be placed on progress probation if, after enrolling in 12 units, the total number of units for which a W, NP or INC has been assigned equals 50 percent or more of the units enrolled.

RD (Report Delayed)

This temporary administrative symbol is recorded on the student's permanent record when a course grade has not been received from the instructor. It is changed to a letter grade when the grade report is received.

Returning Student

A previously enrolled student who did not attend the College during the previous two semesters. Attendance during the summer session is not included in this determination.

Satisfactory Completion

Completion of a course with a grade of "C" or better.

Schedule of Classes

A schedule giving directions for enrollment and detailed information about the times, locations, and instructors of the classes to be offered. It is issued before the beginning of each semester and summer session.

Semester

One-half of the academic year, usually 16 weeks.

Substandard Grade

An earned grade of "D" or "F".

Transcripts

A student's permanent record and an official list of all courses taken at a college or university showing the final grade received for each course.

Transfer

A student may change from one collegiate institution to another after having met the requirements for admission to the second institution.

Transfer Courses

Courses designed to match lower-division courses of a four-year institution and for which credit may be transferred to that institution.

Transferable Units

College units earned through satisfactory completion of courses acceptable for credit at a four-year college or university (e.g. UC – University of California, CSU – California State University)

Units

The amount of college credit earned by satisfactory completion of a specific course taken for one semester. Each unit represents one hour per week of lecture or recitation, or a longer time in laboratory or other exercises not requiring outside preparation.

Units Attempted

Total number of units in courses for which a student was ever actively enrolled.

Units Completed

Total number of units in courses for which a student received a grade of A, B, C, D, or P.

Units Enrolled

Total number of units in which the student is enrolled at the end of the non-penalty drop period, which is the total number of units for all courses appearing on the student's transcripts.

W

An administrative symbol assigned to a student's permanent record for all classes which a student has dropped or has been excluded from by the instructor after the end of the non-penalty drop date, but by the last day to drop.

Withdrawal

The action a student takes in dropping all classes during any one semester and discontinuing coursework at the College.

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EMERGENCY INFORMATION

The college is concerned about your safety in case of an emergency.

Detailed instructions are posted in every classroom and throughout the LATTC campus. Additionally, you may visit the Environmental Health and Safety Website for more information: http://college.lattc.edu/ehs/

In case of emergency, remember these key points.

- Secure yourself
- Assess the situation
- Forward information
- Enact according to the campus Emergency Evacuation Plan

EMERGENCY RESPONSE INFORMATION

LATTC-Sheriff Telephone Numbers for Emergency

In case of an emergency, you should immediately contact the College's Sheriff's Office on campus.

- Dial Ext 3611 or 911 to reach the College Sheriff's office from any campus phone.
- You also may dial 911 to reach the sheriff's office.
- You may also press the extension button marked "EMERGENCY", on all campus phones.
- Pick up the campus emergency blue telephone station "dial direct" to the College Sheriff's Office.
- If you use your cell phone you may dial 213-763-3611 to connect to the College Sheriff's office.

Please note if you dial 911 from your cell phone or pay phone on campus, it will not connect directly to the College Sheriff's, but it will connect to outside emergency services.

MEDICAL EMERGENCY

- Call the College Sheriff if the injury is life threatening and calmly provide detailed information to the Sheriff's Office.
- Stay on the line to answer any questions.
- Comfort the injured person by talking to them until help arrives
- Employees (or supervisor) Call 1-855-602-5264 Hotline.

BOMB THREATS

Bomb threats are usually received by telephone.

The person receiving a bomb threat should remain calm and attempt to obtain as much information as possible from the caller by using the "TELEPHONE THREAT" listed below.

Call the Sheriff's Department ext. 3611(from your mobile phone dial 213-763-3611). Give your name, location and telephone number. Inform the dispatcher of the situation, including any information you may have as to the location of the bomb, time it is set to explode, and time when you received the call.

Inform your supervisor and/or department head.

SUSPICIOUS OBJECT OR PACKAGE

In the event a suspicious object or potential bomb is observed on campus, do not handle the object. Immediately clear the area and call the college sheriff office at ext. 3611(from your mobile phone dial 213-763-3611)

EARTHQUAKE

In the event of earthquake:

- Stay Calm.

If inside

- Stay inside.
- IMMEDIATELY get away from windows and large objects that may topple; DROP, COVER, and HOLD ON
- DROP to the ground.
- COVER by getting under a sturdy desk or table, and
- HOLD ON to it until the shaking stops.

If outside

- Stay outside.
- Go to your designated evacuation area on campus, away from buildings, trees, and power lines.

FIRE/SMOKE

If you detect fire or smoke

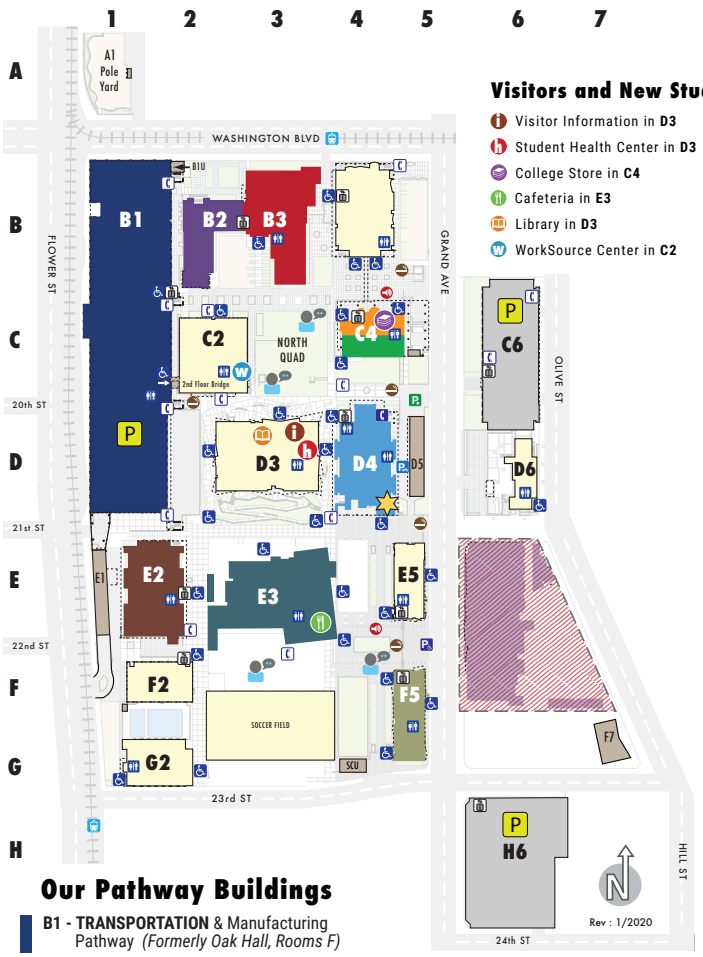
- Immediately activate the nearest fire alarm pull station.
- Call the College Sheriff and notify them of the location of the fire.
  - If you hear a fire alarm
  - Immediately EVACUATE the area.
  - Turn off all equipment and close doors as you leave.
  - Proceed to the nearest exit and to your designated "Evacuation Area".
  - Remain calm and await further instructions.

ELEVATOR ENTRAPMENT

If you become trapped in an elevator, remain calm.

- Press the call button (panel button with telephone receiver icon) to automatically connect with the College Sheriff.
- Press the red emergency button (red panel button with a bell icon) to activate the audible elevator alarm system which automatically notifies College Sheriff
- You may also use your mobile phone to directly call the College Sheriff 213-763-3611.
- Wait for qualified personnel to respond and assist. DO NOT ATTEMPT TO STEP OFF THE ELEVATOR unless specifically instructed to do so.

LATTC Campus Map



Visitors and New Students

- Visitor Information in **D3**
- Student Health Center in **D3**
- College Store in **C4**
- Cafeteria in **E3**
- Library in **D3**
- WorkSource Center in **C2**

Our Pathway Buildings

- **B1** - **TRANSPORTATION** & Manufacturing Pathway *(Formerly Oak Hall, Rooms F)*
- **B2** - **COSMETOLOGY** Pathway *(Formerly Magnolia Hall, Rooms MH)*
- **B3** - **HEALTH** & Related Sciences Pathway *(Formerly Magnolia Hall, Rooms MH)*
- **C4** - **APPLIED SCIENCES** Pathway *(Formerly Cedar Hall, Rooms K)*
- **C4** - **BUSINESS** & Civic Engagement Pathway *(Formerly Cedar Hall, Rooms K)*
- **D4** - **DESIGN & MEDIA ARTS** Pathway *(Formerly Cypress Hall, Rooms D)*
- **E2** - **CONSTRUCTION**, Maintenance Pathway & Utilities *(Formerly Sequoia Hall, Rooms B)*
- **E3** - **CULINARY ARTS** Pathway *(Formerly Sage Hall, Rooms H)*
- **F5** - **LIBERAL ARTS** Pathway *(Formerly Aspen Hall, Rooms TE)*

Our Services/ Activities Buildings

- **C2** - Tom Bradley Center for **Student Life** *(Formerly Redwood Hall, Rooms C)*
- **D3** - **Student Support** Center (the Hub) *(Formerly Mariposa Hall, Rooms MA)*
- **D6** - Child Development Center (**CDC**)
- **E5** - **Administration/Services** Building *(Formerly Juniper Hall, Rooms ST)*
- **F2** - **Athletics** Building *(Formerly Willow Hall, Rooms J)*
- **G2** - **Gymnasium** *(Formerly Laurel Gym, Rooms G)*

Service	Bldg	Room
GETTING STARTED & ENROLLMENT		
Admissions & Records	E5	1st Flr Lobby
Bridges to Success Center	D3	105
ACADEMIC SERVICES		
Academic Connections	D3	109
Distance Education	D3	07
Library	D3	2nd Floor
Open Computer Labs	D3	09
COUNSELING & HEALTH SERVICES		
NextUP	E5	415
Cross Cultural Counseling Center	E5	214
Disabled Student Program & Services	D3	100
EOPS/Care	E5	416
GAIN/CalWorks	E5	403
International Students	E5	316
Student Health Center	D3	107
University Transfer Center	E5	203
Veteran Student Center	D3	101
FINANCIAL & RELATED SERVICES		
Business Office	E5	1st Flr Lobby
College Store	C4	102
Financial Aid	E5	1st Flr Lobby
Financial Aid Lab	E5	314
EMPLOYMENT & INTERNSHIPS		
Career Center	E5	413
Cooperative Work Experience Education (Internships)	C4	203A
Employment Center	C2	107A
Worksource Center	C2	106
STUDENT LIFE		
Associated Student Organization (ASO)	C2	105
Cafeteria	E3	
Gymnasium	G2	
Office of Student Life	C2	105
COLLEGE SUPPORT & ADMINISTRATIVE SERVICES		
Academic Technology	D3	07
Copy/Mail Center	D3	06
Foundation	E5	513
Garden Room	B4	
Information Technology (IT)	D3	04
Labor Center	D3	05
Office of Administrative Services	E5	305
Office of Institutional Effectiveness	E5	519
Office of Instructional Affairs	E5	512
Office of Student Affairs	E5	532
Office of the President	E5	543
Payroll/Personnel	E5	429
Physical Plant Office	D4	152
Recruitment	E5	513
Sheriff's Office	D4	150
Slate-Z	E5	543

PERSONAL NEEDS

Gender Neutral Restrooms

B1-108E	C2-104A	D5-131	D6-116	D6-210	E5-108
B3-318	C4-215	D5-320	D6-117	E2-231	F5-211
B4-135	D3-107G	D6-106	D6-209	E2-338	G2-101

Lactation Room

C4-213

PARKING & UTILITY/ RESOURCE BUILDINGS

- **B1** - Flower St. Parking
- **C6** - Olive St. Parking
- **H6** - 24th St. Parking
- **D5** - M&O Resource
- **E1** - Central Receiving
- **F7** - LADWP
- **B1U** - B1 Utility
- **SCU** - South Campus Utility

LEGEND

Sheriff's Office · Metro Rail Stop · Elevator · Accessible Drop-Off
Construction Area · Public Pay Phone · Accessible Entrance · Student Parking (unless otherwise noted)
Smoking Area · Emergency Blue Phone · Gender Neutral Restroom · Motorcycle Parking
Free Speech Areas (Public and Student) · Student Free Speech Areas · Sheriff Parking

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