Accredited by Western Association of Schools and Colleges

This catalog is published for informational purposes. Although every effort has been made to ensure its accuracy, it is not to be considered an irrevocable contract between the student and Merced College. The college reserves the right to change provisions and descriptions at any time while taking precautions that such changes do not adversely affect enrolled students. Students are advised to consult the current Schedule of Classes and college counselors for supplementary information.
Welcome to Merced College where students are our focus! The Merced College Team is committed to helping you achieve your educational and career goals. Our committed faculty, classified professionals, and leadership work hard to ensure access and success for all students.

Since first opening our doors in 1962, thousands of students have pursued and achieved their academic and professional goals. With more than 14,000 students enrolled, we provide cutting edge and innovative programs to prepare society ready graduates with both regional and global perspectives.

We put students first whether we are providing academic counseling, teaching in the classroom, maintaining our beautiful campus and facilities, or assisting with student support programs and services. With more than 135 associate degree and certificate program available, guaranteed transfer agreements with four-year institutions, and comprehensive career technical education programs, Merced College is prepared to equip you for the career of your choice.

Merced College is accredited with the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges. A number of our specialized programs maintain their own professional accreditation as well.

At Merced College, we honor and pursue our mission, institutional philosophy, and core values and beliefs. We also pursue the goals of our current strategic plan, striving always to improve our institutional effectiveness and our learning outcomes for students.

We are glad that you have discovered Merced College as a place where you can continue on your individual path to a better future through education. Every member of the college community is here to support you in reaching your academic goals.

It is my sincere hope that you find a home at Merced College. Please let our dedicated team of professionals know how we can best meet your needs. I look forward to seeing you when you are on campus.

Sincerely,
Chris Vitelli, M.Ed.
Superintendent/President
Academic Schedule 2018-2019

SUMMER 2018
Summer and Fall 2018 Semester Registration Begins ......................................................... April 11, 2018
SUMMER 2018 SEMESTER BEGINS .................................................................................... June 4, 2018
Adds Require Instructor’s Signature beginning first day of the term .................................. June 4, 2018
Refund Deadline for all classes, you must drop before 10% of the class meetings .......... before 10% of the class meetings
Last Chance to Drop with No Entry on Transcripts for 6 week Classes meeting MTWTh in person .................................................................................................................. June 7, 2018
For all other classes, you must drop the day before 20% of the class meetings.
Instructional Dean signature required ............................................................................... June 7, 2018
Pass/No Pass Option Deadline for 6 week classes meeting MTWTh .................................... June 13, 2018
Last Chance to Drop with a “W” for 6 week classes meeting MTWTh ................................ July 3, 2018
For all other classes, you must drop the day before 75% of the class meetings.
Independence Day Observed - Campus Closed ..................................................................... July 4, 2018
End 6 week Summer Session ............................................................................................. July 11, 2018

SUMMER 2018 dates for 8 week classes (June 4 to July 28, 2018)
Summer and Fall 2018 Semester Registration Begins ......................................................... April 11, 2018
SUMMER 2018 SEMESTER BEGINS .................................................................................... June 4, 2018
Adds Require Instructor’s Signature beginning first day of the term .................................. June 4, 2018
Last Chance to Drop with No Entry on Transcripts for 8 week Classes meeting MTWTh in person .................................................................................................................. June 11, 2018
For all other classes, you must drop the day before 20% of the class meetings.
Instructional Dean signature required ............................................................................... June 11, 2018
Pass/No Pass Option Deadline for 8 week classes meeting MTWTh .................................... June 18, 2018
Last Chance to Drop with a “W” for 8 week classes meeting MTWTh ................................ July 16, 2018
For all other classes, you must drop the day before 75% of the class meetings.
Independence Day Observed - Campus Closed ..................................................................... July 4, 2018
End 8 week Summer Session ............................................................................................. July 26, 2018

FALL 2018 (August 13 to December 14, 2018)
FALL 2018 Semester registration begins ............................................................................ April 11, 2018
FALL 2018 SEMESTER INSTRUCTION BEGINS ............................................................. August 13, 2018
Adds require instructor’s signature (for 18 week classes) .................................................. August 13, 2018
Refund deadline for 18 week classes .................................................................................. August 26, 2018
For all other classes, you must drop the day before 10% of the class meetings.
Graduation and Certificate of Completion applications accepted ..................................... August 27 - October 19, 2018
Last chance to drop with no entry on transcripts for 18 week classes in person ............... August 31, 2018
OR online ........................................................................................................................... September 2, 2018
For all other classes, you must drop the day before 20% of the class meetings
Instructional Dean’s signature required on adds if effective date is after 3rd week ............ September 3, 2018
Pass/No Pass Option deadline ......................................................................................... September 14, 2018
FALL 2018 Mid-Session begins ......................................................................................... October 15, 2018
Adds require instructor’s signature beginning first day of the term
Last chance to drop with a “W” for 18 week classes in person ........................................ November 16, 2018
OR online ........................................................................................................................... November 18, 2018
For all other classes, you must drop the day before 75% of the class meetings.
Final Exams ....................................................................................................................... December 10-14, 2018
End of FALL 2018 Semester ............................................................................................. December 14, 2018

SPRING 2019 (January 14 to May 24, 2019)
Spring 2019 Semester registration begins ....................................................................... October 17, 2018
Spring 2019 SEMESTER INSTRUCTION BEGINS (adds require instructor’s signature for 18 week classes) ..................................................................................... January 14, 2018
Refund deadline for 18 week classes .................................................................................. January 27, 2018
For all other classes, you must drop the day before 10% of the class meetings.
Graduation and Certificate of Completion applications accepted ..................................... January 28 - March 22, 2019
Last chance to drop with no entry on transcripts for 18 week classes in person ............... February 1, 2019
OR online ........................................................................................................................... February 2, 2019
For all other classes, you must drop the day before 20% of the class meetings.
Instructional Dean’s signature required on adds if effective date is after 3rd week ............ February 5, 2019
Pass/No Pass Option deadline ......................................................................................... February 14, 2019
Spring 2019 Mid-Session begins ..................................................................................... March 18, 2019
Adds require instructor’s signature beginning first day of the term
Scholarship Application Deadline ....................................................................................... March 31, 2019
Last chance to drop with a “W” for 18 week classes in person ........................................ April 19, 2019
OR online ........................................................................................................................... April 21, 2019
For all other classes, you must drop the day before 75% of the class meetings.
Final Exams ....................................................................................................................... May 20-24, 2019
End of Spring 2019 Semester ........................................................................................... May 24, 2019
Memorial Day - campus closed ........................................................................................ May 27, 2019
# 2018-2019 ACADEMIC/INSTITUTIONAL CALENDAR

Board Approved on 10-10-2017

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<th>FALL 2018 SEMESTER</th>
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**09-10 Flex**  
13 First Day Fall 2018 Semester

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**01 No Saturday Classes**  
03 Holiday, Labor Day  
04 Census

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**15 First day 2nd 9 week session**  
18 First day 2nd 9 week session  
1 End 8 Week Summer 2019 Semester

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**10 No Saturday Classes Holiday, Veteran’s Day Observed**  
22-23 Thanksgiving Break  
24 No Saturday Classes

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**10-14 Final Exam Week**  
17-21 College Open, No Classes  
24-31 College Closed, Winter Break

**20-24 Final Exam Week**  
24 Commencement  
27 Holiday, Memorial Day
The History of Merced County

Prior to the discovery of gold in California, the San Joaquin Valley was pristine. Wild clover grew taller than a horse’s head. Streams teemed with salmon, bass, and trout. Grizzly bears and antelope roamed far and wide. The early inhabitants of the valley, the Northern Valley Yokuts, estimated to number around 30,000, roved the entire valley floor. During an 1806 expedition, Ensign Gabriel wrote of finding a welcoming river to quench the expedition’s thirst. He named it El Río de la Nuestra Señora de la Merced, The River of Our Lady of Mercy, known simply today as the Merced River. The valley landscape changed rapidly when gold prospectors overran the area on their way to the gold fields.

When California achieved statehood in 1850, Mariposa County covered much of the valley, extending to a mutual boundary with San Diego and Los Angeles counties. In 1855, lowland farmers decided they did not have much in common with the miners of the foothills and mountains and petitioned to have a section split off to form a new county. When the petition was granted, Governor John Bigelow formed Merced County on April 19, 1855. According to the 1857 tax assessment rolls, the new county hosted a population of 277 with the first county seat located in Snelling. Once the railroad came through the county, much of the business and the county seat moved to the new town of Merced, which was incorporated in 1889.

Since that day, growth and change has continued in Merced County.

District and Organization

The Merced Community College District (District) is composed of most of Merced County, the area including the Chowchilla Union High School District in Madera County, the Dos Palos Joint Elementary School District in Fresno County, and the Los Banos Unified School District. The District is governed by a seven-member elected Board of Trustees. The main campus is located on M Street in Merced. The Los Banos Campus is located on Highway 152 in the City of Los Banos.

The Beginnings of the College District

Merced College is a California public community college operated by the Merced Community College District, which was formed by a vote of the people of the Le Grand and Merced Union high school districts on February 27, 1962. The District became effective for all purposes on July 1, 1963. The District, which included the eastern half of Merced County at that time, consisted of the areas served by these two high school districts. The Board of Trustees consisted of five elected-at-large members.

In later years, the Board of Trustees was expanded with two additional trustees, one to specifically represent the Dos Palos/Los Banos area and one to represent the Chowchilla area. Elections were also changed from at-large elections to District elections. Thus, the Board now numbers seven trustees, each elected within a specific area of the District.

Philosophy

A democratic society functions best when its members are educated and active participants. To encourage this participation, Merced College provides educational opportunities for all who qualify and can benefit. This education involves having a respect for and awareness of all cultures, as well as the dignity and worth of all individuals.

Merced College is dedicated to the pursuit of excellence. The leadership and educational services provided by the College reflect and enhance the cultural, economic, and social life of the community and respond to its changing needs and interests. Recognizing that learning is a life-long process, the College provides preparation for a complex and changing society while maintaining high academic standards. The College also fosters individual learning and critical thinking to enhance awareness of the interrelationship and interdependence of all persons.

Vision

Merced College will provide transformative and empowering educational experiences to meet student and community needs.

Mission

Merced College serves as a gateway to the future, providing accessible, affordable, and relevant education and workforce training for students in our richly diverse region. The college offers programs of study that lead to transfer, associate degrees, and certificates. Merced College provides basic skills and noncredit courses, as well as community education for personal and professional enrichment.

Core Values

Student Success

We focus on student access and success.

Supportive Environment

We promote an atmosphere of trust where communication and teamwork cultivate a rich environment for teaching and learning.

Proactive

We utilize agility, innovation, and responsible risk-taking to create our preferred future.

Partnering

We actively engage with the community and community partners to respond to cultural, educational, economic, and technological needs.

Diversity

We embrace diversity and equity as community strengths and celebrate these qualities in our institution.

Self-Reflection

We strive for continuous improvement based on data-driven self-reflection, objective assessment, and dialogue.

Institutional Student Learning Outcomes

( Adopted, April 3, 2007 and reviewed April 2010)

Communication: Use language and non-verbal modes of expression appropriate to the audience and purpose. (GE Breadth Areas A and C)

Examples: Students will be able to:
1. Compose coherent written communication appropriate to the audience
2. Read and analyze written communication appropriate to the subject
3. Construct and deliver oral communication appropriate to the audience
4. Comprehend, analyze, and utilize aural and visual communication in its various modes.
5. Design and deliver presentations appropriate to the audience

Computation: Use mathematical skills and various aspects of technology appropriate to the task. (GE Breadth Areas A and B)

Examples: Students will be able to:
1. Analyze and apply mathematical concepts to an appropriate task
2. Appraise various aspects of technology and apply them to an appropriate task

Cognition: Use critical thinking skills to analyze, synthesize, and evaluate ideas and information. (GE Breadth Areas A, B and C)

Examples: Students will be able to:
1. Evaluate information and incorporate it into appropriate tasks
2. Analyze information, develop an opinion, and support it
3. Examine, create, and/or evaluate materials and objects by using aesthetic criteria.
4. Analyze and solve problems using logical and creative methods
5. Assess the impact of science and technology on the world

Global and Community Consciousness and Responsibility: Demonstrate understanding of different cultures and knowledge of historical eras and importance of community involvement. (GE Breadth Areas D)

Examples: Students will be able to:
1. Distinguish and understand diverse cultures
2. Evaluate historical knowledge and relate it to current issues
3. Recognize the impact of local, national, and global involvement

Personal Development and Life-Long Learning: Demonstrate self-management, maturity, and growth through practices that promote physical, mental, and emotional well-being. (GE Breadth Area E)

Examples: Students will be able to:
1. Analyze and apply interpersonal skills
2. Demonstrate an understanding of life long learning
3. Relate a healthy lifestyle and wellness to personal choices
4. Evaluate and adhere to professional and academic ethical standards

Accreditation

Merced College is fully accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC), under the Western Association of Schools and Colleges (WASC), an institutional accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education. Merced College is also approved by the State Department of Education to train veterans under provisions of the G.I. Bill of Rights, and by the United States Immigration Service. The College offers a lower division program consisting of courses parallel to those of four-year colleges and universities, the credits of which are transferable to all other accredited colleges and universities.

Accrediting Agencies

Merced College and its various academic programs are accredited by the following agencies.

Diagnostic Medical Sonography Program
Commission on Accreditation of Allied Health Education Programs (CAAHEP)
http://www.caahep.org/
Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS)
http://jrcdms.org/

Diagnostic Radiologic Technology Program
Joint Review Committee on Education Radiologic Technology (JRCERT)
https://www.jrcert.org/
California Department of Public Health - Radiologic Branch (CDPH)
http://www.cdph.ca.gov/programs/Pages/RadiologicHealthBranch.aspx

Nurse Assistant
California Department of Public Health (CDPH)
http://www.cdph.ca.gov/programs/LnC/Pages/LnC.aspx

Registered Nursing
Board of Registered Nursing (BRN)
http://www.bn.ca.gov/schools/index.shtml

Vocational Nursing
Board of Vocational Nursing & Psychiatric Technicians (BVNPT)
http://www.bvnpt.ca.gov/education/schools/

Merced College Foundation

The Merced College Foundation is a non-profit organization formed in November 1973. The mission of the Foundation is to provide support to Merced College by administering and awarding scholarships to students, accepting and acquiring gifts, bequests, endowments, and real and personal property as sources of income for the Foundation, and to serve as the organization through which special projects desired by the College can be developed and administered. For more information, call the Foundation office at (209) 381-6470.

The Merced Campus

The Merced Campus is located one mile north of Olive Avenue in Merced, on the east side of M Street. Originally consisting of 110 acres presented as a gift to the College by the C-H-M and the Yosemite Land & Cattle Companies through the efforts of Merced city officials, the campus expanded to 269 acres with additional purchases of adjacent land. Classes began on September 10, 1963 at a temporary site located at the Merced County Fairgrounds. Classes at the permanent campus began in the summer of 1966. The new campus was completed in spring 1967 and dedication ceremonies were held on April 23, 1967.

The Administration Building, the Science Building, and a temporary library facility were the first main buildings constructed. The Student Union was completed in November 1967. Since that time, facilities were added, including a gymnasm, an automotive shop, agriculture facilities, and technical labs for drafting, engineering, and vocational nursing. The Lesher Library and the Theater were completed for use in fall 1972.

Over the next 30 years, many facilities were completed or modified to meet current needs. The Child Development Center was completed in spring 2002, expanding the outer perimeter of the College’s educational facilities northward.

In 2002, voters passed a $53.5 million bond measure for the Merced Campus (Measure H). The following projects have been completed: the North Loop Road, a campus wide energy retrofit, the Learning Resources Center, the Science Building renovation, the Business Resource Center, the Lesher Building renovation, Administration Building renovation, Student Union Building renovation, and the Allied Health Complex Project. In 2012, the Theater was renovated to provide ADA access to the Theater Basement. Future planned projects include the Agriculture Science/Industrial Technology Complex Project and Vocational Renovation/Expansion Project.

The Los Banos Campus of Merced College

The Los Banos Campus, an educational center 40 miles west of the Merced campus, serves the people of Los Banos, Dos Palos, and the surrounding areas. It began as a full-service campus in September 1971 in rented facilities. In 1973, the Los Banos Unified School District’s voters approved joining the District and the Dos Palos Joint Elementary School District’s voters approved moving from the West Hills Community College District to the District in 1978. The Los Banos Campus was formally approved by the California Community Colleges Chancellor’s Office as an educational center in 1979.

In 1982, thanks to a donation of 10 acres by Richard Menezes, the campus moved to a site on Mercey Springs Road with modular buildings providing educational opportunities and serving as a cultural and intellectual center for the residents of the Westside of Merced County.


The campus offers a variety of programs for day and evening classes and provides a wide range of academic and vocational classes, enabling a student to stay in Los Banos and take all the courses necessary for an associate degree and fulfill all the breadth requirements of four-year state colleges. Los Banos Campus students may also complete several certificate programs.
Admission and registration procedures are the same as those for the Merced campus. For further information, contact the Los Banos Campus at 22240 Highway 152, Los Banos, CA 93635, or by calling (209) 826-3495.

Off-Campus Programs
In addition to extensive day and evening programs at the Merced and Los Banos campuses, Merced College schedules classes at other sites throughout the District, including Delhi, Dos Palos, Livingston, and Mariposa. Consult the current Schedule of Classes for class offerings and locations. For more information, contact Dean Shelly Conner at (209) 384-6067.

CVHEC
Merced College is one of the member institutions of the Central Valley Higher Education Consortium (CVHEC). Members represent accredited, non-profit and private colleges and universities in the Central Valley from Bakersfield to Stockton. The goal of the consortium is to increase the number of students prepared for, enrolling in, and graduating from college.
College Policies, Regulations, and Procedures

General Information

Educational Opportunities
Founded in 1962, Merced College offers students an opportunity to obtain an associate degree or to transfer academic credits to the California State University or the University of California. The College offers vocational certificates in various programs and serves all students who live within the District.

Admission to Merced College
Each candidate should have a high school diploma or equivalent, or should be a minimum of 18 years old, and should be able to take advantage of the instruction offered.

Registration at Merced College
The Office of Admissions and Records has the responsibility to admit and assist with the registration of all eligible students. Prospective students should follow these general guidelines for admission and registration.
1. Complete the application for admission at www.opencccapply.net
2. Participate in the orientation, assessment, student planning/advising.
3. Register online or in person for classes and pay fees.

Detailed information regarding this process is available online.
- http://www.mccd.edu/getstarted/apply.htm

Student Services
Counseling services are available to assist students in the selection of appropriate courses and to provide other course-related assistance and referrals. Financial aid is available to all eligible students. Many grants and/or scholarship can help pay for educational expenses. For more information regarding these and other student services go to http://www.mccd.edu/resources/index.html.

Information in español

Oportunidades Educativas
Fundada en 1962, El Colegio Comunitario de Merced ofrece a los estudiantes la oportunidad de obtener un grado de asociado o la transferencia de créditos académicos a la Universidad Estatal de California o la Universidad de California. El Colegio ofrece certificados vocacionales en diversos programas y sirve a todos los estudiantes que viven dentro del Distrito.

Inscripción en El Colegio Comunitario de Merced
La Oficina de Admisiones y Archivos es responsable por la admisión y asistencia en la inscripción de todos estudiantes que califican para admisión. Futuros estudiantes deben de seguir las directivas generales sobre admisión y inscripción:
1. Cumpla la aplicación de admisión a www.opencccapply.net
2. Participe en la orientación de estudiantes nuevos; el examen diagnóstico; y planeación y consejos académicos estudiantes.
3. Regístrate en el internet por clases y el pago de matrícula.

Información detallada tocante estos procesos está disponible en el internet:
- http://www.mccd.edu/getstarted/apply.htm

Servicios Estudiantiles
El Colegio ofrece servicios de consejos para ayudar estudiantes elegir clases apropiadas y a proveer asistencias relacionadas a clases. También se ofrece asistencia financiera a estudiantes que califican. Hay muchas becas que ayudan con los gastos educativos. Si necesita más información tocante todos estos servicios, contacte el Colegio Comunitario de Merced:
- http://www.mccd.edu/resources/index.html

Academic Freedom
Since the vitality of a society is energized and sustained by ideas, and since the nature of a college involves the examination and discussion of those ideas, a policy of academic freedom protecting such free examination and expression historically has been deemed necessary.

To this end, the Merced Community College District is committed to free discussion and open inquiry. We recognize that the freedom to think, to read, to speak, and to question is necessary for the development of an informed citizenry.

This freedom shall be integral to the philosophy of this District and is guaranteed to students, faculty, administration, and staff. This freedom is both a right and a responsibility. As a right, it assures unimpeded research, study, and inquiry. It also assures the right to free expression in both public and private settings, including the right to disagree.

As a responsibility, it obligates members of the college community to present, discuss, and interpret ideas, knowledgeably, fairly, and objectively, with openness to the ideas of others, with the intention to stimulate independent thinking, and with sensitivity to the special situations of students.

To ensure these principles of intellectual freedom, the administration and the Board of Trustees will demonstrate their support by actively working to foster this freedom.

Academic Honesty
Academic dishonesty is a violation of the Standards of Student Conduct (Board Policy 5500). The College has the responsibility to ensure that
grades assigned are indicative of the knowledge and skill level of each student. Acts of academic dishonesty make it impossible to fulfill this responsibility.

Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, and misuse of College computers and software. Disciplinary actions may include an oral reprimand, a failing grade on all or part of a particular paper, project, or examination, or the assignment of an “F” grade in cases where the dishonesty is more serious, premeditated, or a repeat offense. Serious or repeated offenses may also result in suspension from the College.

The Academic Honesty procedure was developed by the Merced College Academic Senate and is administered by the Office of the Vice President of Student Personnel (Board Policy 5540). Copies are available from the Office of Student Personnel.

Conduct

The Merced College Standards of Student Conduct, as approved by the Board of Trustees, is available online. Policies affecting student conduct may be found under the links related to Board Policies and Procedures 5500. Copies also may be obtained from the Office of Student Personnel. Merced College students are expected to conduct themselves in an exemplary manner. Students are prohibited from using or possessing drugs or alcoholic beverages on the campus or at any school function held on or off campus. Students not following standards of student conduct may experience a range of disciplinary actions.

The following conduct shall constitute good cause for discipline, including but not limited to the removal, suspension or expulsion of a student.

- Causing, attempting to cause, or threatening to cause physical injury to another person.
- Possession, sale or otherwise furnishing any firearm, knife, explosive or other dangerous object, including but not limited to any facsimile firearm, knife or explosive, unless, in the case of possession of any object of this type, the student has obtained written permission to possess the item from a district employee, which is concurred in by the college president.
- Unlawful possession, use, sale, offer to sell, or furnishing, or being under the influence of, any controlled substance listed in Chapter 2 (commencing with Section 11053) of Division 10 of the California Health and Safety Code, an alcoholic beverage, or an intoxicant of any kind; or unlawful possession of, or offering, arranging or negotiating the sale of any drug paraphernalia, as defined in California Health and Safety Code Section 11014.5.
- Committing or attempting to commit robbery or extortion.
- Causing or attempting to cause damage to district property or to private property on campus.
- Stealing or attempting to steal district property or private property on campus, or knowingly receiving stolen district property or private property on campus.
- Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the college or the District.
- Committing sexual harassment as defined by law or by District policies and procedures.
- Engaging in harassing or discriminatory behavior based on disability, gender, gender identity, gender expression, nationality, race or ethnicity, religion, sexual orientation race, sex, (i.e., gender) religion, age, national origin, disability, or any other status protected by law.
- Engaging in intimidating conduct or bullying against another student through words or actions, including direct physical contact, verbal assaults, such as teasing or name-calling; social isolation or manipulation; and cyberbullying.
- Willful misconduct which results in injury or death to a student or to college personnel or which results in cutting, defacing, or other injury to any real or personal property owned by the District or on campus.
- Disruptive behavior, willful disobedience, habitual profanity or vulgarity, or the open and persistent defiance of the authority of, or persistent abuse of, college personnel.
- Cheating, plagiarism (including plagiarism in a student publication), or engaging in other academic dishonesty.
- Dishonesty; forgery; alteration or misuse of college documents, records or identification; or knowingly furnishing false information to the District.
- Unauthorized entry upon or use of college facilities.
- Lewd, indecent or obscene conduct on District-owned or controlled property, or at District-sponsored or supervised functions.
- Engaging in expression which is obscene, libelous or slanderous; or which so incites students as to create a clear and present danger of the commission of unlawful acts on college premises, or the violation of lawful District administrative procedures, or the substantial disruption of the orderly operation of the District.
- Persistent, serious misconduct where other means of correction have failed to bring about proper conduct.
- Unauthorized preparation, giving, selling, transfer, distribution, or publication, for any commercial purpose, of any contemporaneous recording of an academic presentation in a classroom or equivalent site of instruction, including but not limited to handwritten or typewritten class notes, except as permitted by any district policy or administrative procedure.

Students who engage in any of the above are subject to the procedures outlined in AP 5520 title Student Discipline Procedures.

The Student Code of Conduct (Board Policy 5500) also may be found on the Merced College web site under the link for Board of Trustees.

Copyrighted Materials, Including Music, Video and Printed Materials

The District supports the Higher Education Opportunity Act and Digital Millennium Copyright Act, which outline efforts to eliminate the illegal distribution of copyrighted material. Under the law, college administrators may be obligated to provide copyright holders with information about users of the District’s information network who have violated the law. Accordingly, students are prohibited from using the information network to illegally download and/or share music, video and all other copyrighted intellectual property. Illegal forms of downloading and file sharing as well as the unauthorized distribution of copyrighted materials are violations of the law and may subject offenders to academic sanctions from the College as well as criminal and civil penalties, including a lawsuit brought by the Recording Industry Association of America (RIAA). In addition to being illegal, file sharing drains the District’s network bandwidth, which slows computer connections for students and employees who are using the network for legitimate academic purposes and ultimately creates an unnecessary financial burden to the College. The District has developed policies with consequences to ensure that students properly use the information network and respect music and other forms of intellectual property as well as conduct responsible use of the Internet. These policies are available from the President’s Office or from the Learning Resources Center.

Crime Awareness and Campus Security

In compliance with the Federal Campus Security Act, Merced College makes an annual and a three-year security report available upon request. This report contains procedures for students and others to report criminal actions or other emergencies occurring on campus. It also includes the District’s policy in responding to such reports, a policy statement on security and access to campus facilities, and the enforcement authority of security personnel. The report also contains policies that encourage accurate and prompt reporting of all crimes to campus security and appropriate police agencies, information on programs which inform students and employees about security procedures and practices and which encourage them to be responsible for their own security and that of others, a description of programs to inform students and employees about crime prevention, and statistics on the on-campus occurrence of reported criminal offenses. Also included are policy statements on the possession, use, and sale of alcohol and illegal drugs, information on enforcement of state underage drinking laws and federal and state drug laws, and descriptions of available drug
Dress

There is no dress code at Merced College, but it is expected that a student’s dress will follow community standards.

Drug and Alcohol Free Campus

Merced College is an alcohol and drug free educational institution. In addition to being a violation of state and federal laws, Merced College Board Policies and Administrative Procedures #3550, Drug-free Environment and Drug Prevention Program, and #5500, Standards of Conduct, make the distribution, possession, use, or being under the influence of alcohol or illegal controlled substances, or offering, arranging or negotiating the sale of any drug paraphernalia [as defined in California Health and Safety Code Section 11014.5], forbidden on campus, at off-campus centers, or at campus sponsored events or activities [except as noted in Board Policy and Administrative Procedure #3560].

The following information is provided to inform the campus community of the disciplinary and/or criminal actions that can result from violations as stipulated in Board Policies and Administrative Procedures #3550 and #5500. Students are asked to review the “Standards of Conduct” section in the College catalog for details regarding legal and disciplinary sanctions for violations of these policies.

As an educational institution, we recognize the importance of providing all members of the college community with information on the effects of alcohol and drug use. Information is available on the Student Health Services website, http://www.mccd.edu/resources/health/.

If there are any questions regarding these regulations, please contact the Vice-President of Student Services.

Disciplinary Actions

In addition to the penalties stated in the Merced College Board Policies and Administrative Procedures #3550 and #5500, the Merced College Police Department will be notified of the offenses and may initiate criminal action with the Merced County District Attorney’s Office.

Health Risks

Use of controlled substances can lead to memory loss, indifference to academic achievement, impaired judgment, overdose, sudden death, liver disease, psychological disorders, and brain damage. Long-term alcohol abuse can cause ulcers, gastritis, pancreatitis, liver disease, cancer, loss of coordination, heart disease, stroke, emotional distress, sexual dysfunction, and other health problems.

Other problems associated with alcohol and other drug abuse include poor academic or job performance; relationship difficulties; a tendency toward verbal and physical violence; financial stress; injuries or accidents; and violations of the law such as driving under the influence and willfully destroying property.

Alcohol and drug abuse have significant consequences for the health and well-being of those who use, as well as those around them. If you or a fellow student has a drug or alcohol related problem, you are encouraged to contact Student Health Services at (209) 384-6045 for assistance with locating available resources within the community.

Gainful Employment Disclosure Metrics

Federal Department of Education’s regulation on Gainful Employment requires each college to provide students with Gainful Employment (GE) disclosure metrics that can be helpful when deciding where to obtain career technical education training. GE information for Merced College can be found by selecting the Gainful Employment Disclosure icon on the Merced College home page or by logging on to the following web site: Merced College Gainful Employment

Non-discrimination

The Merced Community College District prohibits discrimination on the basis of race, color, sex, religion, national origin, ethnic group identification, ancestry, age, physical or mental disability, medical condition, military service, sexual orientation, marital status, pregnancy, or any other basis prohibited by law.

The District operates in compliance with all applicable laws, regulations, and requirements related to its status as a public educational entity and the receipt of Federal and/or State funds, including but not limited to Title VI of the Civil Rights Act of 1964 and its amendments, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, the Age Discrimination in Employment Act, and the California Fair Employment and Housing Act. In so doing, the District is committed to providing equal opportunities for all individuals in employment and in all programs and activities which it conducts. Therefore, no enrolled student or District employee or applicants for enrollment or employment with the District; or others who might receive the benefits of College activities, programs, and services shall be excluded from participation in, denied benefits of, or be subject to discrimination in any process, position, program, service, or activity, on any basis prohibited by law.

Individuals who believe they have been subjected to discrimination or harassment may initiate a complaint pursuant to the District’s Board Policy 3430 (Complaints of Unlawful Discrimination), which describes the District’s rules and procedures relating to unlawful discrimination, including instructions on how to initiate a complaint, how an individual’s complaint is processed, and a description of how an individual is notified of the outcome of his or her complaint, including enforcement of corrective action, if necessary.

Individuals who seek information and/or who wish to initiate a complaint for alleged acts of discrimination or harassment are directed to contact the Director of Human Resources at (209) 384-6102. A copy of Board Policy 3430, as well as assistance with initiating a complaint for alleged acts of discrimination or harassment, may also be obtained by contacting the Director of Human Resources. The District maintains the confidentiality of all complaints of unlawful discrimination except where disclosure is required by law.

A copy of Board Policy 3430, complaint forms and other materials are available online at www.mccd.edu.

Open Enrollment Policy

It is District policy that, unless specifically exempted by statute, every course, section, or class, the average daily attendance of which is to be reported for state aid, whether offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to the College and who meets such prerequisites as may be established pursuant to Chapter II, Title 5 of the California Code of Regulations.

Parking

There are approximately 2,098 regular and 90 disabled parking spaces available for students to use. Parking lot locations are indicated on the campus map. Please note that Lot P6 (west side of campus) is designated for staff use only. There are also plenty of parking spaces in Lot P1 (Allied Health Parking Lot), and Lot P2 (Tri-College Center), which is near the new Allied Health Complex. Please note that the east side of University Avenue is for pedestrian use only.

Bikes are to be secured in designated bike racks and NOT to hand rails, trees or outside of a classroom. For more information, please review Board Policy 6750, Section 16. Furthermore, violations will be subject to impound.

Bike Rack Locations (BR):
- Administration Bldg-East
Copies of the full text of the Family Educational Rights and Privacy Act should be directed to the Registrar.

Sexual Harassment

Introduction
Education Code 66281.5(b) requires the adoption of a policy statement setting forth the District's commitment to provide an educational and work environment free from unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment.

Purpose
It is the intent of the Board of Trustees to deem as unacceptable any form of sexual harassment. Such conduct undermines the integrity of the classroom and/or the employment relationship or work/academic environment. Conduct constituting sexual harassment will not be tolerated in the District. It is understood that this policy is not intended to infringe upon Academic Freedom except to the extent provided by law.

Description
The policy applies to all aspects of employment and the academic environment, including but not limited to classroom conditions, grades, academic standing, employment opportunities, scholarships, recommendations, disciplinary actions, and participation in any community college activity.

All District employees who violate this policy may be subject to disciplinary action up to and including termination in accordance with applicable college procedures, Education Code sections, and/or collective bargaining agreements. Students who violate this policy may be subject to disciplinary measures up to and including expulsion in accordance with District policies and college procedures. Non-employees, such as sales representatives or service vendors are also covered by this policy and may be subject to corrective measures.

The District is concerned about the rights of the accused as well as the accuser and shall afford due process rights accordingly.

Definition
Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal, visual, or physical conduct of a sexual nature, made by someone from or in the work or educational setting under any of the following conditions:

1. Submission to, or rejection of, the conduct by the individual is used as a term or condition of an individual's employment, academic status, or progress;
2. Submission to, or rejection of, the conduct the individual is used as a basis of employment or academic decisions affecting the individual;
3. The conduct has the purpose or effect of having a negative impact on the individual's work or academic performance or of creating an intimidating, hostile, or offensive work or academic environment; or
4. Submission to, or rejection of, the conduct the individual is used as the basis for any decision affecting the individual regarding benefits and services, honors, programs, or activities available at or through the educational institution.

This definition encompasses two kinds of sexual harassment:

1. “Quid pro quo” sexual harassment occurs when a person in a position of authority makes educational or employment benefits conditional upon an individual's willingness to engage in or tolerate unwanted sexual conduct.
2. “Hostile environment” sexual harassment occurs when unwelcome conduct based on sex is sufficiently severe or pervasive so as to alter the conditions of an individual's learning or work environment, unreasonably interferes with an individual's academic work performance, or creates an intimidating, hostile, or abusive learning or work environment. The victim must subjectively perceive the environment as hostile, and the harassment must be such that a reasonable person of the same gender would perceive the
Sexual harassment can consist of virtually any form or combination of verbal, physical, visual or environmental conduct. It need not be explicit, or even specifically directed at the victim. Sexually harassing conduct can occur between people of the same or different genders. The standard for determining whether conduct constitutes sexual harassment is whether a reasonable person of the same gender as the victim would perceive the conduct as harassment based on sex. The determination of whether an environment is hostile is based on the totality of the circumstances, including such factors as the frequency of the conduct, the severity of the conduct, whether the conduct is humiliating or physically threatening, and whether the conduct unreasonably interferes with an individual's learning or work.

Environmental
Environmental sexual harassment is an academic or work environment that is permeated with sexually-oriented talk, innuendo, insults, or abuse not relevant to the subject matter of the class. A hostile environment can arise from an unwarranted focus on sexual topics or sexually suggestive statements in the classroom. An environment may be hostile if unwelcome sexual behavior is directed specifically at an individual or if the individual merely witnesses unlawful harassment in his or her immediate surroundings.

Implementation
This policy assigns ultimate responsibility for implementing the sexual harassment policy to the District Equal Employment Opportunity Officer. He/she shall also be responsible for insuring that other policies and procedures developed related to sexual harassment support this policy.

Retaliation
It is unlawful to retaliate against an employee or student who makes a complaint of sexual harassment, who communicates with or contacts District compliance officer(s) or regulatory agencies, or who is a potential witness or participates in any manner in a sexual harassment investigation, hearing, or proceeding.

Campus Sexual Violence Elimination (SaVE) Act
The Campus Sexual Violence Elimination (SaVE) Act was signed into law in 2013, as part of the Violence Against Women Act (VAWA) Reauthorization. This law mandates increased transparency on campus about incidents of sexual violence, guarantees victims enhanced rights, sets standards for disciplinary proceedings, and requires campus-wide prevention education programs. The Campus SaVE Act amends the Clery Act, which addresses campus sexual assault policies within the Higher Education Act of 1966. For comprehensive information regarding sexual assault prevention and reporting, as well as campus and community resources, please refer to the Merced College Violence Prevention and Advocacy website at www.mccd.edu/safety/save. You may also contact Campus Police at (209) 384-6054, or Student Health Services at (209) 384-6045.

Smoke-free District
The Merced Community College District is a smoke-free district. Smoking, the use of tobacco products, and/or the use of unregulated nicotine products (e.g. e-cigarettes) by students, staff, and visitors on any owned, rented or leased Merced Community College District property is prohibited. Violators of Board Policy/Administrative Procedure 3570 may be subject to fines. BP/AP 3570 outlines the policy and procedure for enforcement of the smoke-free District policy.

Statement of Informed Consent
Research, including assessment and evaluation of the teaching and learning process, will be conducted at Merced College in established or commonly accepted educational settings and will involve normal educational practices.

Information gathered relating to student knowledge, skills, attitudes, and behaviors will be kept anonymous and/or confidential, and participation shall expose students to no or minimal risk of harm. By enrolling and attending Merced College courses, students have volunteered as subjects, have been fully informed, and have given their consent to participate in education-based research. Students will be fully informed should the research parameters change. The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law regulating the privacy of student records and the obligations of the institution, primarily in the areas of release of the records and the access provided to those records. Students are protected under both FERPA law and the Human Subjects Review process.

References:
Merced College Board Policy 5040
Merced College Administrative Procedure 5040, 5045
Education Code Sections 76200, 76222, 76232
Title 5, Section 54600, 54630
Family Educational Rights and Privacy Act (FERPA)
HHS - Office for Human Research Protections

Student Equity
Merced College complies with California Community College Board of Governors’ regulations related to equity and historically underrepresented groups of students. Student equity activities include research and evaluation of programs for underrepresented students, establishing goals and schedules for implementing these programs, and identifying funding sources for these services. Copies of pertinent reports are available upon request from the Office of Grants and Institutional Research and the newly formed Office of Student Equity and Success.

Student Right-To-Know Disclosure
Completion Rate: 22.06%
Transfer Rate: 5.16%
(From 2013 COHORT Data)
In compliance with the Student Right-to-Know and Campus Security Act of 1990 (Public Law 101-542), it is the policy of our college district to make available its completion and transfer rates to all current and prospective students. Beginning in Fall 2013, a cohort of all certificate-, degree-, and transfer-seeking first-time, full-time students were tracked over a three year period. Their completion and transfer rates are listed above. These rates do not represent the success rates of the entire student population at the College nor do they account for student outcomes occurring after this three year tracking period.
Based upon the cohort defined above, a Completer is a student who attained a certificate or degree or became ‘transfer prepared’ during a three year period, from Fall 2013 to Spring 2016. Students who have completed 60 transferable units with a GPA of 2.0 or better are considered ‘transfer prepared’. Students who transferred to another post-secondary institution, prior to attaining a degree, certificate, or becoming ‘transfer prepared’ during a five semester period, from Spring 2014 to Spring 2016, are transfer students.
Link: http://srkt.cccd.edu/531/12/index.htm

Section 504 of the Rehabilitation Act of 1973
Section 504 is also known as the “Access Law.” It provides program and physical access for students with disabilities. The law states that: “No otherwise qualified individual in the Unites States...shall, solely by reason of disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” When providing aid, benefit or service, public entities must provide opportunities for individuals with disabilities to participate that are as effective as the opportunities provided to others.

MCCD 504 Coordinator: Dean of Student Services
Phone: (209) 384-6192
Address: Merced College; 3600 M Street; Merced, CA 95348
The procedures for filing a complaint may be obtained from persons listed above.

**Seccion 504 del Acto de Rehabilitacion de 1973**

Seccion 504 es parte de la Ley Federal de Rehabilitacion de 1973. Otros leyes incluyen El Titulo VI de la Ley de Derechos Civiles de 1964, Titulo IX de las Enmiendas de Educacion de 1972, y la ley America con Discapacidades. Los Estados Unidos proporciona acceso a programas y fisicamente para personas que tienen discapacidades y están calificados sin embargo a recibir y participar en el colegio en modos diferentes por acomodaciones educacionales. Además, la ley estipula: No se permite exclusion de cualquier persona quien tiene discapacidades de actividades del colegio solamente por razon de tener discapacidades. Además, la ley prohíbe denegación de beneficios, discriminacion y exclusion de participacion en cualquier programa o actividad que recibe asistencia financiera del gobierno federal. Además, cuando agencias publicas proporcionan ayuda, beneficios, o servicios, las mismas agencias tienen discapacidades la responsabilidad legal a proporcionar oportunidades a individuales con en temas de participacion en actividades que a lo menos son de misma eficazmiénto a las ofrecidos a personas quienes no tienen discapacidades. Para mas información, contacte:

MCCD Cordinador, Seccion 504
Teléfono: (209) 384-6192

Pasos de someter una reclamacion: obtenga una forma o la secretaría de él.

**Tshooj Cai 504 Ntawm Txoj Cai Rehabilitation Xyoo 1973**

Tshooj cai 504 yog hais bog “Cai Muaj Feemcuam.” Nws qhib kev rau cov tub ntxhais kawn ntaww kws muaj disabilities kom muaj feemcuam koom tau. Txoj cai hais tias: "Tsis pub tshem cias ib leej neeg twg haui teb chaws Amelika....vim kev disability, tawn ntawm kev muaj feemcuam, cias kev pab, lossis cias bxwv bxhua lub luag dejnum uas tau txais tseemfwv kev pab nyiaj txiag."

Thaum muab kev pab, kev txhawb lossis kev qhia, tseemfwv cov koomhaum yuav tau muab kev vajhaum sib luag rau cov neeg muaj disabilities kom muaj feemcuam sib npaug zos il lwm tus.

Tus Thawj Txuas Lus ntawm Tshooj Cai MCCD 504 yog Xovtooj: (209) 384-6192
Chaw Nyob: Merced College; 3600 M Street; Merced, CA 95348

Nej tuaj muab tau cov bheejbxheem teev kev tsis txaus siab ntawm cov neeg muaj npe raws li saum nov.

**Title IX**

The College’s Title IX coordinator is the Human Resources Director and can be reached at (209) 384-6102. Inquires concerning the application of Title IX, which prohibits sex discrimination may be referred to the Title IX coordinator, or to the Office for Civil Rights, U.S. Department of Education, 50 Beale Street, Ste 7200, San Francisco, CA 94105, (800) 421-3481 (Washington DC); (415) 486-5555 (voice) or (415) 586-5570 (fax).

El coordinador del Título IX del Colegio es el supervisor de Recursos Humanos y se puede llamar al (209) 384-6102. Las consultas relativas a la aplicación del Título IX, que prohíbe la discriminación sexual, puede ser referido al coordinador del Título IX, o en la Oficina de Derechos Civiles, U.S. Departamento de Educación, 50 Beale Street, Ste 7200, San Francisco, CA 94105, (800) 421-3481 (Washington DC); (415) 486-5555 (voice) or (415) 586-5570 (fax).

Tus Ceev lub luag Title IX hauv Tsev Kawn Ntaww yog Human Resources Supervisor, (209) 384-6102. Yog xav paub bxog lub luag Title IX, uas txwv tsis pub caij poj niam los yog txiv neej, hu tuaj tau rau Tus Ceev lub luag Title IX, los yog lub Hoobkas ntawm Pejxeem Cov Cai, U.S. Department of Education, 50 Beale Street, Ste 7200, San Francisco, CA 94105, (800)
Admission & Registration

Who Can Be Admitted
Any person who meets at least one of the following requirements is eligible to attend Merced College:
- Has graduated from an accredited high school with either a diploma or a high school certificate of completion.
- Has passed the California High School Proficiency exam.
- Possesses a GED.
- Is a non-high school graduate, 18 years of age or older, who is no longer attending high school and is able to benefit from instruction.

Persons who are under the age of 18 and/or currently attending high school may be admitted as a special part- or full-time student with the permission of one’s school principal, with parental consent, and with the approval of a college administrator. (See administrative Procedure 5011).

Semester System and Units
Merced College classes follow the semester system, and the majority of classes cover a period of 18 weeks. Students earn the number of units specified in the catalog upon successful completion of the course. At Merced College, as in universities, a “unit” represents one hour per week for one semester of the student’s time in a lecture class, or three hours in laboratory or other exercise class not requiring homework for preparation. A normal schedule of 15 college units presupposes that the average student will devote approximately 45 hours per week to college classes and preparation.

Because varsity sports require no academic homework assignments, they require 10 hours per week of activity for three units of credit. There are also certain courses that are regulated by outside agencies (primarily for skill certification in vocational areas) in which additional mandated hours are required but for which additional student units are not awarded.

Course Numbering
All courses offered at Merced College are considered to be lower division. No upper division credit is granted. Course numbers are assigned as follows:
- Courses numbered 1-49 are certified as transferable to the California State University system. Other four-year institutions may accept courses numbered 1-49 as transferable, but students transferring to colleges outside the CSU system should consult the catalog of that college and confer with a counselor.
- Courses numbered 50-79 and independent letters such as A, B, and C designate courses that apply only to A.A./A.S. Degrees and to certificate programs and are not normally transferable to four-year institutions.
- Courses numbered 80-89 designate intermediate non degree-applicable basic skills courses OR certain occupational and activity credit courses. These courses do not apply to the Associate Degree or transfer programs.
- Courses numbered 90-99 designate courses that are primarily non degree-applicable basic skills courses that do not apply to the Associate Degree or transfer programs.

California State University breadth areas and Intersegmental General Education Transfer Curriculum (IGETC) areas are noted in parentheses ( ).

Course Descriptions
Courses are listed alphabetically at the end of the discipline information. Each course is listed by number with the course title, the number of units, and the number of hours of lecture and laboratory instruction. Preceding each description are the prerequisites and/or corequisites of the course. All credit courses listed in this catalog are graded courses and meet the definition of “college credit courses” as stated by Section 55002, of Title 5 of the California Code of Regulations.

It is District policy that unless specifically exempted by statute, every course, course section or class, the average daily attendance of which is to be reported for state aid, whenever offered and maintained by the

District, shall be fully open to enrollment in and participation by any person who has been admitted to the College and who meets the prerequisites as may be established pursuant to Chapter 11, Division 2, Part VI, Title 5 of the California Administrative code, commencing with Section 58108.

Application
New or former students applying to Merced College must complete an application in order to enroll in classes. Former students are those who have had a lapse of at least one semester between enrollment periods. Applications may be submitted online through Open CCC at http://www. openccapply.net/Portal. New students should bring a copy of prior transcripts, whether from high school or from another college attended. Students who are in grades K-12 must re-apply each semester they attend.

Student Success and Support Program (Matriculation)
The Student Success and Support Program (SSSP) refers to the services Merced College provides you from your point of entry through the completion of your program of study. The State of California mandated SSSP services are the orientation, assessment, counseling and advisement (including the abbreviated student education plan and comprehensive student education plan), and follow up and referral. The intent of these services is to increase your opportunity for success in your academic pursuits. You are required to become a matriculated student unless you meet the exemption criteria.

Merced College Responsibilities
Within the Student Success and Support Program Merced College provides an orientation to college programs, services, and procedures; an assessment of basic educational skills and career goals; pre-enrollment counseling/advising and course selection; a suitable curriculum or program of courses; quality instruction; and continuous follow up on student progress with referral to support services when needed.

Student Responsibilities
As part of the Student Success and Support Program, students agree to express a broad educational intent at the time of admission; declare a specific educational objective within a reasonable period of enrollment; complete the placement test or other assessments; confer with counselors for registration approval and discussion of educational and vocational choices; attend classes (including orientation) and complete assigned course work; seek out support services as needed; and complete courses and maintain progress toward an educational goal.

You are a matriculated student if you have completed the orientation, assessment process, and have met with a counselor to complete an abbreviated or comprehensive student education plan.

You are an exempted student if you have an AA/AS or higher degree (and can provide documentation); are enrolling at the college for a reason other than career development or advancement, transfer, attainment of a degree or certificate of achievement, or completion of a basic skills or English as a Second Language course sequence; are enrolling 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; has enrolled at the college as a special admit student (K-12).

As an exempted student, you are not required to participate in any SSSP service. However, you may participate in any or all of these services if you choose to do so.

To become a matriculated student, you must complete the following SSSP service. To begin the matriculation process visit our website at www.mccd.edu and click on Academics - Apply Today. The steps are listed as follows:
- Apply - complete our online application
- Orient - complete our online orientation
- Assess - complete the assessment requirements
- Plan - sign up for a new student planning session.
Note: Please identify any special needs accommodations required when you make any of the above appointments.

- Complete the English and Math assessments. Your student ID card is required. Retaking assessment tests is not allowed until your subsequent semester of enrollment, except in rare circumstances when approved by a counselor. Once you have begun a math or English course, you cannot retake the assessment tests. The Assessment Center is located on the first floor of the Lesher Student Services Center.

- Bring your assessment information and high school and/or other college transcripts to your new student planning session.
- Register for classes based on your priority group date on the Merced College website or at the registration counter in the Lesher Student Services Center.
- Pay fees, according to the fee payment schedule in place at the time you register, at the Student Fees counter in the Lesher Student Services Center.

### Registering for Courses

All students without a hold on their registration may register for classes within their assigned priority registration group online either through WebAdvisor, or student planning, both of which can be accessed through the Merced College Portal at https://mc4me.mccd.edu. Students may also register in the Open Enrollment period directly following Priority Registration. Students may register in person at either the Merced or Los Banos campus Admissions and Records office.

Priority in registration is given per Board Policy BP5055 and Administrative Procedure AP5055. New and returning students must complete an admissions application before processing their registration forms.

The class schedule may be accessed online through the Merced College Portal/WebAdvisor Registration or Academic Planning or from the Merced College Website www.mccd.edu/getstarted/search-classes.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Summer/Fall 2018</th>
<th>Spring 2019</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Begins</td>
<td>Wednesday April 11, 2018</td>
<td>Wednesday October 17, 2018</td>
<td>Students who are qualifying Foster Youth or former Foster Youth¹ or Homeless Youth¹¹ at Merced College or Students who are qualifying Veterans, or students who are receiving services from EOPS, DSPS, CalWORKs or Tribal TANF and who: ● have completed orientation, assessment, and developed a student education plan (abbreviated education plan if less than 15 units completed and comprehensive education plan if 15 units or more completed) at Merced College ● have completed less than 100 degree applicable units at Merced College ● do not have 2 or more continuous semesters of probation at Merced College immediately prior to semester enrolling</td>
</tr>
</tbody>
</table>

| Group 2-A | | |
| Registration Begins | Monday April 16, 2018 | Monday October 22, 2018 | Athletes, International Students, students with a 3.5 GPA or better and all continuing students who have completed or are in-progress of completing 30 - 75 units at Merced College prior to semester enrolling and who: ● have completed orientation, assessment, and developed a student comprehensive education plan at Merced College ● have completed less than 100 degree applicable units at Merced College ● do not have 2 or more continuous semesters of probation at Merced College immediately prior to semester enrolling |

| Group 2-B | | |
| Registration Begins | Monday April 23, 2018 | Monday October 28, 2018 | New students, including graduating high school seniors, who: ● have completed orientation, assessment and developed a student education plan (abbreviated education plan if less than 15 units completed and comprehensive education plan if 15 units or more completed) at Merced College |

| Group 2-C | | |
| Registration Begins | Monday April 30, 2018 | Monday November 5, 2018 | Returning students and all other continuing students at Merced College prior to semester enrolling and who: ● have completed orientation, assessment, and developed a student education plan (abbreviated education plan if less than 15 units completed and comprehensive education plan if 15 units or more completed) at Merced College ● have completed less than 100 degree applicable units at Merced College ● do not have 2 or more continuous semesters of probation at Merced College immediately prior to semester enrolling |

| Group 3 | | |
| Registration Begins | Monday May 14, 2018 | Monday November 12, 2018 | All other students (i.e. Special Admit K-12 students, students who have completed 100 or more degree applicable units, academic enrichment, students not completing orientation, assessment and/or education plans, etc.) |

¹For purposes of this section, “foster youth” means a person who is currently in foster care, and “former foster youth” means a person who is an emancipated foster youth and who is up to 24 years of age.

¹¹Homeless youth means a student who has been verified at any time during the 24 months immediately preceding the receipt of his or her application for admission by a postsecondary educational institution.
Counseling & Course Advisement
Students wishing to register in college course work with a prerequisite not completed at Merced College may be required to meet with a counselor or advisor for approval. The counselor can help determine one’s preparedness for courses, determine whether one has met prerequisites, and, when appropriate, assist with the preparation of a “prerequisite challenge” (see below).

These sessions can also provide information regarding helpful College resources and support services and allow counselors to make recommendations regarding the number of units one should consider taking given work/life obligations. Counselors can also advise students on other personal, social, educational, and career-related issues which may interfere with their course of study.

Prerequisites and Corequisites
Merced College provides you with a wide variety of academic assistance and personal support, but it is up to you to know when you need help and to seek it out. It is your responsibility to keep informed and to obey campus rules, regulations and policies that affect your academic standing as a Merced College student. Meeting deadlines, completing prerequisites and satisfying the degree and certificate requirements, as found in this catalog, are all part of your responsibility as a student.

In both the college Catalog and the Schedule of Classes, skills are listed in the form of prerequisites, two types of corequisites, limitations on enrollment, and advisories. These skills are normally given in the form of a course, the successful completion of which will provide students with the necessary skill(s). A definition of each of these terms is listed below:

Prerequisite
This represents a set of skills or a body of knowledge that one must possess prior to enrolling in a course. Without these skills a student will unlikely receive a satisfactory grade in the course or succeed in the program. Students will not be permitted to enroll in these courses and programs without the prerequisite.

One-way Corequisite
This represents a course whose content is dependent on a main course; however, the contents of the main course can stand alone. These courses do not necessarily need to be taken during the same semester.

Two-way Corequisite
These are paired courses that are part of the same sequence and must be taken during the same semester.

Limitation on Enrollment
This is an audition or try-out requirement associated with public performance or intercollegiate competition, honors courses, safety issues, or blocks of courses intended for a cohort or group of students (such as a nursing program).

Advisory
This is a course, skill, or status which is strongly recommended but not required. Students with the advised skill will probably have a better understanding of the course material.

The most common way of satisfying a required or advised skill is by completing the prerequisite course with a grade of “C” or better. Those wishing to enroll in a course with a prerequisite and who have not completed the prerequisite course with a grade of “C” or better should refer to the challenge process below.

Challenging a Prerequisite or a Corequisite
Students who believe they have met the requirements (or if one of the conditions below exists) may challenge a prerequisite. A challenge petition can be obtained from the Counseling Office. The form will explain what must be done. Students may challenge the criteria for a course if they:

1. Believe they have the knowledge or ability to succeed in the course but have not completed the pre- or corequisite;

2. Believe they will be subject to undue delay in reaching the goal of their educational plan because the pre- or corequisite course has not been made reasonably available, or the course has been limited to a special group of students and there are no other courses which would fulfill the requirement. (Students must attach a copy of their “Student Educational Plan” to be eligible to file a challenge based on this condition.);

3. Believe it is unlawfully discriminatory or is being applied in an unlawfully discriminatory manner.

Supporting documentation MUST be attached to all challenges submitted. Challenges may be filed any time during the registration period. Upon completion of the challenge procedure, the challenge will be reviewed and a determination will be made within five working days. The student will be advised of the determination. For more detailed information on the challenge process, call the Counseling Office at (209) 381-6478.

Request for Review of an Upper Division Course to Meet a Lower Division requirement
Students wishing to receive course credit for previously completed upper division work must apply to Merced College for approval. One may request credit for a major, a competency, or a general education breadth. Students must submit to the evaluator, located in Lesher Student Services Center, the following items:

- Completed Petition form
- An official transcript from the college
- A catalog description of the course

Applications are due during the application for graduation window the semester prior to anticipated graduation or needed certification.

For Major: Course substitution: Once received in Admissions, paperwork will be routed to the area dean. Approval requires the signature of two faculty members in the discipline and the area dean.

For Competency: General Petition: Once received in Admissions, paperwork will be submitted to the Academic Exceptions Committee (AEC) for approval. Approval requires the signature of a discipline faculty member for the competency requested and the chair of the AEC committee as well as the Dean of Student Services.

General Education Breadth: General Petition: Once received in Admissions, paperwork will be submitted to the Academic Exceptions Committee (AEC) for review. Approval requires the signature of the chair of the AEC committee as well as the Dean of Student Services.

The decision of the faculty is final; no appeal is available.

Petitions not following the routing process will be declined.

English and Math Requirements
Those pursuing an associate degree will have English and math requirements and should begin to fulfill these requirements as early in their college career as possible.

Some Courses Have Laboratory Requirements
Some courses, such as anatomy, biology, chemistry, and child development, require lab sections in addition to lecture sessions. Students must register in both the lecture and the lab section for these courses at the time of registration.

Some Programs Are Restricted
(Limitations on Enrollment)
The following programs require additional criteria: Certified Nursing Assistant, Home Health Care Aide, Licensed Vocational Nursing, Radiologic Technology, and Registered Nursing.

For more information, speak with an Allied Health counselor in the Guidance Center (209-384-6478) or contact the Allied Health Division Office (209-384-6371).

209.384.6000
Safety in Allied Health Programs
Programs offered by the Allied Health Division that result in certification or licensure in health occupations include required courses of clinical training conducted at clinics, hospitals, and other patient care treatment centers. Students enrolled in clinical training settings are expected to maintain standards of practice that ensure the safety of clients and personnel in the clinical agencies. Safety is defined as meeting the objectives of a course by the times designated for each objective and to the degree of mastery designated.

A student will be dismissed from clinical training courses for unsafe behavior related to the objectives for the course in which currently enrolled, or to the objectives of previously completed clinical laboratory courses.

Requirements for Athletics Courses
Merced College is a member of the Central Valley Conference (CVC) as authorized by the California Community College Athletic Association (CCCAA). Other Conference schools: Cerro Coso Community College; College of the Sequoias; Columbia College; Fresno City College; Reedley College; Porterville College; Taft College; West Hills College; and West Hills, Lemoore. The CCCAA establishes rules of student-athlete eligibility and assigns “host” conferences when necessary. Eligibility to compete must be confirmed prior to student-athlete participation.

Merced College offers competition in the following sports: men’s football, water polo, basketball, baseball, swimming, and track & field; women’s volleyball, water polo, basketball, softball, swimming, and track & field.

To participate in varsity competition, a student-athlete must adhere to CCCAA rules for athletic eligibility. These include:
1. Regular attendance, beginning no later than four weeks after the beginning of the semester.
2. Active enrollment in at least 12 units during the season of sport, nine of which counts toward remediation, degree, or certificate.
3. Completion of at least 24 units with a minimum 2.0 GPA from the beginning of the first semester of competition to the beginning of the second.

Regulations are subject to change by the CCCAA legislative process.

Minimum and Maximum Unit Load
Students should plan to enroll in 15 units of course work each semester to earn a degree or certificate in a timely manner.

Those wishing to enroll for more than 19 units in a regular semester or 9 units in a summer session must have completed a college term of at least 15 units with a minimum 3.5 GPA. A request for excess units must be approved by the dean of Student Services.

To qualify for one of the categories listed below, students must carry a minimum course load in a fall or spring semester as follows:
- Full-time Student: 12 units per semester.
- International Student: 12 units per semester.
- Work-Study Student: 12 units per semester.
- Social Security, California State Disability, and P.L. 674 Students: 12 units per semester.
- Military Benefits: Full-time (12 units per semester); three-quarter time (9 units) half-time (6 units).
- Student Body Officer: 12 units per semester.
- Varsity Athlete: 12 units, and P.E. if required.
- Cooperative Education: Total of 7 units per semester.

There is a Limit on Nondegree-Applicable Basic Skills Courses
Students are limited to a total of 30 units in non degree-applicable basic skills courses (i.e., courses that are not college-level). Students who have completed a total of 26 units of non degree-applicable basic skills course work, excluding ESL courses, must apply for a waiver of the 30-unit limitation to continue in remedial course work. Petitions and procedures are available at the Admissions and Records office.

Student Progress Monitoring
Merced College monitors the academic progress of its students and communicates this information to enrolled students. Each term students fail to make satisfactory progress (2.0 GPA) they are placed on probation, as are students who have withdrawn from more than 50 percent of the courses in which they have enrolled. Students on probation may have additional restrictions placed on them.

Auditing a Course
Students can audit a course only if there is space available in the class and with the instructor’s permission. Any prerequisites established for the course must be met.

Students can register to audit a fall or spring full-term course after the first week of instruction, or for a short-term or summer session course after the second class meeting. The per-unit fee for auditing is charged unless a student is enrolled in at least 10 units at the time of applying to audit a class. Students who are already enrolled in at least 10 units may audit up to three units free of charge. The audit fee is non-refundable. Board Policy 4070/AP4070.

Once enrolled as an auditor of a course, a student may not enroll in that course for credit during the same semester, and may audit a course only once. An audited course will not be posted on one’s permanent academic record; however, as an auditor, students will be expected to attend regularly and may participate in class activities, take examinations, and write papers with the instructor’s consent.

If a student is enrolled only as an auditor will have restricted use of some College facilities and services. Although use of the library is permitted, audit students may not check out library materials, have access to the library's periodicals or any instructor materials placed on reserve. There will be restricted use of Student Health Services and there will be no access to the College’s Employment Referral Service.

Changing Your Schedule
Adding a Fall or Spring Class
Students who have completed their steps to registration and have no holds may add any class that they have met the pre-requisite requirement for through WebAdvisor or Student Planning up until the first class meeting of that course. To add a class in person, obtain a Schedule Request form in the Admissions and Records Office. Fill in the Course Registration/Adds section. Students are required to obtain a counselor’s signature if they are on probation or if they are trying to register in a course which has a prerequisite and the student is not currently enrolled in the prerequisite or if he/she has not successfully completed the prerequisite at Merced College.

From the first day of the semester through the end of the third week of the semester, students may add into a class by obtaining the instructor’s signature on a schedule request add form. Many Merced College classes have waitlists for classes that have full enrollment. Instructors will add from the list of waitlisted students first. Because late registering students may be unable to succeed due to missing instruction time, beginning with the fourth week of instruction, students must also obtain the approval of a dean of instruction.

Dropping a Fall or Spring Class
It is the student’s responsibility to drop any class that they do not intend to complete. Classes may be dropped at any time a student is eligible for registering. Students with no holds can drop classes through WebAdvisor, Student planning or in person in Admissions and Records.

If a class is dropped within the first three weeks of an 18-week course, it will not appear on the student’s permanent record. A grade of “W” will be placed on the student’s permanent record for classes dropped after the third week and before the end of the fourteenth week of a regular semester. (See “withdrawal” in the section on grading.)
week drops are not allowed and students must be given the letter grade they have earned for the course.

Instructors may, but are not required to, initiate class drops if a student has not attended class or if attendance has dropped below standard (see Attendance Policy). If dropped by the instructor, students will receive a permanent record entry based on the above time periods.

Adding and Dropping Summer Classes
Adding a Class: Students who have completed their steps to registration and have no holds may add any class that they have met the pre-requisite requirement for through WebAdvisor or Student Planning up until the first class meeting of that course. From the first day of the semester through the end of the first week of the semester students may add into a class by obtaining the instructor’s signature on a schedule request add form. Many Merced College classes have waitlists for classes that have full enrollment.

Instructors will add from the list of waitlisted students first. From the beginning of the second until the end of the third week, students can add a class with the approval of the instructor and the dean of Instructional Services. Classes will not be added after the third week.

Dropping a Class: Students with no holds can drop classes through WebAdvisor, Student Planning or in person in Admissions and Records. Classes dropped during the first week of classes will not be shown on permanent records. For the second through the fifth week, a “W” - withdrawal - will be recorded on the student’s permanent record. After the fifth week, drops are not allowed and students must be given the letter grade they have earned for the course.

If You Withdraw from the College
Total withdrawal from the College is a student responsibility and can be accomplished by completing the Course Drops section of the Schedule Request form in Admissions and Records office for all of your courses or by completing the drop process for all classes through WebAdvisor or Student Planning which can be accessed through the Student Portal. All outstanding debts owed to the College must be paid and all books or other materials on loan from the College must be returned.

Tuition, Fees, and Refunds
A California State enrollment fee is charged per unit for all students. This enrollment fee is subject to change by the State Legislature. Enrollment fees are due at the time of registration.

For non-resident students, this enrollment fee must be paid in addition to the non-resident tuition fee. (See Residency and Tuition below.)

The cost of textbooks and supplies needed for courses is dependent upon the selected courses and may vary widely. Textbook lists all information and prices are posted at the Bookstore web site at www.mercedcollegebookstore.com prior to any registration period.

IT IS THE STUDENT’S RESPONSIBILITY TO REQUEST A REFUND. REFUND APPLICATIONS ARE AVAILABLE FROM THE STUDENT FEES OFFICE.

Listed below are the various student fees, charges, and the refund policy for each. Fees may be charged or changed without notice.

REQUIRED:
- California State Enrollment Fee: $46 per unit
- Non-resident Tuition: $208 per unit ($208 for summer), plus enrollment fee. Tuition charges are subject to change beginning with the summer session each year.
- International Student Insurance: Approximately $600 per year is required; other insurance plans may be acceptable. Refund Policy: Refunds are in accordance with the insurance company’s policies.
- Health Fee*: $17 per semester ($14 for summer) which includes campus accident and injury insurance coverage; community resource information, basic health and wellness services and information; short term personal counseling services.
- Student Rep Fee**: $1 per semester (no fee for summer). Fee is used to support student advocacy at the local, state and national levels.
- Student Body Fee***: $5 per semester (no fee for summer). Fee is used to support campus clubs, events, activities, and campus based programs that will benefit the student population. Examples of supported programs are scholarships, multi-cultural campus events, and community resource outreach.

*Ed Code Section 76355 allows exemption from the Health Fee solely to those students meeting the following criteria:
1. Indentured apprentice enrolled in apprenticeship classes only
2. Those who depend exclusively on prayer for healing (appropriate documentation must be filed)

Health Fee Waiver forms available at the Student Fees Office. This form must be submitted by the end of the second week of the semester. Please contact the Student Fees Office for more information.

**Ed. Code Section 76060.5 allows the Students to request a waiver of this fee for religious, political, moral, or financial reasons.
1. Fee is used to support student advocacy at the local, state and national levels.

No fee for summer session.
Student Representation Fee Waiver forms are available at the Student Fees Office or ASMC. This form must be submitted by the end of the first week of the semester.

***Per California Community College Student Fee Handbook section 4.3 states that this fee is optional to students:
1. Fee is used to support campus clubs, events, activities, and campus based programs that will benefit the student population. Examples of supported programs are scholarships, multi-cultural campus events, and community resource outreach.

Student Body Fee Waiver forms are available at the Student Fees Office or ASMC. This form must be submitted by the end of the first week of the semester.

ADDITIONAL:
- Transcript Fee:
  The first two transcripts are free; additional copies are $5 each. Please allow 10 working days from the receipt of your request. Next business day service may be available for pick-up or mailing for an additional charge of $10, but certain restrictions apply. Call (209) 384-6193 for more information. Refund Policy: No refund available.
- Parking Fee:
  $20 per auto ($10 for summer) per semester or $1 per day.
- Child Care:
  As arranged per child by semester contract.
  Refund Policy: If services are cancelled with a two-week notice, a refund may be obtained for the remainder of the contract.
- Auditing Fee:
  The per-unit fee for auditing is charged unless students are enrolled in at least 10 units at the time they apply to audit a class. Students already enrolled in at least 10 units may audit up to three units free of charge. The audit fee is non-refundable.
- Return Check/Stop Payment Fee:
  $30 per returned item. Refund Policy: No refund available.
- Subpoena Fee:
  $15 per request. Refund Policy: No refund available.
- Duplicate Diploma Fee:
  $10 per request. Refund Policy: No refund available.
- Credit by Exam:
  The fee is equal to the enrollment fee required if registering for the
Refund Policy
The general refund policy covers the following fees: enrollment fees, state health fees, parking fees, student body fees, student representation fees, and non-resident tuition. Students may apply for a refund if withdrawing from courses within the first two weeks of a full semester (18-week) course or, in the case of non-18-week courses, before 10 percent of the class meetings have passed. After the second week of a full-semester course, or after 10 percent of the class meetings have passed on a non 18-week course, no refunds are available. Any additional classes added after the respective refund period will incur a financial responsibility.

Outstanding Debts Owed to the College
Students owing an outstanding debt to the College will have a hold placed on their academic records at the Admissions and Records office. Ordering transcripts and the issuance of a diploma will be withheld until the student clears the hold by paying the outstanding debt in full. A student’s ability to register for classes will be restored after having paid the debt in full or setting up a payment plan with the College. To pay the debt in full or arrange a payment plan, contact the Student Fees Office at (209) 384-6219 (Merced) or (209) 826-3431 (Los Banos). Credit card payments can be made online at www.mccd.edu/makeapayment.

Residency & Tuition
Establishing California Residency
To avoid paying non-resident tuition, you must have resided in California for at least one year and one day prior to the opening date of the semester or summer session in which you are enrolling. You must also have satisfied at least three acts of intent prior to the one year and one day waiting period. Documentation must be valid, legible, and cover the one year and one day before the first day of the enrolling semester time period. These acts may include, but are not limited to, obtaining a California driver’s license, registering a motor vehicle in California, registering to vote in California, owning California property, or having one’s belongings in California. You must also show evidence that California income taxes have been or are being paid (unless you are on public support). A complete explanation of California residency laws and regulations may be obtained in the Office of Admissions and Records.

If you do not qualify for California residency, you must pay non-resident tuition.

To Be Reclassified as a Resident:
Upon completion of the one year and one day requirement and being previously classified as a non-resident, students may obtain the forms from the Office of Admissions and Records for reclassification as a California resident. Reclassification has the additional requirement of financial independence from parents if they are non-California residents.

Military Waiver of Non-resident Tuition
Members of the U.S. armed forces on active duty in the State of California (and have not been assigned to California for educational purposes) are exempt from non-resident tuition. There is no requirement to establish California residency; however, one must be on active duty at the time they are admitted to the College to qualify for this waiver. Upon separating from the military, the student will be required to provide evidence of intent to establish residency in California at least one year prior to the admittance date.

Non-resident Veterans (AB13 2014)
Eligibility for nonresident tuition exemption contact Admissions and Records. Dependents of non-resident military personnel are entitled to an exemption from non-resident tuition until they have established residency as stated in “Establishing California Residency” above.

Residency Status for Refugees and Undocumented Aliens
New arrivals from countries approved for refugee status must reside in California one year and must hold an I-181 or an “Alien Registration Card” (green card) before applying for residency status.

Refugees not meeting the above requirements will be considered a nonresident and must pay nonresident tuition. Eligible California high school graduates may qualify to pay resident tuition under the California Nonresident Tuition Exemption law (AB 540).

The California Community College Chancellor’s Office has ruled that undocumented aliens are to be classified as non-residents.

International Students
It is the philosophy of Merced College to encourage the attendance of international students to enrich and broaden the educational experiences of all students. With this philosophy as a basis, the Merced College International Student Policies encompass the following guidelines:

- A maximum number of international students equal to 5 percent of the previous year’s full-time equivalent enrollment may be admitted to Merced College.
- Discretion is used in selecting applicants to ensure that there is a balance of international students from various countries of the world.
- International student eligibility is based on meeting the application requirements and English language proficiency (TOEFL 450) by the semester deadline.
- Upon acceptance to the International Student Program, a student is issued an I-20 immigration form that enables the student to apply for his/her student visa.

To apply for admission under the International Student Program, write to the Program Assistant requesting an application (there is an application fee). Once admitted to Merced College as an international student, nonresident tuition plus state enrollment fees must be paid. Financial aid is NOT available to international students. By the census date of each class fees are due in full or a payment plan must be set up. Fees must be paid in U.S. currency.

Attendance & Grading

Attendance Policy
Regular attendance and consistent study are the two factors which contribute most to success in college work. College students are expected to attend all sessions of the classes in which they are enrolled. Failure to attend class can result in a lower grade or in being dismissed from a class. Priority in a class is established at the time of class registration. Registering for and failing to attend the first class meeting will forfeit any priority in that class and students may be dropped from the roll in order to accommodate other students wishing to register in the class.

If, in the opinion of the instructor, a student’s absences in a specific class would prevent the successful completion of the course requirements, the student may be dropped from the class. In the event of extenuating circumstances such as a verified illness, accident or conditions beyond your control, the instructor may allow the student to continue under special arrangement.

Grade Scale
In a course of instruction for which grades are awarded, the instructor of the course will determine the grade assigned using the following grade scale:

<table>
<thead>
<tr>
<th>Symbol Definition</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>D</td>
<td>Passing, less than satisfactory</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
</tr>
</tbody>
</table>
Assigning and Removing a Grade of Incomplete

A written record containing the conditions for removal of the “I” is to be completed by the instructor at the time that grades are submitted to the Admissions and Records office. If the conditions for removal are not completed after one semester, the grade to be assigned must be part of this record. A copy of the written record will be given to the student and one will be filed with Admissions and Records.

The required work will be evaluated and a final grade will be assigned if the student meets the conditions within the one semester allowed. Students may petition for a time extension due to unusual circumstances.

Taking Courses on a Pass/No-Pass Basis

Students are allowed to earn a maximum of 12 units attempted on a pass/no-pass basis. There are certain courses in which all students are evaluated on a pass/no pass basis only. These courses are specified in the course description in this catalog. All courses other than those included in the category above are available for the pass/no-pass option; however, courses specifically required for one’s degree or certificate should not be taken with this option.

Units earned on a “P/NP” basis are not used in the calculation of GPA; however, when receiving an “NP” the units for that course will be counted as units attempted and considered in probation and dismissal procedures. One may repeat a course in which an “NP” was received. (The repeated course will not be counted as units attempted.)

Students selecting the pass/no-pass option and later wishing to receive the letter grade which was filed with the Registrar must submit the grade request form no later than one regular semester following the semester in which received the “P” was received. Course units converted from pass/no-pass to a letter grade will not be counted in the 12 allowable pass/no-pass units, but will be used in the calculation of the GPA.

Grade Changes

The instructor of 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 incompetence. The removal of an incorrect grade from a student’s record shall only be done upon authorization by the instructor of the course, with the following two exceptions: 1) If the instructor is no longer employed by the District and compelling evidence is available that there was a simple error in the grade submitted, the vice president of Student Personnel OR vice president of Instruction may change the grade; 2) If mistake, fraud, bad faith, or incompetence are present, the final determination concerning removal or change of grade will be made by the Board of Trustees based on the recommendation of the Superintendent/President. Board Policy 4231/ AP4231.

Repeating a Course Course

Repetition for Grade Improvement

In an effort to alleviate substandard academic work, a student may repeat courses in which they have received sub-standard grades of “D”, “F”, “FW”, “NP” or “NC” by re-enrolling in the course(s). Students may repeat courses in this way for a total of three attempts. A withdrawal that results in a “W” on the transcript counts as one attempt to improve a grade. One additional attempt may be allowed if the College finds there are documented extenuating circumstances which justify another repetition. A petition must be submitted along with documentation supporting the circumstances relating specifically to the dates of the last attempt. Extenuating circumstances are verified cases of accidents, illness or other issues beyond the control of the student.

Course Repetition When the Student Has Earned a Passing Grade

Students may take a course once and then repeat it as many times as is stated in the course description in the catalog. After receiving a grade for a course, subsequent enrollments in that course that result in a withdrawal with a “W” count as a repetition attempt.

For courses that are not repeatable in which a student has received a satisfactory grade, i.e., “A”, “B”, “C”, “CR”, or “P” may not be repeated unless the Academic Exceptions Committee approves a Petition which:

1. Demonstrates a significant length of time has elapsed since the course was taken (five or more years), or for other substantial reasons.
2. Demonstrates that repetition is necessary for a student to meet a legally mandated training requirement as a condition of continued paid or volunteer employment.

After repeating a course the following changes will appear:

- If the grade received in the original course was sub-standard, an “R” will appear in the notes column to the right of the original course.
- The original grade will not be used in computing the GPA. The grade received in the approved repeated course will be posted to the transcript and used for GPA purposes.
- If the grade received in the original course was satisfactory, both the grade received in the approved repeated course and the original grade will be used for purposes of GPA calculation. (State regulations do not allow “W” grades to be removed or lined out.)

Withdrawal

Withdrawal from a course or courses shall be authorized through the last day of the 14th week of instruction (or 75 percent of a term, whichever is less). The academic record of a student who remains in a course beyond the time allowed by district policy must reflect a symbol as authorized other than a “W.” No notation (“W” or other) shall be made on the academic record of the student who withdraws during the first four weeks or 30 percent of a term, whichever is less.

Students may attempt a course a maximum of 3 times including withdrawals where a “W” symbol is recorded.

Students have the right to file a petition if they believe they either should or should not receive a “W” or wish to enroll in a course where they have exceeded the maximum number of “W”s due to extenuating circumstances.

Academic Renewal

If a student receives a sub-standard grade (“D” or “F”) the student can petition to disregard this course for purposes of calculating GPA. (Title 5 Sections 55044 and 55046) Students may petition to have their academic record reviewed for academic renewal of substandard academic performance under the following conditions:

- Students must have achieved a cumulative grade point average of 2.0 since the term in which the substandard grade(s) to be removed was/were earned. The courses used in this GPA calculation must be from an accredited institution and total at least 12 units; and
- At least one regular semester must have elapsed from the time the
course work to be removed was completed.

Up to 24 units of course work may be eliminated from consideration in the cumulative grade point average.

When academic renewal procedures permit previously recorded substandard coursework to be disregarded in the computation of a student’s grade point average, the student’s permanent academic record should contain an accurate record of all coursework to ensure a complete academic history.

Academic renewal procedures may not conflict with the District’s obligation to retain and destroy records or with the instructor’s ability to determine a student’s final grade.

The Dean of Student Services or Academic Exceptions Committee designee must approve the Academic Renewal Petition.

Reversal of Academic Renewal actions may occur if the College finds there are documented extenuating circumstances. A petition must be submitted along with documentation supporting the extenuating circumstances to the Dean of Student Services for a final decision.

Acceptance of Credit from Other Institutions at Merced College

A maximum of 30 credits may be earned from the combined use of Military Experience, Advanced Placement, C.L.E.P., Credit by Examination, and International Baccalaureate.

Students Transferring from another College

Official transcripts must be submitted in an official, sealed envelope from the other institution to the Admissions and Records office for evaluation of equivalent coursework. These may be submitted via mail or in person. Only lower division credit will be accepted provided the institution offering the courses accepts them towards its own degree. Institutions must be listed as being fully accredited by one of the regional institutional accrediting organizations that are recognized by the United States Department of Education. Transcripts submitted to Merced College become the property of Merced College and cannot be returned or forwarded to another institution.

International Transcripts

Merced College does not evaluate international transcripts until they are evaluated by a recognized transcript evaluation service recommended by the Merced College Records Office (Educational Records Evaluation Service). The Evaluations Office will only consider lower division courses recommended by the service. The request forms for these companies can be picked up in the Evaluations Office. The cost of the evaluation is the responsibility of the student.

Other Means of Obtaining Credit at Merced College

A maximum of 30 credits may be earned at Merced College from the combined use of Military Experience, Advanced Placement, C.L.E.P., Credit by Examination, and International Baccalaureate. While many colleges accept, with certain limitations, appropriate credits obtained by examination, there is no guarantee by Merced College that other institutions will do so.

Merced College recognizes and fully participates in awarding student credit for the examinations listed below. However, credits earned from Advanced Placement, C.L.E.P., and I.B. external examinations may not count toward a Merced College degree major. Students are encouraged to consult their counselors in these matters. Advanced Placement, C.L.E.P., I.B., and Military Credit may be counted towards the satisfaction of prerequisite courses with the advice and consent of counselors.

Advanced Placement

Merced College participates in the Advanced Placement (AP) Program offered by the College Board. A score of 3, 4, or 5, is required, depending upon the specific exam. Not all AP examinations are identified for credit. Information about the awarding of credit by the specific AP exam and the application for Merced College Associate Degree Breadth, CSU General Education Breadth, and IGETC is provided in the section entitled AP EXAMINATIONS.

C.L.E.P.

Merced College will award credit under the College Level Examination Program (C.L.E.P.) in accordance with the standards adopted by the California State University System. Credit for Subject Matter exams is based on the scores recommended by the American Council on Education (ACE). The number of units of credit granted varies. See a college counselor for additional information.

Credit by Examination at Merced College

- Credit by Examination (occasionally referred to as Challenging a Course) is available to students during the first six weeks of each regular semester and the first four weeks of a summer term.
- Students must be registered in at least one course at Merced College during the semester they want to attempt Credit by Examination and they must be in “Good” academic standing.
- Students may be asked to supply a high school and/or other college transcript when applying for a Credit by Examination.
- Students will pay a Credit by Examination fee equal to the enrollment fee required if registering for the course; the fee must be paid prior to completing the examination.
- All grades obtained through Credit by Examination will be displayed on the transcript with a notation of “C” (Credit by Exam).
- Credits acquired by examination shall not be counted in determining the twelve (12) semester hours of credit in residence required for a Merced College Associate Degree.
- Credits acquired by examination are not applicable to meeting the unit load requirements of Selective Service deferment, Veteran’s benefits, or Social Security.
- Credit by Examination is not allowed for courses previously taken in an institution of higher education and for which any grade other than a “W” was received.
- Credit by Examination is not allowed for courses that are considered pre-collegiate.
- Although the University of California and the California State University systems accept, with certain limitations, appropriate credits obtained by examination. There is no guarantee by Merced College that other institutions will do so.

The number and type of courses available for Credit by Examination at Merced College may be limited and are identified annually by the faculty. The 2018-2019 Credit By Exam courses are listed below.
Students will be notified of having been placed on academic probation if they have attempted at least 12 units and earned a grade point average below 2.0 based on all units recorded on their permanent record. A student's probation status is not affected by a break in attendance.

Students will be removed from academic probation when their cumulative GPA is 2.0 or higher.

Students on academic probation will be subject to dismissal from the College if they've earned a cumulative grade point average of less than 1.75 in all units attempted in each of three consecutive semesters.

Students who are on academic probation for three consecutive terms with a cumulative GPA below 1.75 will be subject to dismissal.

Although units accumulated during a summer session are used in the GPA calculation, the probation status changes only at the end of a regular semester when grades are recorded.

Please note, academic probation can impact registration priority and financial aid. Please see a counselor for additional information.

For specific information regarding the impact of academic probation see Administrative Procedures AP 4250 and AP 4255.

### Progress Probation

Students will be placed on progress probation if they've enrolled in at least 12 units and the entries on their permanent record of "W," "I," and/or "NP" reach 50 percent of the cumulative units or more. The probation status is not affected by a break in attendance.

Students will be removed from progress probation when the percentage of units graded as "W," "I," and "NP" drops below 50 percent in this category.

Students placed on progress probation will be subject to dismissal from the College if the entries on their permanent record of "W," "I," and/or "NP" reach 50 percent of the cumulative units or more for three consecutive semesters.

Although units accumulated during a summer session are used in the GPA calculation, the probation status changes only at the end of a regular semester when grades are recorded.

For specific information regarding the impact of progress probation see Administrative Procedures AP 4250 and AP 4255.

### Dismissal Notification

Students who have been dismissed from the college will be notified by e-mail.

### Probation and Dismissal Appeal

A student may appeal probation or dismissal provided that unusual and verifiable circumstances occurred that were strongly instrumental in leading to the probationary or dismissal status. Reasons for appeal might include: 1) one's health; 2) an emergency in one's family; or 3) an extreme change in financial situation which did not allow the student to continue their education. Other reasons not listed above may also be considered.

Board Policy 5530 also provides information about how to contact other organizations, such as the Western Association of Schools and Colleges, if a student wishes to file a complaint.

### Grievance Process

Merced College supports students' right to grieve or appeal any official action or incident which, in their judgment, is unfair or prevents them from obtaining equal educational opportunities. Board Policy and administrative procedure AP 5530 provides information about conditions under which students may grieve and the process to be followed.

In cases of action, such as dismissal from a class, program, or the College, students can initiate an appeal according to a specific appeal channel. If a student wishes to exercise the right to appeal an action taken against
them by a College official, the student should contact the Dean of Students regarding the proper procedure to be followed.

In cases of incidents such as alleged discrimination or harassment, students can initiate a grievance. To exercise the right to grieve such an incident, students should contact the College’s Equal Employment Officer regarding the proper procedure to be followed.

All complaints should attempt to be resolved at the local level. Agencies overseeing Merced College include the agencies listed below. The California Community Colleges Chancellor’s Office has complaint procedures listed on their homepage, which can be located at cccco.edu. The address is 1102 Q St., Suite 4554, Sacramento, CA 95811.

Students who believe that Merced College is in violation of any of the accreditation standards may contact the Accrediting Commission for Community and Junior Colleges, located at 10 Commercial Blvd., Suite 204, Novato, CA 94949 or by e-mail at accjc@accjc.org. The telephone number is 415-506-0234.

For issues related to sex, race, disability, or age discrimination contact maybe made with the Office for Civil Rights, U.S. Department of Education, 50 Beale Street, Suite 7200, San Francisco, CA 94015. Telephone numbers are: 1-415-486-5555 (voice) or 1-415-227-8124 (TTY).

**Student Right to Appeal**

When a student’s petition is denied by the Academic Exceptions Committee, the student has the right to appeal to the Dean of Student Services. An appointment is required by calling (209) 384-6314.
Student & College Services

Air Force Reserve Officer Training (AFROTC)

Students may take AFROTC courses for academic credit with no commitment to the Air Force. For academic credit, a student may take the courses as electives to learn more about national defense, airpower strategy, the Air Force lifestyle, and Core Values. Students can register for classes through Fresno State’s extension program. If a student wants to take the courses as a lead-in to a commission as an Air Force officer, he/she must eventually join the cadre corps to prepare to enter active duty as a second lieutenant. Merced College students, who wish to pursue commissioning as cadets, and not just as students, must be full-time students with at least 12 credit hours per semester and maintain a 2.0 CGPA. They must also be accepted to Fresno State by their junior year in order to complete the commissioning path. In either case, a student or cadet can use the theory and skills learned in Aerospace Studies as leadership experience that will be invaluable for either an Air Force or civilian career. Books and supplies are provided at no cost to the student; uniforms will also be furnished for qualified students at no costs.

For more information, contact California State University-Fresno, AFROTC at (559) 278-2593 or visit www.csufresno.edu/afrotc.

Art Gallery

The Art Gallery, located in the Theater Building, presents high quality art exhibits in a wide variety of media throughout the school year for enjoyment and enrichment. Featured shows include student, faculty and guest artist exhibits. All art gallery events are free and open to the public. Art exhibitions are often scheduled in conjunction with theater events. For a schedule of Art gallery events, please visit www.mccd.edu/thearts/art-gallery or call (209) 386-6644.

Associated Students

Student Government - Dedicated to improving student education, life and experiences!

Associated Students of Merced College (ASMC) is a student government organization. The mission of ASMC is to provide students with representation and advocacy on campus. ASMC is led by a nine-member Student Executive Board who are elected by students each year. Under the guidance of a faculty advisor, ASMC works to:

- Advocate for the inclusion of students in the overall policy and decision-making processes of the college, especially as it relates to institutional effectiveness. This includes participation in the program review and the student learning outcome/service area outcomes process.
- Promote awareness of the student's role in the academic community
- Enhance the quality and scope of education at the college, both inside and outside the classroom
- Schedule activities to enhance student life at Merced College
- Empower students with leadership opportunities

ASMC represents student interests to a variety of audiences, including: college administration, faculty, staff and the Board of Trustees. Members participate in shared governance by serving as representatives on major college committees. ASMC is also a member of Region V of the Student Senate for California Community Colleges (SSCCC) and California Community College Student Affairs Association (CCCSA).

During the Fall and Spring semesters, ASMC holds open council meetings every Tuesday at 02:00p in the Student Union Building, Room 137. Students and members of the community are encouraged to attend and share ideas, concerns and/or comments with the governing council. The council does not meet the first week of the semester, during finals weeks, or during summer or winter breaks. In accordance with the Brown Act, agenda items must be submitted in writing before 12:00 noon on the Thursday before the intended meeting. Agendas will be posted in the window of the ASMC Office on Thursday afternoons. Action items may not be added to the agendas after the deadline.

Merced College
Associated Students of Merced College
3600 M Street
Merced CA 95348
Phone: (209) 384-6119

ASMC Fee

A student must be registered for the current semester and pay the ASMC fees at the Student Fees Office. There is a $1 Student Representative fee and a $5 Student Body fee. Students can opt out of either fee through the student waiver forms available at the ASMC office or Student Fees Office.

ASMC Member Benefits and Privileges:

- Right to seek office within student government
- Discount admission to college athletic and theater events, and all ASMC sponsored activities
- Eligibility to apply for ASMC scholarships
- Membership in student clubs

Bookstore

The Merced College Bookstore is located in the Student Union Building on the Merced Campus. At the Los Banos Campus the bookstore is located at the end of Building A. Both bookstores offer a textbook rental program inside the bookstore or online, and students can reserve new and used textbooks online for both stores as well. You will find in stock exact items your instructors have requested each semester such as new and used textbooks, paperbacks, study aids, art materials and nursing supplies. You will also find stationery items, collegiate apparel and other supplies. The bookstore will buy back textbooks each semester during finals week and at the beginning of each semester. Special orders and custom orders are welcomed any time. Regular bookstore hours are from 7:45a to 3:00p Monday through Friday, and from 5:45p to 7:15p Monday through Thursday. Extended business hours are offered during the beginning of each semester, please go to http://www.mccd.edu/resources/bookstore/ for details and extended business hours for both campuses.

California Mini-Corps

California Mini-Corps offers part-time employment to full-time college students who are seeking a career in teaching and is located at Tri-College Center TC-3 at Merced Campus. The Mini-Corps program gives students the opportunity to work flexible hours in a classroom as tutors assisting migrant students. College students are placed in a public school grades K-12. Tutors get paid $10.00 per hour and work hours range from 10-20 per week. Applicants must be Spanish/English bilingual. Please contact the coordinator, Margarita Covarrubias at (209) 384-6046 or covarrubias.m@mccd.edu for more information.

CalWORKs Program

California Work Opportunity and Responsibility to Kids (CalWORKs) is a state funded welfare-to-work program designed to help individuals on public assistance (TANF). TANF stands for Temporary Assistance for Needy Families, a cash aid program (welfare) for parents who meet income guidelines and have a child at home under the age of 18.

CalWORKs serves as a liaison between the student and the Human Services Agency (HSA), the Department of Workforce Investment (DWI) and the Merced County Office of Education EMPOWER program by providing educational and career opportunities combined with an array of high-quality support services that enable students to complete their educational goals, find gainful employment and successfully transition into
Campus Dining
Complete meals, soups, sandwiches, pizza and snacks at competitive prices can be purchased in the college's attractive cafeteria located in the Student Union Building. The Campus Café also provides on-site affordable customized catering for small to large luncheons and BBQ. See the campus dining page for more information, or call (209) 381-6428, or visit http://www.mccd.edu/resources/.

Career Center And Transfer Center Services
Merced College provides students career resources at the Career Center and transfer resources at the Transfer Center. Each center is located on the third floor of the Lesher Student Services building on the Merced College campus. Students are encouraged to visit the centers to learn more about the services they provide. The Career Center is open during the fall and spring semesters from 08:00a. to 04:30p. Monday through Friday. Summer hours will be posted on the website. Call (209) 384-6239 for Career Services or (209) 384-6239 for Transfer Services.

Child Development Center
Child Development services are available on campus for the children of students, staff, and community members. The program is an infant/preschool educational program and serves as a laboratory for students majoring in Child Development. A charge is levied for this service; however, if you qualify, financial aid is available. Applications are available on the CDC website and at the Child Development Center.
http://www.mccd.edu/resources/index.html

College Clubs
With more than twenty clubs, it's easy to find people who share similar interests! This is your open door to Merced College and we want to get you connected. Associated Students of Merced College (ASMC) recognizes more than twenty student clubs and organizations on campus representing a broad range of interests. Feel free to attend their meetings; they're always looking for new members.

The role of campus clubs are to:
- Increase opportunities for students to engage in activities which contribute to educational and/or social growth outside the classroom
- Establish coordination, communication and cooperation among the officially recognized student clubs
- Promote the development of student leadership, service and networking
- Promote student clubs and public awareness of inter-club council activities

Student clubs are governed by the Associated Students of Merced College. Each club designates one (1) student who will represent and serve the club at ASMC Council Meetings and have a vote on all issues. During the Fall and Spring semesters, ASMC holds open council meetings every Tuesday at 02:00p. in the Student Union Building, Room 137. The meeting agenda and minutes are on display at the ASMC office.

For information on clubs and club activities, visit the ASMC webpage.

Counseling Department
The Counseling Department is staffed by professional counselors with training and expertise in the areas of personal, educational, and vocational/career development. In addition to services provided by the professional counseling staff, the Center is also staffed by teaching faculty who can provide academic advisement in their areas of concentration or major. Counselors will assist students in making satisfactory progress in their program of study and will confirm that they are taking appropriate prerequisite course work necessary for success in higher level courses which may be required for their major.

Counselors are also assigned to other support services and programs, including Extended Opportunity Programs and Services, Disabled Student Program & Services, International Student Services, the Career Center, Transfer Center, Foster Youth Center, Veterans Services, V.T.E.A., CalWORKS, Non-credit Matriculation and Student Athlete Support.

Appointments with counselors done either on an appointment or walk-in basis. The Counseling Department is open Monday through Friday from 08:00a. to 04:30p and some Wednesday evenings until 07:00p. Please plan to check-in no later than 30 minutes prior to closing.

Disabled Students Program & Services
The Disabled Students Program & Services (DSP&S) offers educational support services for students with a variety of disabilities, including those students with physical, psychological, communicative and learning disabilities. Support services and accommodations include, but are not limited to, priority registration, scheduling assistance, academic and vocational counseling, interpreters, test-taking accommodations, assistive technology and e-text, Kurzeil, or PDF.

For students with learning disabilities or suspected of a learning disability who are enrolled in college classes, DSP&S offers assessment to determine individual strengths and weaknesses and program eligibility according to the California Community College criteria. Students with verified disabilities who require alternate formats of college publications and resources should check with DSP&S. Materials available include, but are not limited to, Braille, large print, audio books and electronic text. These formats help accommodate students' specific needs and are created in the timeliest manner possible.

DSP&S serves as a liaison with the campus and community agencies on behalf of students with disabilities. Students are encouraged to visit DSP&S in the Lesher Student Services Building, 2nd floor, office #234 on Merced Campus (209) 384-6155 or (209) 384-6311 (TDD) and in the Student Services Building on the Los Banos Campus (209) 381-6423 or visit the website.

Extended Opportunity Programs and Services (EOPS) and CARE Programs
The Merced College, EOPS program provides academic & personal counseling, book service, book loans, priority registration, and EOPS grants for eligible students.

The CARE program is an additional service provided through the EOPS program to assist the single parent students that have a child under the age of 14 that receives TANF. The additional services to CARE eligible students include CARE orientation and workshops, CARE grants, meal cards, gas cards, and bus passes.

To determine eligibility for EOPS/CARE, contact the EOPS office at (209) 381-6596 or the Los Banos EOPS Office at (209) 826-3495 for more information.

Facilities Usage
College facilities are available for use by public agencies and community organizations to serve the educational, economic, and artistic interests of the citizens of the community. Hundreds of events per year are scheduled on the Merced campus. A comprehensive master calendar is maintained in the Facilities Office. Both indoor and outdoor facilities are available, subject to priority of instructional programs. Reservations for meetings and/or banquets should be made well ahead of time by calling the Facilities Office at (209) 381-6593.
Financial Aid

Merced College administers a student financial aid program designed to assist students in meeting college costs. The amount of financial aid awarded varies from student to student, depending on individual student need and resources.

Financial aid awards are based on calculated financial need as determined by the Free Application for Federal Student Aid (FAFSA). Students may apply online at www.fafsa.gov. Application assistance is available in the FAFSA Lab located on the 3rd floor of the Lesher Student Services Building on the Merced Campus and through the Financial Aid Office, Student Services Building A on the Los Banos Campus.

Available programs include: 1) the Federal Pell Grant; 2) the Federal Supplemental Educational Opportunity Grant (SEOG); 3) the Federal Work Study Program; 4) State of California Cal Grant programs; 5) State of California Board of Governors Fee Waiver (BOG); and 6) Merced College Foundation Scholarships.

Note: Merced College does not currently participate in any Direct Loan or Federal Family Loan Program.

Application

Financial aid funds come from appropriations made by the Federal and State governments and through scholarship awards made by individuals and other public and private agencies and organizations. Hence, each of these funds MUST be administered according to different sets of policies, regulations, and/or specific requirements. To make the process of receiving aid as simple as possible, the Free Application for Federal Student Aid (FAFSA) determines eligibility for most state and federal assistance programs. Students are also required to file a Grade Point Average Verification Form with the California Student Aid Commission for a Cal Grant. Separate applications for specialized grants (the Child Development Grant and the Chafee Grant for Foster Youth) are also required. Scholarship applications for a number of locally administered scholarships are available each year in the Financial Aid offices on both campuses during the month of March.

Student Eligibility

Policies relating to the College's general admission and academic progress standards are described elsewhere in this catalog.

The following are the requirements for most financial aid administered by Merced College:

- You must be a U.S. citizen or eligible non-citizen,
- You must be registered with Selective Service, if applicable,
- You must have a valid Social Security number,
- You must be working toward an eligible degree or certificate program;
- You must be making satisfactory academic progress;
- You must not owe a refund on a Federal grant or be in default on a Federal educational loan;
- You must have "financial need" as determined by submitting the FAFSA;
- You must have a high school diploma, or GED, or pass the California High School Proficiency Examination.
- Recent legislation affecting student eligibility reduces student eligibility for Pell Grants to the equivalent of 12 full-time semesters. This is a lifetime limitation not a limitation per school.

To be eligible for California grants, students MUST also:

- Be a resident of California, and have "financial need" based on the criteria for the BOG or Cal Grant Programs.
- Recent legislation AB130 and AB131 "The Dream Act" (CADA) provides eligibility for certain AB540 students to apply for and receive state grants, scholarships and waivers. Current information regarding dates and application procedures can be found online at www.mccd.edu/resources/financialaid/dream-act.html.

Deadlines/Priority Dates

To be considered for California State Cal Grant A, B, and/or C programs, the FAFSA/CADA (California Application for Dream Act) application and the GPA Verification form for Cal Grants must be filed by March 2 of each year. It is recommended that students obtain a proof of mailing from the Postmaster to document filing on or before the March 2 deadline. Please read the GPA Verification form instructions carefully because changes are made every year.

The Merced College Admissions & Records office automatically verifies electronically GPAs for all students who have completed a sufficient number of degree applicable units and meet the AB540 criteria if applicable, prior to the deadlines. Students should check with A&R to determine if their GPA has been submitted electronically to the California Student Aid Commission.

Merced College Foundation scholarship applications are due annually on March 31. The window of opportunity for scholarship applications is March 1 to March 31. If March 31 falls on a weekend, then the due date is the last working day before the weekend. Notices will be posted each year. Students can obtain a scholarship application in the Financial Aid scholarship office or online at the Merced college Financial Aid website.

Merced College Standards of Satisfactory Academic Progress

For financial aid eligibility, federal regulations require students to move toward the completion of a degree or certificate when receiving financial aid. These regulations state that Academic Progress Standards MUST include a review of periods of enrollment in which students did not receive aid as well as the periods they did receive aid.

Student's satisfactory academic progress will be reviewed at the end of each semester or upon the student's initial application for financial aid, whichever comes first.

For the purpose of financial aid eligibility, students MUST meet the following minimum standards:

- You must maintain a grade point average of at least 2.0 in all units attempted. This includes a cumulative GPA as well as a 2.0 for your last two semesters.
- Your financial aid transcript history must reflect at least a 67 percent successful completion of all enrolled units.
- You will be expected to complete a degree or certificate program based on the 150% maximum of the published unit requirement. Exception to this maximum may be made with appropriate documentation on a case-by-case basis.

Students may appeal a denial of aid based on the maximum time limits by submitting an appeal form and an educational plan, which has been reviewed and signed by a counselor, and which shows the revised goal and specific additional unit requirements. Students may also appeal a denial based on poor grades. The appeal forms can be obtained on the Merced College Financial Aid web site forms page http://www.mccd.edu/resources/financialaid/index.html. Each appeal will be reviewed on a case-by-case basis. Students will be notified in writing of a probationary status or denial of financial aid when academic progress has not been met.

Financial Aid Repayment Policy

Per federal regulations, any student who receives financial aid and then withdraws from all classes prior to completing 60% of the semester/program and/or course will be required to repay a portion of any unearned federal financial aid. If the student has received more than earned, notification will be sent as to the amount of aid to be returned, the due date, and the procedure. If the student has not yet received the full amount earned, notification will be sent regarding a post-withdrawal disbursement the student may receive, the response date, and the procedure. Federal regulations only allow students to receive financial aid for classes they actually attend. Students who receive financial aid for classes they drop before the first day of class or that they otherwise never attended must return those funds. There is no appeal process. Federal regulations
do not allow a college to make any exceptions to the Return of Title IV requirements. Students who do not repay the funds owed are disqualified from eligibility for federal student aid at any college or university.

Note; Students may not receive financial aid from more than one institution during the same enrollment period.

Return to Title IV Funds calculations are based on the student’s:
1. Federal Financial aid award;
2. enrollment status (full, three-quarter, half, or less than half time) at the time of final withdrawal; and
3. the portion of the term completed.

Honors Program

The Merced College Honors Program is designed to meet the needs of exceptional students by providing an enriched educational environment. Students are challenged to reach their full intellectual potential and to better prepare themselves for the academic demands of a four-year college or university.

Enrollment: Any new student with a 3.5 cumulative grade point average, or any continuing student with a 3.25 cumulative grade point average, may enroll in honors classes. Students who do not meet one of these enrollment requirements may also enroll in individual honors classes by successfully completing the challenge process. Inquiries regarding the Honors Program should be directed to Dr. Max Hallman, Honors Program Coordinator, at (209) 384-6327 or at hallman.m@mccd.edu.

Curriculum: The core curriculum of the Honors Program will consist of several honors-designated courses that fulfill CSU and IGETC transfer requirements. At least two of these courses will be offered each semester. In some cases, the courses offered will be taught in back-to-back time slots with instructors coordinating their lectures.

In addition to the core curriculum, a two-unit honors seminar will be offered each semester. These seminars are intended to give the student an opportunity to do advanced reading and research under the close supervision of a Merced College faculty member or members.

Honors Scholarships: With available funds through the Merced College Foundation, McConnell Honors Scholarships are offered to a number of students enrolled in honors classes. These scholarships carry a $1000 award and may be provided for a maximum of two years. For more information on honors scholarships, contact Dr. Max Hallman at (209) 384-6327 or the Financial Aid Office at (209) 384-6031.

Alpha Gamma Sigma

Initial Membership: Students with a minimum cumulative grade point average of 3.0 can attain initial membership upon completion of at least 12 semester units within a maximum of two semesters at any recognized institution of higher education. (No units acquired more than two years prior to application for initial membership will be used prohibitively.)

Temporary Membership: Life members of the California Scholarship Federation who graduated with a minimum GPA of 3.5 at the high school level, are invited to become a temporary member during the first semester at a community college. Upon the payment of fees, temporary members have all the privileges of membership except that of holding office.

Continuing Membership: An initial or temporary member can maintain continuing membership status by achieving at least a 3.0 GPA for the previous semester in courses recognized in college standing, or by maintaining a cumulative 3.0 GPA or better in courses of recognized college standing. (Continuing members will receive a one-semester grace period to recover from a drop below 3.0 GPA. There will not be two consecutive grade periods.)

Permanent Membership: A member can apply for permanent membership by maintaining a cumulative 3.5 GPA or higher and by being a member of AGS for at least one term. A continuing member who has maintained a cumulative 3.25 GPA or higher and who has been a member of AGS for at least two terms may also apply. All applicants must have completed a minimum of 60 semester units of recognized college courses with a minimum of 30 units completed at a community college.

Retroactive Membership is also an option. Ask an advisor for details.

For additional information, please visit the following website: http://www.mccd.edu/campus-life/clubs-activities/index.html.

Lambda Nu (LN)

Lambda Nu (LN) is a national honor society for the radiologic and imaging sciences. Its objectives are to:
- foster academic scholarship at the highest academic levels
- promote research and investigation in the radiologic and imaging sciences
- recognize exemplary scholarship

There are currently 182 LN Chapters in 43 states. Lambda Nu’s name is derived from the lower case Greek characters in the formula in, which represents the physics of the inverse relationship between wavelength (l) and frequency (n), an essential parameter across the diversity of modalities comprising the professions.

Membership: To be accepted to the California Omega Chapter of Lambda Nu, radiologic and imaging sciences students must:
- Have cumulative GPA must be a 3.40 or higher on a 4.0 scale after one full-time semester (or equivalent) of a professional program.
- Be enrolled in a radiologic or imaging sciences program as a full-time student for at least one term.
- Show evidence of professional commitment beyond minimum requirements of the program, including, but not limited to: cumulative GPA higher than Chapter minimum, actively pursuing an independent research project, active membership in a professional organization, as evidenced by: membership in ASRT, CSRT or SDMS societies, holding office or committee appointments, preparing for presentation of a professional paper or poster, preparing for competition in a Quiz- Bowl or clinical based employment in a radiologic or imaging sciences field.
- Pay a one-time membership fee at the time of application.

Privileges: Members of Lambda Nu are entitled to:
- Wear the Lambda Nu cords at graduation;
- Apply for Lambda Nu scholarships;
- Participate in projects of the local California Omega chapter.

Phi Theta Kappa

Phi Theta Kappa is the largest international honor society serving colleges offering associate degree programs. Founded in 1918, Phi Theta Kappa currently has more than 1,200 chapters in the United States and abroad. Its main purpose is to recognize and encourage academic excellence among associate degree students, but the four hallmarks to which Phi Theta Kappa is dedicated are scholarship, leadership, service, and fellowship.

Membership: To be accepted into Phi Theta Kappa, a student must:
- Have completed at least 12 units of course work at Merced College;
- Have a cumulative grade point average of 3.45 or higher;
- Complete and submit a membership profile form;
- Pay a one-time membership fee at the time of application.

Privileges: Members of Phi Theta Kappa are entitled to:
- Wear the Phi Theta Kappa stole at graduation;
- Have the Phi Theta Kappa seal affixed to their diploma;
- Attend regional and national conventions;
- Participate in the Summer Honors Institute;
- Apply for assorted Phi Theta Kappa scholarships (there are 39 million dollars in transfer scholarships available);
- Participate in projects of the local chapter.

The principal induction is held during the spring semester, but memberships will be accepted throughout the academic year; however, graduating students must apply at least 45 days prior to graduation.
Housing Services
Although the College does not officially authorize any housing, advisement for students seeking housing is available in the Associated Students of Merced College office. For further information, contact ASMC at (209) 384-6114.

Job Opportunity Services
Job Opportunity Services offers employment referral assistance for part-time, temporary, and full-time jobs for students attending Merced College and for up to two years after graduation. Other services provided are resume writing, interviewing techniques, job search assistance, and information regarding employment trends. The center also provides listings from summer camp programs locally and countrywide.

Students who already have jobs may sign up for Cooperative Education, earning college credit while they work and providing an opportunity for skill development and career exploration. (209) 384-6068.

Interdisciplinary Literacy Center
The Interdisciplinary Literacy Center (ILC) is always staffed with support to assist students with reading and writing assignments. Students who enroll in an English course are automatically enrolled in the non-credit EDU-112D course. There are no fees for this course and attendance is optional The ILC is located in the Communications Building, Room 2.

For more information, call BSSOT Program Office, (209) 381-6477.

Learning Communities
Learning Communities are pairs or clusters of courses that revolve around a theme or major. These courses are taught by creative faculty dedicated to student success. Learning Communities enhance students’ academic and social opportunities, improve connection with faculty and peers, and provide greater involvement in learning. If students are interested in learning communities they must enroll in all of the linked classes.

Library
The Library opened is located on University Avenue on the north side of campus. The library purchases materials, technology and media and provides services in support of Merced College’s institutional learning outcomes and provides the following:

- Information and reference help for students and faculty;
- Information competency and library instruction;
- Print materials, media, and technology for students and faculty;
- Access to online and electronic resources;
- Spaces for reading, media viewing, studying, collaborative projects, and meetings

Current Merced College students, faculty, and staff have access to over 40,000 books and 150 print newspaper and periodical subscriptions in the library. In addition, they can use student information stations to access the electronic book collection, several online databases, and full text journal subscriptions through the Merced College Portal. The library also has an index to and extensive holdings of the New York Times on microfilm. A variety of other materials is available including pamphlets, CDs, DVDs, books on CDs. Technology is available for students to listen to and view media in the library.

Faculty Librarians assist students and faculty with information and reference needs and provide class-based information literacy instruction and library orientations. Students are encouraged to approach reference librarians for assistance in locating information and materials. Interlibrary loan is available through the reference librarians.

Most library materials may be checked out. Students may borrow books and media for specified periods of time ranging from two weeks to overnight. Some reserve and media items are for in library use only.

Only current students, faculty, and staff of Merced College can check out materials, use reserve materials, or use computer stations.

Math Lab
The Math lab is always staffed with math faculty to assist students with math skills acquisition. The lab provides faculty support and computer tutorials for all math students. Math instructors assist students individually with questions from basic to advanced math. Graphing calculators are available for use in the lab only. Students who enroll in a math course are automatically enrolled in the non-credit EDU-112B lab course. There are no fees for this course and attendance is optional. The Math Lab is located in the Science Building, Room 201 (upstairs). Print services are available in the Math Lab. Students must purchase a print card in Student Fees or the Bookstore: $2.00 for 50 copies.

For more information, call Student Success Program, (209) 384-3177.

Merced College Theater
The MC Theater presents a variety of music, drama, dance, and other of live performances throughout the year. Featured performances include student productions by the theatre and music departments, as well as, events by local and international artists and performers. Most theater events are open to the public-please visit the website or call for ticket information.

www.mccd.edu/theArts or call (209) 386-6644.

Online Courses
MCC offers some courses in an online and/or hybrid format as an alternative to traditional face-to-face classes. Online classes require no on-campus sessions, where hybrid courses require one or more in person meetings. Specific details vary per semester. Students are advised to refer to the class schedule for these courses. No distinction is made between the expectations and outcomes of online and hybrid courses with on-campus courses. The content and outcomes of the classes are the same as those taught in the face-to-face classroom. It is the flexibility of time and convenience that appeals to distance education students.

Online courses require a self-disciplined student. Courses require frequent participate through online communication with the professor and other students. These courses are best suited for those students who are self-motivated and do not procrastinate. The ability to manage time and take responsibility for deadlines is critical to success. To see if online classes are right for you, take our online readiness quiz located on our website.

The student enrolled in an online class should have a solid understanding of Internet browsers (for example, Firefox, Chrome or Internet Explorer) and using file attachments and word processing programs. They should also be good problem solvers who are not intimidated by technology.

Online students must have consistent access to the Internet. If necessary, students may gain access to the Internet and MCC online courses via the library and study central during posted hours. Certain classes have specific software requirements that may or may not include extra fees. Check the website and class schedule for more information.

Ponte Project
Puente students...

- Succeed academically
- Are recognized as leaders and scholars
- Graduate from four-year colleges and universities
-Belong to a statewide network of leaders and professionals.

Puente was founded in 1981 by Co-director Felix Galviz and Patricia McGrath at Chabot College in Hayward. The program mission was to increase the number of Mexican American/Latino students transferring to four-year colleges and universities. Since then, Puente has expanded to
numerous community colleges throughout the state. Today, Puente is open to all students who wish to transfer to a four-year university.

Many components work together to prepare Puente students to transfer to four-year colleges and universities:

**English and Guidance Instruction:** Puente students take two consecutive English classes, ENGL-85 and ENGL-01A. These classes provide a supportive and stimulating environment for Puente students to build confidence in their writing and reading skills through an exploration of the Mexican American/Latino experience. All Puente students are also required to enroll in the program's Guidance 30 and Guidance 45 courses.

**Mentors:** Business or professional mentors share with students their personal, academic, and career experiences, and provide a window into "real-life" work environments. The network of trained Puente mentors provides many resources for the Puente students, their families, their colleges, and the community.

**Other Activities:** Puente students are required to attend university field trips and cultural and program events. These events are designed to help students achieve the goals of the program.

Call the Counseling Department at (209) 381-6478 for more information.

**Student Health Services**

The mission of Student Health Services is to provide students with services, education, and resources necessary to make responsible, informed decisions regarding their physical and mental health and well-being. Services, health promotion activities, community and campus resource information and referrals are provided to currently enrolled Merced College students.

Licensed Personnel: Registered Nurse (RN); Licensed Marriage Family Therapists (LMFTs)

Eligibility: Full or part-time students, who are currently enrolled and active in classes, are eligible for service. Students must present a current Merced College ID card at the time of service.

Cost: All services are included with payment of the health fee.

Services include:
- Personal counseling with a licensed therapist (short-term)
- Health information and education
- Blood pressure checks
- Over the counter medications
- Family planning: information, condoms, pregnancy tests
- First aid
- Tuberculosis (TB) skin testing
- Community resource information

**Treatment of a Minor:** Any student under the age of 18 is required to have a parental consent form signed prior to receiving the following services: personal counseling (to be determined by therapist, based upon need), TB skin testing, and flu vaccinations.

**Accident Insurance:** Accident insurance is included in the student health fee and provides on-campus accident coverage while attending college or college-sponsored activities. It is recommended that each student carry voluntary insurance coverage for off-campus emergencies and illnesses.

Student Health Services is located in the Student Union Building on the Merced Campus (209) 384-6045, and in the Student Services Building at the Los Banos Campus (209) 381-6423. Please visit the website at http://www.mccd.edu/resources/health/ for more information.

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**Student Success Program**

The Student Success Office oversees student academic support services including Tutorial Center, Math Lab, Study Central, Supplemental Instruction (SI), and Learning Communities. The ultimate goal of the Student Success Program is to connect students with the appropriate academic support services and resources needed to achieve their educational goals. For more information, contact Tomasia Drummond, director of Student Success, at (209) 384-6318.

**Study Central**

Study Central is a place where students can receive assistance from highly trained peer guides, and faculty who specialize in a variety of academic fields. It provides a comfortable environment for students to study or work on homework, individually or in small groups. Study Central is equipped with computers and Internet access for research and class-related assignments. In addition, Study Central offers free, drop-in academic workshops that cover a variety of topics supporting student success. Study Central is located in the Student Union Building and it is open Monday through Friday from 09:00a to 02:00p. Print services are available in Study Central. Students must purchase a (green) Study Central print card in Student Fees or the Bookstore: $2.00 for 50 copies. Call (209) 384-6177 for more information.

**Supplemental Instruction**

Supplemental Instruction (SI) is an academic assistance program that utilizes peer-assisted study sessions to assist students with traditionally difficult academic courses. SI sessions are regularly scheduled, informal review sessions in which students compare notes, discuss readings, develop organizational tools, and predict test items. Students learn how to integrate course content and study skills while working together. The sessions are facilitated by SI leaders (students who have previously excelled in the course) and who attend all class lectures, take notes, and act as role models. SI sessions are open to all students in the course and are attended on a voluntary basis.

**Tutorial Center**

The Tutorial Center provides tutoring at no cost to students who are currently enrolled in the course for which the student is seeking tutoring. Students must complete a tutoring referral form and be referred by a counselor or instructor to receive tutoring services. The Center provides individual and group tutoring in most subjects and is always staffed with professional faculty and highly-trained peer tutors. Tutors are students who have been recommended by their instructors and have completed a tutor training course. The Tutorial Center is located at the Merced campus in Communications Building Room 1. The center is open Monday and Tuesday, 09:00a to 07:00p, Wednesday and Thursday 08:00a to 05:00p, and Friday 08:00a to 02:00p. Print services are only available to students receiving tutoring. Student must purchase a print card in Student Fees or Bookstore: $2.00 for 50 copies.

For more information, call (209) 384-6329.

**Veterans Services**

Merced College welcomes veterans wishing to further their education and encourages them to seek assistance at the Veteran's Resource Center, which is located in the Student Union Building. Staff are available to provide the paperwork and information necessary to establish eligibility. Veterans are also supplied with information about other campus resources and local agencies services. Department of Veterans Affairs encourages all new and returning veterans to contact them directly at www.gibill.va.gov or (888) 442-4551 for questions about veteran's benefits and payments.

Merced College is one of 1900 members of the Servicemen's Opportunity College dedicated to assisting service members, their family members, and veterans in attaining their educational goals.

Academic counselors specializing in veterans services are available to provide educational and career planning. Counseling services are...
provided on the second floor of the Lesher Student Services Center, next to Admissions & Records. Class registration information can be found in the "Schedule of Classes" booklet printed each semester or on the Merced College website: http://www.mccd.edu/getstarted/search-classes.html.

Veterans with disabilities can receive assistance from the College's Disabled Student Program & Services (DSP&S) program. Call (209) 384-6155 for more information about available services.

Personal Counseling is available through the Merced College Student Health Services Office. Call (209) 384-6045 for more information.

Additional information may be found at by calling (209) 384-6113 or http://www.mccd.edu/resources/index.html.
Preventing for Graduation

Catalog Rights
An undergraduate student remaining in attendance in regular sessions at any California community college, or any combination of California community colleges and campuses of the California State University, may elect for purposes of meeting graduation requirements to meet the Merced College requirements in effect either
1. At the time the student began such attendance;
2. At the time of entrance to Merced College;
3. At the time of graduation from Merced College.

Campus authorities may authorize or require substitutions for discontinued courses. A campus may require a student changing his or her major or any minor field of study to complete the major or minor requirements in effect at the time of the change.

For purposes of this section “attendance” means attendance in at least one semester or two quarters each calendar year.

Applying for Graduation
Students must complete an application for graduation in order to be eligible for graduation in their major or to receive a Certificate of Achievement in their area of study. Graduation applications are available through the Counseling Department at the beginning of the third week of each regular semester for an eight-week period. Students may apply for graduation in the semester that they are intending to complete their requirements.

When the application is received, the student’s transcript record will be evaluated and notification of eligibility or of any deficiencies that would prevent the successful completion of the degree requirements at Merced College will be sent.

Superintendent’s Honors
Graduating students who have completed at least 36 units at Merced College, and have maintained a GPA of 4.0 in courses* at Merced College and in all course work attempted at any other colleges will receive recognition from the Superintendent/President of Merced College. Work in progress from the spring semester will not be used in this computation. The computation will be based on completed grades recorded on the student’s official Merced College transcript.

Graduation with Honors
Graduating student who have completed at least 45 units at Merced College and have maintained a 3.5 GPA in courses at Merced College* and in all course work attempted at any other colleges will be graduated with honors. Work in progress from the spring semester will not be used in this computation. The computation will be based on completed grades recorded on the student’s official Merced College transcript.

*The GPA calculated for the purposes of Superintendent’s Honors and graduation with honors excludes physical education activity courses, more than eight units in Cooperative Education, all remedial-level courses, and “P/NP” grades in any courses.

Competency Requirements
Students must achieve competency in the areas of reading, writing, and mathematics, through the following:

Reading Competency
Students must receive a grade of “C” or better in ENGL 01A or the equivalent.

Writing Competency
Students must receive a grade of “C” or better in ENGL 01A, or the equivalent.

Math Competency
Students must receive a grade of “C” or better in MATH C, MATH 61, MATH 62 or a grade of “C” or better in any course which has the prerequisite of Math C, or the equivalent.

Graduation Requirements
Requirements for graduation with an associate in arts or an associate in science degree are prescribed by the Board of Governors of the California Community Colleges and the Board of Trustees of the Merced Community College District. These are as follows:

• You must complete at least 60 degree-applicable units.
• Effective for all students admitted to a community college in Fall 2009 and thereafter, all courses that count toward the associate degree major or area of emphasis must be “satisfactorily completed” with grades of A, B, C or P (pass). All degree requirements, including general education, must be completed with an overall grade point average of 2.0 or better.
Associate Degree Majors and Certificate Programs 2018-2019

Associate Degrees:
Because learning is a continual process of self-discovery, students are encouraged to keep an open mind about their potential and options. California Community Colleges have unique relationships with the University of California and California State University systems so that students can move easily from a two-year to a four-year college. With proper planning, students can earn an associate degree while fulfilling the lower division requirements of a four-year school. When choosing courses at Merced College, students are encouraged to keep their options open for transfer.

Certificates of Achievement:
Students interested in taking only the occupational major area classes will be eligible to receive a Certificate of Achievement from Merced College upon the successful completion of the final occupational major area course. A minimum 2.0 grade point or better is required in the area of concentration, and a minimum of 12 units must be taken at Merced College.

Merced College awards Associate Degrees, Associate Degrees for Transfer or Certificates in the following areas:

Accounting
05000.AA Accounting (AA)
05000.CT Accounting (CT)

Administrative Office Management
05007.AA Administrative Medical Office Professional (AA)
05008.AA Administrative Medical Office Professional (AA)
05007.CL Administrative Medical Office Professional (CL)
05008.CT Administrative Office Professional (CT)

Agriculture
01050.AA General Agriculture (AA)
01040.AS General Agriculture: Advanced (AS)
01052.CL Agricultural Chemicals (CL)
01050.CT General Agriculture (CT)

01000.AST Agriculture Business (AST)
01000.AS Agriculture Business (AS)
01000.CT Agriculture Business (CT)

01100.AS Animal Science (AS)
01100.CT Animal Science (CT)

22000.AAT Anthropology (AAT)

10110.AA Art (AA)

Automotive Technology
09000.AS Automotive Collision Repair (AS)
09003.AS Master Auto Technician (AS)
09005.CL Automotive Collision Repair (CL)
09010.CL Automotive Technology Level 1 (CL)
09002.CT Automotive Technology Level 2 (CT)
09008.CT Master Auto Technician (CT)

04100.AST Biology (AST)
04135.AS Biotechnology-Industry (AS)
04137.AS Biotechnology Pre Professional (AS)
04130.CB Biotechnology (CB)

Business
05100.AST Business Administration (AST)
05150.AA General Business (AA)
05150.CT General Business (CT)

19100.AST Chemistry (AST)

Child Development
13010.AST Early Childhood Education (AST)
13010.AA Child Development (AA)
13015.CT Child Development: Early Intervention Assistant Specialization (CT)
13020.CT Child Development: Families In Crisis Specialization (CT)
13026.CT Infant/Toddler Care (CT)
13030.CT Child Development: School Age Care Specialization (CT)

15601.AAT Communication Studies (AAT)

Computer Science
07200.AST Computer Science (AST)
07300.AS Management Information Systems (AS)

Criminal Justice
21075.AST Administration of Justice (AST)
21150.AA Criminal Justice (AA)
21150.CT Criminal Justice (CT)

01150.AA Crop Science (AA)
01150.AS Crop Science (AS)
01150.CT Crop Science (CT)

49100.CT CSU General Education (CSU-GE-Breadth) (CT)

01200.AS Diesel Equipment Technology (AS)
01200.CT Diesel Equipment Technology (CT)

13180.CL Dietetic Services Supervisor (CL)

Drafting Technology
09040.AA Computer & Networking Technology (AA)
09040.AS CAD Drafting - Architectural Design (AS)
09040.CT CAD Drafting - Architectural Design (CT)

09104.AS CAD Drafting - Mechanical Design (AS)
09104.CT CAD Drafting - Mechanical Design (CT)

09105.AS CAD Drafting - Architectural Design (AS)
09105.CT CAD Drafting - Architectural Design (CT)

09102.CD CAD Draftsman - Mechanical (CL)
09102.CT CAD Draftsman - Mechanical (CT)

09300.AS Engineering (AS)
09350.AS Engineering Technology (AS)

Entrepreneurship
05700.AA Small Business Entrepreneurship (AA)
05700.CT Small Business Entrepreneurship (CT)

05700.AST Small Business Entrepreneurship (AST)

15200.AAT English (AAT)

Electronics/Electrical and Computer Technologies
09040.AA Computer & Networking Technology (AA)
09040.CT Computer & Networking Technology (CT)
09040.AS CAD Drafting - Architectural Design (AS)
09040.CT CAD Drafting - Architectural Design (CT)

09250.AA Electronics Technician (AA)
09250.CT Electronics Technician (CT)

09510.AA Industrial Electrical Technician (AA)
09510.CT Industrial Electrical Technician (CT)

09650.AA Instrumentation and Process Control Technology (AA)
09650.CT Instrumentation and Process Control Technology (CT)
2200.AAT Economics (AAT)
49810.AAT Elementary Teacher Education (AA-T)
01225.AS Equine Science and Management (AS)
01225.CT Equine Science and Management (CT)
21400.AS Fire Technology (AS)
21400.CT Fire Technology (CT)
11200.AA French (AA)
22250.AAT Geography (AAT)
19400.AST Geology (AST)
11400.AA German (AA)
12300.AA Health Sciences (AA)
Heating, Ventilation, Air Conditioning, and Refrigeration Technology
09401.AA Commercial Refrigeration Technician (AA)
09400.AA HVAC Technician (AA)
09401.CT Commercial Refrigeration Technician (CT)
09400.CT HVAC Technician (CT)
22300.AAT History (AAT)
21500.AA Human Services (AA)
21500.CT Human Services (CT)
49300.AA Humanities (AA)
49200.CT IGETC (CT)
09550.AA Industrial Maintenance Technology (AA)
09550.CT Industrial Maintenance Technology (CT)
12400.AAT Kinesiology (AAT)
01350.AS Landscape Horticulture (AS)
01350.CT Landscape Horticulture (CT)
49501.AA Liberal Studies (Teaching Preparation) (AA)
05450.AA Management/Supervisory Training (AA)
05450.CT Management/Supervisory Training (CT)
05460.AS Marketing (AS)
05460.CT Marketing (CT)
17400.AST Mathematics (AST)
Mechanized Agriculture
01450.AS Mechanized Agriculture Technology (AS)
01450.CT Mechanized Agriculture Technology (CT)
01453.CL Compact Power Equipment (CL)
10400.AAT Music (AAT)
10400.AA Music (AA)
12500.AS Nursing, Registered (AS)
12550.AA Nursing, Vocational (AA)
12550.CT Nursing, Vocational (CT)
13160.AST Nutrition and Dietetics (AST)
13161.AA Nutrition and Foods (AA)
13161.CL Nutrition and Foods (CL)
15400.AAT Philosophy (AAT)
10500.AA Photography (AA)
10500.CL Photography (CL)
08500.AA Physical Education (AA)
19700.AST Physics (AST)
20500.AA Psychology (AA)
20500.AAT Psychology (AAT)
Radiologic Technology
12700.AS Diagnostic Radiologic Technology (AS)
12700.CF Diagnostic Radiologic Technology (CF)
22600.AA Social and Behavioral Sciences (AA)
22650.AAT Sociology (AAT)
11600.AAT Spanish (AA)
10550.AAT Studio Arts (AAT)
Sonography
12800.CT Diagnostic Medical Sonography (CT)
10600.AAT Theatre Arts (AAT)
10600.AA Theatre Arts (AA)
09800.AA Welding Technology (AA)
09810.CL Advanced Welding and Metal Fabrication (CL)
 Continuing Education (Noncredit)
49165.NC Basic Skills
21078.NC Court Interpreter
49196.NC ESL Beginning Skills Program
49198.NC ESL Intermediate Skills Program
49166.NC Mathematics College Preparatory Basic Skills
10100.NC Medical Assistant
49199.NC Reading and Writing College Preparatory Basic Skills
07744.NC Technical Office Occupations
Certificates Not Transcribed
05150.CE Business Information Worker
05200.CO Customer Service Academy Certificate (CO)
12100.CE Emergency Medical Technician (CE)
05250.CO Emerging Leaders Institute (CO)
09780.CE Entry Level Welding (CE)
12150.CO Nursing Assistant (CO)
09785.CE Pipe Welding Technology (CE)
05600.CE Real Estate Salesperson License (CE)
05725.CE Social Media (CE)
05800.CE Virtual Office Professional (CE)

AA-T = Associate in Arts (A.A.-T.) Degree for Transfer
AS-T = Associate in Science (A.S.-T.) Degree for Transfer
AA = Associate in Arts (A.A.) degree
AS = Associate in Science (A.S.) degree
CE = Certificate requiring 6 to fewer than 16 semester units (Not approved by Chancellor’s Office)
CB = Certificate requiring 8 to fewer than 16 semester units (Approved by Chancellor’s Office)
CL = Certificate requiring 16 to fewer than 30 semester units
CT = Certificate requiring 30 to fewer than 60 semester units
CF = Certificate requiring 60 or more semester units
CO = Other credit Award, under 6 semester units
Associate Degree Breadth Requirements 2018-2019

Breadth requirements are designed to introduce students to the variety of means through which people comprehend the modern world. Those who receive associate degrees must possess in common certain basic principles, concepts and methodologies unique to and shared by the various fields of study. College-educated persons must be able to use this knowledge when evaluating and appreciating the physical environment, the culture, and the society in which they live. Most importantly, this education should lead to a better self understanding.

A student may use the same course to fulfill an AA/AS major requirement and associate degree breadth requirement.

To complete the associate breadth requirement, students must select courses that fulfill the unit requirements of the following areas:

Area A - Language and Rationality (6 units total)
Courses in language and rationality are those which develop for the student the principles and applications of language toward logical thought, clear and precise expression and critical evaluation of communication in whatever symbol system the student uses. (Select one course from each area.)

(A1) English Composition (3 units)
ENGL-01A

(A2) Communication and Analytical Thinking (3 units)
ACTG-04A
ARTD-07
COMM-01, 01H, 02, 04, 05, 30
CPSC-07
ENGL-02, 13+, 13H+
MATH-C, 02, 02H, 04A, 04B, 04C, 06, 07, 08, 10, 15, 20A, 20B, 25, 26, 61, 62
PHIL-10, 12, 13+, 13H+
PSYC-05

Area B - Natural Sciences (3 units total)
Courses in the natural sciences are those which examine the physical universe, its life forms, and its natural phenomena.
ANSC-10
ANTH-01
ARCH-01
ASTR-01, 01L
BIOL-01, 02, 04A, 04B, 06, 09, 16, 18, 20, 32, 32L
CHEM-02A, 02B, 04A, 04B
ELCT-30
GEOG-01, 15
GEOL-01, 02, 03
PHSC-01, 01L, 02, 02L
PHYS-02A, 02B, 04A, 04B, 04C, 10
PLSC-10
PSYC-15
SOIL-10

Area C - Humanities (3 units total)
Courses in the humanities are those which concentrate on the study of cultural activities and artistic expressions of human beings.
ART-01, 02, 06, 12A, 15, 24A
ARTD-07, 40A, 40B, 41A, 41B, 42A, 42B, 45B, 47
DRAM-01, 02, 02L, 04, 04L, 08, 12, 16, 23
ENGL-01B, 04A, 04B, 05, 06A, 06B, 07, 08, 10, 11, 14, 15, 18
FREN-01, 02, 03, 04
GERN-01, 02, 03, 04
HMNG-01, 02
HUM-01, 01H, 02, 02H, 15*, 21
JPN-01A, 01B, 02
MUSA-21B, 25A, 27A
MUSE-44, 45
MUSG-10, 11, 12, 13, 14
MUST-01, 02
PHIL-01, 01H, 02, 03, 04, 05, 15
PHOT-10A, 10B, 11A, 33, 35, 36
SPAN-01, 02, 03, 04, 10, 11

Area D - Social and Behavioral Sciences (6 units total)
Courses in the social and behavioral sciences are those which focus on people as members of society. (Select one course from area D1 and one course from area D2.)

(D1) Social And Behavioral Sciences (3 units)
Includes introductory or integrative survey courses in cultural anthropology, cultural geography, economics, psychology, sociology and related disciplines.
AGBS-11
AGRI-10
ANTH-02, 10*
CRIM-01
ECON-01, 02
GEOG-02, 12
PSYC-01A, 01AH, 15, 25
SOC-01, 02, 03

(D2) History and Political Sciences (3 units)
Includes introductory or integrative survey courses in history and political science.
POSC-01, 02

Area E - Lifelong Understanding and Self-Development (5 units total)
Courses in lifelong understanding and self-development are those which equip human beings for lifelong learning by providing them with the skills necessary to function as independent adults in contemporary society and foster an understanding of themselves as integrated physiological and psychological entities. (Select one course from each area.)

(E1) Integrated Organism (3 units)
AOM-30
ARTD-47
AUTO-04
BUS-35, 56B
CLDV-01, 02, 09+, 38
COLL-10
CPSC-01, 30
GUID-30, 48
HLTH-10, 15
KINE-01, 03, 04
LAND-11
LRNR-30
NUTR-10
PSYC-09+, 22, 23, 36, 37, 40
REGN-34

(E2) Activity (2 units)
ATHL-01A, 01B, 01D, 01G, 01I, 01J, 01K, 01L, 02A, 02B, 02D, 02G, 02I, 02K, 03, 13

*Designates ethnic studies courses which expose students to, develop an understanding of, and examine cultures that are different from the dominant culture of the United States. In addition, these courses teach an appreciation and knowledge of ethnic contributions to the society of the United States.

Courses listed in multiple areas shall not be certified in more than one area.
+ENGL-13 = PHIL-13; ENGL-13H = PHIL-13H
+CLDV-09 = PSYC-09
Merced College participates in the College Level Examination Program (CLEP) offered by the American Council on Education (ACE). Merced College students may only receive credit towards the associate's degree general education requirements locally established. CLEP general education subject area applicability exists system-wide for students completing CSU GE Breadth, but the UC system does not accept CLEP exams for credit under the IGETC pattern. Please see a counselor for more information.

<table>
<thead>
<tr>
<th>College-Level Examination Program (CLEP)</th>
<th>Passing Score</th>
<th>Minimum Semester Credits Earned towards admission*</th>
<th>Semester Credits Toward GE Breadth Certification</th>
<th>Merced College General Education Breadth Areas</th>
<th>American Institutions and/or GE Breadth Area**</th>
<th>Removal Date for GE Breadth***</th>
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<tbody>
<tr>
<td>CLEP American Government</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>POSC-01 (D2)</td>
<td>D8</td>
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<tr>
<td>CLEP American Literature</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>ENGL-10 OR ENGL-11 (C)</td>
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<tr>
<td>CLEP Analyzing and Interpreting Literature</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td></td>
<td>C2</td>
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<tr>
<td>CLEP Biology</td>
<td>50</td>
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<td>3</td>
<td>BIOL-01 (B2)</td>
<td>B2</td>
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<tr>
<td>CLEP Calculus</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>MATH-04A (A2)</td>
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<td>50</td>
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<td>3</td>
<td>CHEM-02A (B1)</td>
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<tr>
<td>CLEP College Algebra</td>
<td>50</td>
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<td>CLEP College Algebra - Trigonometry</td>
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<td>CLEP College Composition</td>
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<td>CLEP College Composition – Modular</td>
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<td>0</td>
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<td>CLEP English Composition (no essay)</td>
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<td>0</td>
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<tr>
<td>CLEP English Composition with Essay</td>
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<td>0</td>
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<tr>
<td>CLEP English Literature</td>
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<td>ENGL-06A OR ENGL-06B (C)</td>
<td>C2</td>
<td>F11</td>
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<tr>
<td>CLEP Financial Accounting</td>
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<td>0</td>
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<tr>
<td>CLEP French Level I</td>
<td>50</td>
<td>6</td>
<td>0</td>
<td>FREN-01 OR FREN-02 (C)</td>
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<td>CLEP French Level II</td>
<td>59</td>
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<td>3</td>
<td></td>
<td>C2</td>
<td>F15</td>
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<td>CLEP French Level II</td>
<td>59</td>
<td>9</td>
<td>3</td>
<td>FREN-03 OR FREN-04 (C)</td>
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<tr>
<td>CLEP Freshman College Composition</td>
<td>50</td>
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<td>0</td>
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<td>CLEP German Level I</td>
<td>50</td>
<td>6</td>
<td>0</td>
<td>GERN-01 OR GERN-02 (C)</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>CLEP German Level II</td>
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<td></td>
<td>C2</td>
<td>F15</td>
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<tr>
<td>College-Level Examination Program (CLEP)</td>
<td>Passing Score</td>
<td>Minimum Semester Credits Earned toward admission*</td>
<td>Semester Credits Toward GE Breadth Certification</td>
<td>Merced College General Education Breadth Areas</td>
<td>American Institutions and/or GE Breadth Area**</td>
<td>Removal Date for GE Breadth***</td>
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<tr>
<td>CLEP German Level II</td>
<td>60</td>
<td>9</td>
<td>3</td>
<td>GERN-03 OR GERN-04 (C)</td>
<td>C2</td>
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<tr>
<td>CLEP History, United States I</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HIST-17A (D2)</td>
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<tr>
<td>CLEP History, United States II</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HIST-17B (D2)</td>
<td>D6+US-1</td>
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<td>CLEP Human Growth and Development</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>PSYC-09 OR CLDV-09 (E1)</td>
<td>E</td>
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<td>CLEP Humanities</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HUM-01 OR HUM-02 (C)</td>
<td>C2</td>
<td></td>
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<tr>
<td>CLEP Information Systems and Computer Applications</td>
<td>50</td>
<td>3</td>
<td>0</td>
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<tr>
<td>CLEP Introduction to Educational Psychology</td>
<td>50</td>
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<td>0</td>
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<td>CLEP Introductory Business Law</td>
<td>50</td>
<td>3</td>
<td>0</td>
<td>BUS-18A (NO GE AREA)</td>
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<tr>
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<td>3</td>
<td>3</td>
<td>PSYC-01A (D1)</td>
<td>D9</td>
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<td>50</td>
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<td>SOC-01 (D1)</td>
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<td>50</td>
<td>3</td>
<td>3</td>
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<td>B1 or B2</td>
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<td>50</td>
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<td>3</td>
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<td>CLEP Principles of Accounting</td>
<td>50</td>
<td>3</td>
<td>0</td>
<td></td>
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<tr>
<td>CLEP Principles of Macroeconomics</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>ECON-02 (D1)</td>
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<td>0</td>
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<td>50</td>
<td>6</td>
<td>0</td>
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<td>CLEP Spanish Level II</td>
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<td>12</td>
<td>3</td>
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<td>C2</td>
<td>F15</td>
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<td>CLEP Spanish Level II</td>
<td>63</td>
<td>9</td>
<td>3</td>
<td>SPAN-03 OR SPAN-04 (C)</td>
<td>C2</td>
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<tr>
<td>CLEP Trigonometry</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>MATH-25 (A2)</td>
<td>B4</td>
<td>F06</td>
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<tr>
<td>CLEP Western Civilization I</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HIST-04A (D2)</td>
<td>C2 or D6</td>
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<tr>
<td>CLEP Western Civilization II</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HIST-04B (D2)</td>
<td>D6</td>
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<tr>
<td>CLEP Spanish Level I</td>
<td>50</td>
<td>6</td>
<td>0</td>
<td>SPAN-01 OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPAN-02 (C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>College-Level Examination Program (CLEP)</td>
<td>Passing Score</td>
<td>Minimum Semester Credits Earned towards admission*</td>
<td>Semester Credits Toward GE Breadth Certification</td>
<td>Merced College General Education Breadth Areas</td>
<td>American Institutions and/or GE Breadth Area**</td>
<td>Removal Date for GE Breadth***</td>
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<tr>
<td>CLEP Spanish Level II</td>
<td>63</td>
<td>12</td>
<td>3</td>
<td></td>
<td>C2</td>
<td>F15</td>
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<tr>
<td>CLEP Spanish Level II</td>
<td>63</td>
<td>9</td>
<td>3</td>
<td>SPAN-03 OR SPAN-04 (C)</td>
<td>C2</td>
<td></td>
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<tr>
<td>CLEP Trigonometry</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>MATH-25 (A2)</td>
<td>B4</td>
<td>F06</td>
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<td>CLEP Western Civilization I</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>HIST-04A (D2)</td>
<td>C2 or D6</td>
<td></td>
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<tr>
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<td>3</td>
<td>HIST-04B (D2)</td>
<td>D6</td>
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</table>

For CLEP tests in the same language other than English:
- Only one exam score may be applied towards the CSU degree.
- A passing score of 50 is considered "Level I" and earns six units of baccalaureate credit
- A passing score higher than 50 is considered "Level II" and earns additional units of credit and placement in Area C2 of GE Breadth

If a student passes more than one CLEP test in the same language other than English, then only one examination may be applied to the baccalaureate. For each test in a language other than English, a passing score of 50 is considered "Level I" and earns six units of baccalaureate credit; the higher score listed for each test is considered "Level II" and earns additional units of credit and placement in Area C2 of GE Breadth, as noted.

*Minimum Semester Credits Earned towards admission: These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

**American Institutions and/or GE Breadth Area: Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

***Removal Date for GE Breadth: Students seeking certification in GE Breadth prior to transfer must have passed the test before this date.

05/02/17
International Baccalaureate (IB)

CSU System-wide Credit for External Examinations as of April 21, 2017
ASA-2017-13 (Supersedes Coded Memorandum AA-2015-19)

As recommended by the California State University Chancellor’s Office and the University of California Office of the President (UCOP), Merced College grants credit toward its undergraduate degrees for successful completion of specific Higher Level International Baccalaureate examinations. Students who present scores of four (4) or better will be granted up to three (3) to six (6) semester units of credit by the CSU applied to the appropriate General Education requirements (CSU-GE). Merced College students may receive credit towards the associate’s degree general education requirements locally established. Please consult the IB Chart below for specific details and consult with a counselor.

<table>
<thead>
<tr>
<th>International Baccalaureate</th>
<th>Passing Score</th>
<th>Minimum Semester Credits Earned towards admission*</th>
<th>Semester Credits Toward GE Breadth Certification</th>
<th>Merced College GE Breadth Areas</th>
<th>American Institutions and/or GE Breadth Area**</th>
<th>Removal Date for GE Breadth***</th>
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<tbody>
<tr>
<td>IB Biology HL</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>B2-3 units</td>
<td>B2</td>
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<tr>
<td>IB Chemistry HL</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>B1-3 units</td>
<td>B1</td>
<td></td>
</tr>
<tr>
<td>IB Economics HL</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>D1-3 units</td>
<td>D2</td>
<td></td>
</tr>
<tr>
<td>IB Geography HL</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>D1-3 units</td>
<td>D5</td>
<td></td>
</tr>
<tr>
<td>IB History (any region) HL</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>D2-3 units</td>
<td>C2 or D6</td>
<td></td>
</tr>
<tr>
<td>IB Language A Literature HL</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>C2</td>
<td></td>
<td></td>
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<tr>
<td>IB Language A Language and Literature HL</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>C2</td>
<td></td>
<td></td>
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<tr>
<td>IB Language A1 (any language) HL</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>C2</td>
<td>F13</td>
<td></td>
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<tr>
<td>IB Language A2 (any language) HL</td>
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<td>6</td>
<td>3</td>
<td>C2</td>
<td>F13</td>
<td></td>
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<tr>
<td>IB Language B (any language) HL@</td>
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<td>6</td>
<td>0</td>
<td>C-3 units</td>
<td>n/a</td>
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<tr>
<td>IB Mathematics HL</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>A2-3 units</td>
<td>B4</td>
<td></td>
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<tr>
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<td>B1-3 units</td>
<td>B1</td>
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<tr>
<td>IB Psychology HL</td>
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<td>3</td>
<td>D1-3 units</td>
<td>D9</td>
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<td>6</td>
<td>3</td>
<td>C-3 units</td>
<td>C1</td>
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</tr>
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</table>

HL = indicates “higher level” exams which qualify for IB credits. Students who have taken other exams (i.e., “S” = standard, are not eligible for IB credits.)

*These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

**Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org

***Students seeking certification in GE Breadth prior to transfer must have passed the test before this date.

@ The IB curriculum offers language at various levels for native and non-native speakers. Language B courses are offered at the intermediate level for non-natives. Language A1 and A2 are advanced courses in literature for native and non-native speakers, respectively.

05/02/17
AP Examinations

AP Credit for Merced College Associate Degree Breadth

Students will be granted three to six units of credit upon completion of the Advanced Placement (AP) examination with a score of 3, 4, or 5, depending upon the specific exam listed below. Not all AP exams are identified for credit and no letter grade will be given.

AP credit cannot be counted toward the degree major. AP credit can be counted toward the associate degree general education requirements.

AP Credit for CSU GE

- For the fall 1997 term and beyond, all institutions participating in the CSU General Education-Breadth certification may treat the AP examinations listed below as though they were incorporated in the institutions' own General Education-Breadth certification list.
- Students must have scored 3, 4, or 5 on the AP examination to receive the credit indicated. All CSU campuses will accept the minimum units shown below toward fulfillment of the designated General Education-Breadth area if the examination is included in a full or subject-area certification.
- Individual CSU campuses may choose to accept more units than those specified below towards completion of General Education-Breadth requirements. The CSU campus to which the student is transferring determines the total number of units awarded for successful completion of an AP examination and the applicability of the examination to other graduation requirements.
- Not all AP examinations are approved systemwide for fulfillment of General Education-Breadth requirements, nor can all General Education-Breadth areas be completed by AP examination. No AP examination is accepted for fulfillment of the Area A3 (critical thinking) requirement.

AP Credit for IGETC (UC Campuses only)

A score of 3, 4, or 5 is required to grant credit for IGETC certification. An acceptable score for IGETC equates to either 3-semester or 4-quarter units for certification purposes. Each AP exam listed below may be applied to one IGETC area as satisfying one course requirement, with the exception of Language other Than English (LOTE). Students who have earned credit from an AP exam should not take a comparable college course because transfer credit will not be granted for both. If two areas are identified for an AP exam, either area may be used to regardless of where the certifying CCC's discipline is located.

- Students earning scores of 3, 4, or 5 in the physical and biological science AP examinations earn credit toward IGETC Area 5 and meet the IGETC laboratory activity requirement. AP exams in Biology, Chemistry or Physics B allow CCC campuses to apply 4 semester or 5 quarter units to IGETC certification. For Environmental Science, Physics C: Mechanics and Physics C: Electricity/Magnetism, 3 semester or 4 quarter units are applied for IGETC certification. Therefore, students who complete these exams will be required to complete at least 4 semester or 5 quarter units to satisfy the minimum required units for Area 5.
- There is no equivalent AP exam for Area 1B- Critical Thinking/ Composition requirement and Area 1C – Oral Communication (CSU requirement only).
- Actual AP transfer credit awarded for admission, major or baccalaureate degree requirements is determined by the individual CSU and UC campus. Students should check with the transfer campus of their choice for its policies on awarding unit credit for AP exams.
## College Board Advanced Placement Tests 2016-2017

CSU System-wide Credit for External Examinations as of April 21, 2017  
ASA-2017-13 (Supersedes Coded Memorandum AA-2015-19)

<table>
<thead>
<tr>
<th>College Board Advanced Placement Tests</th>
<th>Minimum Passing Score</th>
<th>Minimum Semester Credits Earned towards admission*</th>
<th>Semester Credits Toward GE Breadth Certification</th>
<th>IGETC Applicability (3 sem/4qtr)</th>
<th>American Institutions and/or GE Breadth Area**</th>
<th>Removal Date for GE Breadth***</th>
<th>MC Associate Degree Breadth Areas &amp; unit credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Art History</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>3A or 3B⁴</td>
<td>C1 or C2</td>
<td></td>
<td>C (3)</td>
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<td>AP Biology</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>5B and 5C</td>
<td>B2+B3</td>
<td></td>
<td>B2 (3)</td>
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<tr>
<td>AP Calculus AB¹</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2A</td>
<td>B4</td>
<td></td>
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<tr>
<td>AP Calculus BC¹</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>2A</td>
<td>B4</td>
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<td>A2 (3)</td>
</tr>
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<td>3</td>
<td>3</td>
<td>2A</td>
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<td>AP Chemistry</td>
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<td>B1+B3</td>
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<td>College Board Advanced Placement Tests</td>
<td>Minimum Passing Score</td>
<td>Minimum Semester Credits Earned towards admission*</td>
<td>Semester Credits Toward GE Breadth Certification</td>
<td>IGETC Applicability (3 sem/4qtr)</td>
<td>American Institutions and/or GE Breadth Area**</td>
<td>Removal Date for GE Breadth***</td>
<td>MC Associate Degree Breadth Areas &amp; unit credit</td>
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<td>3</td>
<td>3B and 6A</td>
<td>C2</td>
<td>C (3)</td>
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<td>3B and 6A</td>
<td>C2</td>
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<td>B4</td>
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<td>AP U.S. Government &amp; Politics</td>
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<td>4 and US-2</td>
<td>D8+US-2</td>
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<td>3</td>
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<td>(C2 or D6) + US-1</td>
<td>D2 (3)</td>
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<td>AP World History</td>
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<td>6</td>
<td>3</td>
<td>3B or 4*</td>
<td>C2 or D6</td>
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¹ AP Calculus AB, AP Calculus BC, AP Calculus BC/AB Subscore, and AP Computer Science A, AP computer Science AB - If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.

²AP Environmental Science - Students who pass AP Environmental Science earn 4 units of credit. Tests prior to Fall 2009 may apply to either B1+B3 or B2+B3 of GE Breadth. Fall of 2009 or later, those credits may only apply to B1+B3.

³AP Physics 1, AP Physics 2, AP Physics B, AP Physics C - If a student passes more than one AP exam in physics, only six units of credit may be applied to the baccalaureate, and only four units of credit may be applied to a certification in GE Breadth.

⁴IGETC Version 1.7 – AP exams may be used in either area regardless of where the certifying CCC’s discipline is located.

* Minimum Semester Credits Earned towards admission - These units count toward eligibility for admission. The units may not apply towards Associate Degrees for Transfer (AD-T) or the baccalaureate degree. The units may not all apply toward certification of the corresponding GE-Breadth area. See Executive Orders 1036 and 1100 for details.

** American Institutions and/or GE Breadth Area - Areas of GE Breadth (A1 through E) are defined in EO 1100. Areas of American Institutions (US-1 through US-3) are set forth in Sections IA and IB of EO 1061, and at assist.org.

*** Removal Date for GE Breadth - Students seeking certification in GE Breadth prior to transfer must have passed the test before this date.

06/14/17
Transfer Requirements 2018-2019

General Information

Merced College provides the first two years of a four-year college or university program. The requirements for transfer vary considerably among the four-year institutions in California. As a result, entering students are encouraged to meet with a counselor at the College as soon as possible to plan his/her course of study.

The four-year institutions in California fall generally into three categories:

1. The California State University System (CSU): CSU Bakersfield, CSU Channel Islands, CSU Chico, CSU Dominguez Hills, CSU Fresno, CSU Fullerton, CSU East Bay, Humboldt State University, CSU Long Beach, CSU Los Angeles, CSU Maritime Academy, CSU Monterey Bay, CSU Northridge, California State Polytechnic University, Pomona, CSU Sacramento, CSU San Bernardino, CSU San Marcos, San Diego State University, San Francisco State University, San Jose State University, California Polytechnic State University, San Luis Obispo, Sonoma State University, and CSU Stanislaus. Each CSU campus accepts certification of breadth requirements completed at Merced College.

2. The University of California (UC): UC Berkeley, UC Davis, UC Irvine, UC Los Angeles, UC Merced, UC Riverside, UC San Diego, UC San Francisco (medical school), UC Santa Barbara, and UC Santa Cruz. UC campuses support a “transfer core curriculum”; however, each UC campus may list particular breadth and major requirements. Refer to www.assist.org for articulation agreements.

3. The Independent or Private Colleges and Universities: Some examples of the over 100 in California include Brandman University, Stanford University, University of the Pacific, Fresno Pacific, and the University of Southern California. Each private college or university has its own unique requirements.

California State University (CSU)

Basic Information

Merced College courses numbered 1 - 49 have been designated baccalaureate level courses transferable to the CSU system. These courses will be accepted by any campus of the California State University system for credit toward its baccalaureate degrees.

In preparing for transfer to a CSU campus, you should follow two concurrent pathways to complete required course work:

1. The CSU General Education Breadth courses listed on the following page; and
2. Articulated lower division major preparation courses as designated by the particular CSU campus to which you plan to transfer. A Merced College counselor can assist you with course selection.

CSU Transfer Admission Requirements

The majority of transfer students enter as upper-division transfers. Students can qualify for admissions to the CSU system as an upper-division transfer if they have a minimum of 60 semester or 90 quarter units. Your overall grade point average must be at least 2.0 (2.40 for California nonresidents.) The GPA is calculated using all transfer units attempted.

Some transfers will enter as lower-division transfers. If, at the time you will enter the CSU, you have completed 59 or fewer semester or 89 or fewer quarter units you are a lower-division transfer. Some CSU campuses do not accept lower-division transfers, so be sure to check with the campus if you are considering transfer as a lower-division student.

CSU Transfer Breadth Curriculum

Merced College will certify completion of the General Education Breadth requirements in part, or in their entirety, if you are transferring to one of the 23 campuses of the California State University System.

Merced College will give full certification upon the satisfactory completion of 39 designated units. In addition, a minimum of nine upper division units must be taken as designated by the state university conferring the B.A./B.S. Degree. If the CSU campus requires more than 48 General Education/Breadth units, you will take the additional units after transfer.

To complete the CSU transfer breadth requirements, students must select courses that fulfill the unit requirements of specific areas. (Courses listed in these areas may change, depending upon CSU Chancellor’s Office approval.) The CSU transfer breadth requirements appear on the following page.

SB 1440

The Student Transfer Agreement Reform Act (SB 1440 – Padilla), signed into legislation on September 29, 2010, enables the California Community Colleges and California State University to collaborate on the creation of Associate in Arts Degree (AA) and Associate in Science (AS) Degree transfer programs. This new law requires community colleges to grant an associate degree for transfer to a student once a student has met specified general education and major requirements for the degree. Upon completion of the associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system.

Students are given guaranteed admission into the California State University (CSU) system, and further are given priority consideration when applying to a particular program that is similar to the student’s community college major. The law prohibits the CSU from requiring a transferring student to repeat courses similar to those taken at the community college that counted toward their associate degree for transfer. It is expected that community college students will be able to declare an interest in pursuing specific transfer AA/AS degrees.

University of California System (UC)

Of the ten University of California campuses, nine welcome community college transfer students (UCSF is only a graduate level university). UC campuses support a “transfer core curriculum”; however, each of the ten campuses and the individual majors has unique requirements. Students planning to transfer to a UC campus should see a Merced College counselor as soon as possible in order to plan an appropriate program of study and work closely with the UC representative in the Career/Transfer Center.

Private Colleges and Universities

There are approximately 112 independent or private schools in the state of California not supported by state tax revenues. They vary greatly in programs offered, size, and number of transfer students. Each school acts autonomously, evaluating course work on an individual basis. To obtain specific transfer information, contact the admissions office at the school to which you wish to transfer. A Merced College counselor can help you plan your transfer program.
California Community Colleges are now offering associate degrees for transfer to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses.

Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units.

To view the most current list of Merced College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to [http://www.sb1440.org/](http://www.sb1440.org/). Current and prospective community college students are encouraged to meet with a counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.

Merced College list of Transfer Degrees:
- Administration of Justice
- Agriculture Business
- Anthropology
- Biology
- Business Administration
- Chemistry
- Communication Studies
- Computer Science
- Early Childhood Education
- Economics
- Elementary Teacher Education
- English
- Geography
- Geology
- History
- Kinesiology
- Mathematics
- Music
- Nutrition and Dietetics
- Philosophy
- Physics
- Psychology
- Sociology
- Spanish
- Studio Arts
- Theatre Arts

Additional majors are being developed. Please see a counselor and [www.mccd.edu](http://www.mccd.edu) for more information.
CSU-General Education Breadth Certification Requirements
2017-2018

AREA A: English Language Communication and Critical Thinking
Select one course from each category:
A1 Oral Communication
COMM-01, 01H, 04, 05
A2 Written Communication [AP accepted]
ENGL-01A
A3 Critical Thinking
ENGL/PHEL-13, 13H,
PHIL-10, 12

AREA B: Scientific Inquiry and Quantitative Reasoning
A minimum of 9 units is required with one course each from areas B1, B2,
and B4. At least one of the courses must be a lab course from B3 (Lab
courses are underlined under B1 and B2):
B1 Physical Science [AP, IB & CLEP accepted]
ARCH-01,
ASTR-01, 01L
CHEM-02A, 02B, 04A, 04B
GEOG-01, 01L, 15
GEOL-01, 02, 03
PHSC-01, 01L, 02
PHYS-02A, 02B, 04A, 04B, 04C, 10
SOIL-10
B2 Life Science [AP, IB & CLEP accepted]
ANTH-01
BIOL-01, 02, 04A, 04B, 06, 09, 16, 18, 20, 32
PLSC-10
PSYC-15
B3 Laboratory Activity
ANTH-01
ASTR-01L
BIOL-01, 02, 04A, 04B, 16, 18, 20, 32L
CHEM-02A, 02B, 04A, 04B
GEOG-01L
GEOL-01, 02, 03
PHSC-01L, 02L
PHYS-02A, 02B, 04A, 04B, 04C, 04P
PLSC-10
PSYC-15
B4 Mathematics/Quantitative Reasoning [AP, IB & CLEP accepted]
CPSC/MATH-07
MATH-02, 02H, 04A, 04B, 04C, 06, 08, 10, 15, 20A, 20B, 25, 26
PSYC-05

AREA C: Arts and Humanities
A minimum of 9 semester units are required with at least one course from
each area:
C1 Arts (Art, Dance, Music, Theater) [AP & IB accepted]
ART-01, 02, 06, 15
ARTD-40A, 40B
DRAM-01, 08
ENGL-15
MUSG-10, 11, 12, 13, 14
PHOT-33, 36
C2 Humanities (Literature, Philosophy, and Foreign Language) [AP,
IB & CLEP accepted]
DRAM-01
ENGL-01B, 04A, 04B, 05, 06A, 06B, 07, 08, 10, 11, 18
FREN-01, 02, 03, 04
GERN-01, 02, 03, 04
HIST-04A, 04B, 05, 09A, 09B, 17A, 17AH, 17B, 17BH, 19, 29
HMNG-01, 02
HUM-01, 01H, 02, 02H, 15, 21
JPNS-01A, 01B, 02
PHIL-01, 01H, 02, 03, 04, 05, 15
SPAN-01, 02, 03, 04, 10, 11

AREA D: Social Sciences [AP, IB & CLEP accepted]
A minimum of 9 semester units are required with courses in at least two
disciplines:
AGBS-11
AGRI-10
ANTH-02, 10
CLDV-01, 02
COMM-30
CRIM-01
ECOM-01, 02
GEOG-02, 12
HIST-04A, 04B, 05, 17A, 17AH, 17B, 17BH, 19, 22, 23, 29
HUM-15
PHIL-02
POSC-01, 02
PSYC-01A, 01AH, 15, 22, 23, 25, 36, 37
SOS-01, 03

AREA E: Lifelong Understanding and Self-Development
A minimum of 3 units are required from the following:
E Integrated Organism [CLEP accepted]
ATHL-02A, 02B, 02C, 02G, 02K
CLDV-01, 02
CLDV/PSYC-09
COLL-10
GUID-30
HLTH-10
KINE-09, 15, 30, 35, 36, 41, 42
NUTR-10
PSYC-22, 23, 40
REGN-34

Minimum Total CSU-GE Certification: 39 Units

Merced College Courses Designated to Meet CSU History,
Constitution, and American Ideals Graduation Requirement [AP &
CLEP accepted]
The American Institutions Requirement (AIR) (U.S. History, Constitution,
California State and Local Government) as well as requirements for
Political and Economic Institutions may be met by completion of one of the
following sequences:
Sequence A:
HIST-17A or HIST-17AH (both meet US-1 and US-2) AND
HIST-17B or HIST-17BH (both meet US-1 and US-3)
Sequence B:
HIST-17A or HIST-17AH or HIST-17B or HIST-17BH or HIST-22
(US-1)
AND
POSC-01 (US-2 AND US-3)

Students satisfy this CSU graduation requirement through coursework in
three areas:
US-1: Historical development of American institutions and ideals
US-2: U.S. Constitution and government
US-3: California state and local government

This requirement may be met before or after transfer to the CSU.
- Students who want to fulfill this requirement with courses taken before
Fall, 2004 should consult their college catalogs.
- If a course is approved for more than one US Area above, a student
may use the course to satisfy all areas listed.
- US-1 may be completed with a score of 3 or higher on Advanced
Placement US History.
- US-2 (but not US-3) may be completed with a score of 3 or higher on
Advanced Placement US Government & Politics.
- At the discretion of the CSU Campus granting the degree, courses
meeting this requirement may also be counted toward certification in
general education (GE Breadth or IGETC).

Check with your counselor for details.
07-25-18
### CSU Baccalaureate Level Course List 2017-2018

This agreement lists courses transferable for unit credit to all CSU campuses. It is based on information from the 2017-2018 ASSIST database (www.assist.org)

<p>| ACTG-04A | ASTR-01L | CLDV-05 | CRIM-49A-ZZ | ENGL-10 | HMSV-21 |
| ACTG-04B | ATHL-01A | CLDV-06 | CROP-10 | ENGL-11 | HMSV-22 |
| ACTG-31  | ATHL-01B | CLDV-07 | CROP-12 | ENGL-12 | HSMV-41 |
| AGBS-10  | ATHL-01D | CLDV-07L | CROP-13 | ENGL/PHIL-13 | HMSV-42 |
| AGBS-11  | ATHL-01G | CLDV/PSYC-09 | DAIR-10 | ENGL/PHIL-13H | HMSV-43 |
| AGBS-12  | ATHL-01I | CLDV-11 | DRAM-01 | ENGL-14 | HSMV-44 |
| AGBS-13  | ATHL-01J | CLDV-30C | DRAM-02 | ENGL-15 | HNRS-40A |
| AGBS-14  | ATHL-01K | CLDV-30D | DRAM-02L | ENGL-18 | HNRS-40B |
| AGBS-17  | ATHL-01L | CLDV-33 | DRAM-04 | ENGR/CPSC-14 | HNRS-40C |
| AGBS-18  | ATHL-02A | CLDV-34A | DRAM-04L | ENGR-15 | HNRS-40D |
| AGBS-30B | ATHL-02B | CLDV-34B | DRAM-08 | ENGR-18 | HUM-01 |
| AGBS-30C | ATHL-02D | CLDV-35 | DRAM-12 | ENGR-30 | HUM-01H |
| AGBS-31A | ATHL-02G | CLDV-35L | DRAM-13 | ENGR-45 | HUM-02 |
| AGBS-31B | ATHL-02I | CLDV-37 | DRAM-14 | ENGR-49A-ZZ | HUM-02H |
| AGBS-31C | ATHL-02K | CLDV-38 | DRAM-15 | FIRE-30 | HUM-15 |
| AGRI-10  | ATHL-03 | CLDV/NUTR-41 | DRAM-16 | FIRE-31 | HUM-21 |
| ANSC-10  | ATHL-13 | COLL-10 | DRAM-23 | FIRE-32 | INDT-10 |
| ANSC-12  | ATHL-36A | COMM-01 | DRFT-04A | FIRE-33 | INDT-25 |
| ANSC-13  | ATHL-36B | COMM-01H | DRFT-04B | FIRE-34 | INDT-32 |
| ANSC-14  | ATHL-36C | COMM/ENGL-02 | DRFT-04C | FIRE-35 | INDT-35 |
| ANSC-16  | ATHL-36D | COMM-04 | DRFT-04D | FIRE-36 | INDT-38 |
| ANSC-17  | AUTO-04 | COMM-05 | DRFT-06 | FIRE-37 | INDT-40 |
| ANSC-18  | AUTO-32 | COMM-30 | DRFT-10 | FIRE-39 | INDT-41 |
| ANSC-19  | AUTO-33 | COOP-41A | DRFT-25 | FIRE-42A | INDT-49 |
| ANSC-30  | AUTO-36 | COOP-41B | DRFT-35 | FIRE-47B | JPN-01A |
| ANSC-40  | AUTO-41 | COOP-41C | DRFT-41 | FIRE-49A-ZZ | JPN-01B |
| ANSC-41  | AUTO-42 | COOP-41D | DRFT-42A | FPPO-13 | JPN-02 |
| ANTH-01  | AUTO-43 | CORR-42 | DRFT-42B | FREN-01 | KINE-01 |
| ANTH-02  | AUTO-44 | CORR-43 | DRFT-43 | FREN-02 | KINE-02 |
| ANTH-10  | AUTO-46 | CORR-44 | DRFT-44 | FREN-03 | KINE-03 |
| AOM/CPSC-30 | AUTO-47 | CORR-49AB | ECON-01 | FREN-04 | KINE-04 |
| ARCH-01  | AUTO-48A | CORR-49AC | ECON-02 | GEOG-01 | KINE-05 |
| ARCH-01L | AUTO-48B | CORR-49A-ZZ | ELCT-30 | GEOG-01L | KINE-06 |
| ART-01   | AUTO-48C | CORR-49JJ | ELCT-31 | GEOG-02 | KINE-07 |
| ART-02   | AUTO-48D | CORR-49LL | ELCT-32 | GEOG-12 | KINE-09 |
| ART-06   | AUTO-48E | CORR-49OO | ELCT-34 | GEOG-15 | KINE-12A |
| ART-12A  | AUTO-48F | CORR-49TT | ELCT-35 | GEOI-01 | KINE-12B |
| ART-12B  | BIOL-01 | CORR-49XX | ELCT-36 | GEOI-02 | KINE-13 |
| ART-15   | BIOL-02 | CPSC-01 | ELCT-41 | GEOI-03 | KINE-14 |
| ART-17A  | BIOL-04A | CPSC-05A | ELCT-42A | GERN-01 | KINE-15 |
| ART-17B  | BIOL-04B | CPSC-06 | ELCT-42B | GERN-02 | KINE-16 |
| ART-20A  | BIOL-06 | CPSC/MATH-07 | ELCT-43A | GERN-03 | KINE-19 |
| ART-20B  | BIOL-09 | CPSC/ENGR-14 | ELCT-44 | GERN-04 | KINE-20 |
| ART-23A  | BIOL-16 | CPSC/AOM-30 | ELCT/CPSC-45A | GUID-30 | KINE-23 |
| ART-23B  | BIOL-18 | CPSC-39 | ELCT/CPSC-45B | GUID-45 | KINE-24A |
| ART-24A  | BIOL-20 | CPSC-42 | ELCT-45C | GUID-48 | KINE-24B |
| ART-24B  | BIOL-32 | CPSC/ELCT-45A | ELCT-45D | HIST-04A | KINE-24C |
| ART-26B  | BIOL-33 | CPSCV49A-ZZ | EMER-10 | HIST-05 | KINE-31 |
| ART-29A  | BUS-10 | CRIM-01 | EMER-11 | HIST-09A | KINE-32 |
| ART-29B  | BUS-18A | CRIM-02 | EMER-20 | HIST-09B | KINE-33 |
| ART-48A-ZZ | BUS-35 | CRIM-03 | EMER-21 | HIST-17A | KINE-34 |
| ARTD-40A | BUS-43 | CRIM-04 | EMER-30 | HIST-17AH | KINE-35 |
| ARTD-40B | BUS-49A-ZZ | CRIM-05 | EMER-31 | HIST-17B | KINE-41 |
| ARTD-41A | CHEM-02A | CRIM-06 | ENGL-01A | HIST-17BH | KINE-42 |
| ARTD-41B | CHEM-02B | CRIM-08 | ENGL-01B | HIST-19 | LAND-10A |
| ARTD-42A | CHEM-04A | CRIM-10 | ENGL/COMM-02 | HIST-22 | LAND-10B |
| ARTD-42B | CHEM-04B | CRIM-11 | ENGL-04A | HIST-23 | LAND-11 |
| ARTD-45A | CHEM-12A | CRIM-30 | ENGL-04B | HIST-29 | LAND-12 |
| ARTD-45B | CHEM-12B | CRIM-33 | ENGL-05 | HLTH-10 | LAND-14 |
| ASLG-01  | CLDV-01 | CRIM-35 | ENGL-06A | HLTH-15 | LAND-15 |
| ASLG-02  | CLDV-02 | CRIM-37 | ENGL-06B | HMNG-01 | LAND-16 |
| ASLG-03  | CLDV-03 | CRIM-42C | ENGL-07 | HMNG-02 | LAND-17 |
| ASTR-01  | CLDV-04 | CRIM-42D | ENGL-08 | HMSV-20 | LBST-10 |</p>
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IGETC 2017-2018

Intersegmental General Education Transfer Curriculum

Completion of the IGETC permits a student to transfer from Merced College to a campus in either the California State University or the University of California system without the need after transfer to take additional, lower division, general education courses to satisfy the campus GE requirements. IGETC is not recommended for majors that require extensive lower division preparation. Consult with your counselor. Students may also fulfill the general education requirements by completing the specific lower division breadth and general education requirements of the school or college of the campus to which the student intends to transfer. Students intending to transfer to the California State University System may also complete the requirement by fulfilling the CSU’s general education requirement.

Completion of the IGETC will not satisfy the American Institutions requirement. Courses used to satisfy the American Institutions requirement may not be counted to satisfy either a Humanities or a Social and Behavioral Science requirement.

AREA 1: English Communication

UC: Select one course from 1A & 1B.
CSU: Select one course from 1A, 1B and 1C.

Group A: English Composition [AP accepted]
ENGL-01A

Group B: Critical Thinking
ENGL/PHIL-13*, 13H

Group C: Oral Communication [CSU REQUIREMENT ONLY]
COMM-01, 01H, 04

AREA 2: Mathematical Concepts and Quantitative Reasoning [AP accepted]
(One course: 3 semester units)
CPSC/MATH-07
MATH-02+, 02H+, 04A, 04B, 04C, 06, 07, 08, 10, 15, 26+
PSYC-05

AREA 3: Arts & Humanities

A minimum of three courses (nine semester units) are required with at least one course from 3A and 3B

3A. Arts [AP & IB accepted]
ART-01, 02, 06, 15
ARTD-40A, 40B
ENGL-14
HUM-21
MUSG-10, 11, 13, 14
PHOT-33

3B. Humanities [AP & IB accepted]
DRAM-01
ENGL-01B*, 04A, 04B, 05, 06A, 06B, 07, 08, 10, 11, 18
FREN-03*, 04
GERN-02*, 03*, 04*
HIST-04A, 04B, 05*, 09A*, 09B, 17A*, 17AH*, 17B*, 17BH*, 19, 29*
HMNG-02*
HUM-01, 01H, 02, 02H, 15*
PHIL-01, 01H, 02*, 03, 04, 05, 15
SPAN-02*, 03*, 04*, 10*, 11*

AREA 4: Social & Behavioral Sciences [AP & IB accepted]
A minimum of three courses (9 semester units) is required from at least two disciplines

AGBS-11
ANTH-02, 10
CLDV-01, 02
COMM-30
ECON-01, 02
GEOG-02, 12
HIST-05*, 09A*, 17A*, 17AH*, 17B*, 17BH*, 19, 22, 23, 29*
HUM-15*
PHIL-02*
POSC-01, 02
PSYC-01A, 01AH, 15*, 22, 23, 25, 36
SOC-01, 03

AREA 5: Physical & Biological Sciences
A minimum of two course (7-9 semester units) is required with at least one course from 5A and 5B. At least one course must be a lab course listed in "SC Laboratory".

5A. Physical Science [AP & IB accepted]
ARCH-01
ASTR-01
CHEM-02A+, 02B+, 04A, 04B
GEOG-01, 15
GEOG-01, 02*, 03+
PHSC-01+, 02+
PHYS-02A+, 02B+, 04A+, 04B+, 04C+, 10+
PSYC-05

5B. Biological Science [AP & IB accepted]
ANTH-01
Biol-01+, 02, 04A, 04B, 06, 09, 16, 18, 20, 32
PLSC-10
PSYC-15*

5C. Laboratory [AP & IB accepted]
ANTH-01
Biol-01L, 02, 04A, 04B, 16, 18, 20, 32L
CHEM-02A+, 02B+, 04A, 04B
GEOG-01L
GEOG-01+, 02*, 03+
PHSC-01L, 02L+
PHYS-02A+, 02B+, 04A+, 04B+, 04C+
PSYC-05
PLSC-10
PSYC-15*
SOIL-10

AREA 6: Language Other Than English [AP & IB accepted] [UC ONLY]
Requires proficiency equivalent to two years of high school study in the same language. Courses from another college, AP/IB, or courses above the proficiency level may also be used to meet this requirement.

FREN-01, 02*, 03*, 04*
GERN-01, 02*, 03*, 04*
HMNG-01, 02*
JPNS-01B, 02
SPAN-01+, 02*, 03*, 04*, 10*, 11*

+ Transfer Credit is limited by UC or CSU or both. Please consult with a counselor.

*Courses listed in multiple areas shall not be certified in more than one area except for courses in Area 6, Language Other Than English, which can be certified in both Areas 3B and 6.
IGETC for STEM 2017-2018

Intersegmental General Education Transfer Curriculum
Completion of the IGETC permits a student to transfer from Merced College to a campus in either the California State University or the University of California system without the need after transfer to take additional, lower division, general education courses to satisfy the campus GE requirements. IGETC is not recommended for majors that require extensive lower division preparation. All courses must be completed with a grade of C or better. Consult with your counselor. Students may also fulfill the general education requirements by completing the specific lower division breadth and general education requirements of the school or college of the campus to which the student intends to transfer. Students intending to transfer to the California State University System may also complete the requirement by fulfilling the CSU’s general education requirement. Completion of the IGETC will not satisfy the American Institutions requirement. Courses used to satisfy the American Institutions requirement may not be counted to satisfy either a Humanities or a Social and Behavioral Science requirement.

AREA 1: English Communication
UC: Select one course from 1A & 1B.
CSU: Select one course from 1A, 1B and 1C.

Group A: English Composition [AP accepted]
ENGL-01A

Group B: Critical Thinking
ENGL/PHIL-13*, 13H

Group C: Oral Communication [CSU REQUIREMENT ONLY]
COMM-01, 01H, 04

AREA 2: Mathematical Concepts and Quantitative Reasoning [AP accepted]
(One course: 3 semester units)
CPSC/MATH-07
MATH-02*, 02H*, 04A, 04B, 04C, 06, 07, 08, 10, 15, 16, 26+
PSYC-05

AREA 3: Arts & Humanities
A minimum of three courses (nine semester units) are required with at least one course from area 3A and one course from area 3B.

IGETC for STEM requires a minimum of two courses with at least one course from area 3A and one course from area 3B. (6 semester units).

3A. Arts [AP & IB accepted]
ART-01, 02, 06, 15
ARTD-40A, 40B
ENGL-14
HUM-21
MUSG-10, 11, 13, 14
PHOT-33

3B. Humanities [AP & IB accepted]
DRAM-01
ENGL-01B*, 04A, 04B, 05, 06A, 06B, 07, 08, 10, 11, 18
FREN-01*, 03*, 04*, 05*, 09A*, 17A*, 17A*, 17B*, 17B*, 17BH*, 19, 22, 23, 29*
HUM-01, 01H, 02, 02H, 15*
PHIL-01, 01H, 02*, 03, 04, 05, 15
SPAN-02*, 03*, 04*, 10*, 11+

AREA 4: Social & Behavioral Sciences [AP & IB accepted]
A minimum of three courses (9 semester units) is required from at least two disciplines.

IGETC for STEM requires a minimum of two courses from at least two academic disciplines (6 semester units).
AGBS-11
ANTH-02, 10
CLDV-01, 02
COMM-30
ECON-01, 02
GEOG-02, 12

HIST-05*, 09A*, 17A*, 17A*, 17BH*, 17B*, 17B*, 19, 22, 23, 29*
HUM-15*
PHIL-02*
PSYC-01, 02
SOC-01, 03

AREA 5: Physical & Biological Sciences
A minimum of two course (7-9 semester units) is required with at least one course from 5A and 5B. At least one course must be a lab course listed in “5C Laboratory”.

5A. Physical Science [AP & IB accepted]
ARCH-01
ASTR-01
CHEM-02A+, 02B+, 04A, 04B
GEOG-01, 15
GEOL-01, 02*, 03+
PHSC-01+, 02+
PHYS-02A+, 02B+, 04A+, 04B+, 04C+, 10+
SOIL-10

5B. Biological Science [AP & IB accepted]
ANTH-01
BIOL-01+, 02, 04A, 04B, 06, 09, 16, 18, 20, 32
PLSC-10
PSYC-15*

SC. Laboratory [AP & IB accepted]
ANTH-01
ASTR-01L
BIOL-01+, 02, 04A, 04B, 16, 18, 20, 32L
CHEM-02A+, 02B+, 04A, 04B
GEOG-01L
GEOL-01, 02*, 03+
PHSC-01L, 02L+
PHYS-02A+, 02B+, 04A+, 04B+, 04C+
PLSC-10
SOIL-10

AREA 6: Language Other Than English [AP & IB accepted]
(UC ONLY)
Requires proficiency equivalent to two years of high school study in the same language. Courses from another college, AP/IB, or courses above the proficiency level may also be used to meet this requirement.
FREN-01, 02, 03*, 04*
GERN-01, 02*, 03*, 04*
HMNG-01, 02*
JPNS-01B, 02
SPAN-01+, 02*, 03*, 04*, 10+, 11+

+Transfer Credit is limited by UC or CSU or both. Please consult with a counselor.
*Courses listed in multiple areas shall not be certified in more than one area except for courses in Area 6, Language Other Than English, which can be certified in both Areas 3B and 6.
UC TCA Courses 2016-2017

University of California Transfer Course Agreement

This agreement lists courses transferable for unit credit at all UC campuses. It is based on information from the 2015-16 UCOP (University of California Office of the President) transfer course agreement, and is valid for the current academic year listed at the top of this agreement. Courses marked with "UC-" will satisfy the five areas of the 1996 transfer course requirements. (E = English, M = Math, H = Humanities, B = Behavioral and Social Sciences, S = Biological and Physical Sciences) Meet with your counselor to determine more specific transfer credit information.

SEE NEXT PAGE FOR IMPORTANT INFORMATION ABOUT UC’S TRANSFERABLE COURSE AGREEMENTS.

ACTG-04A  *ATHL-02K  *ENGR-14/CPSC-14  HNRS-40C  MUSA-25A
ACTG-04B  *ATHL-03 ea  ENGR-15  HNRS-40D  MUSA-25B
AOM/CPSC-30 (effective)  *ATHL-13  ENGR-18  HVMV-21  MUSA-27A
SU11L  *ATHL-36A ea  ENGR-30  HUM-01 (UC-H)  MUSA-27B
AGRI-10  **ATHL-36B  ENGR-45  HUM-01H (UC-H)  MUSE-41
AGBS-11 (UC-B)  **ATHL-36C  ENGL-01A (UC-E)  HUM-02 (UC-H)  MUSE-42
AGBS-18  **ATHL-36D  ENGL-01B UC-E/H)  HUM-02H (UC-H)  MUSE-43
ASLG-01  *Biol-01 w/lab (UC-S)  ENGL-02/COMM-02  HUM-15 (UC-B/H)  MUSE-44 ea
ASLG-02 (UC-H)  Biol-02 (UC-S)  ENGL-04A (UC-H)  HUM-21 (UC-H)  MUSE-45 ea
ASLG-03 (UC-H)  Biol-04A w/lab (UC-S)  ENGL-04B(UC-H)  JPN-01A  MUSG-10 (UC-H)
ANC-10  Biol-04B w/lab (UC-S)  ENGL-06A UC-H)  JPN-02  MUSG-13 (UC-H)
ANC-12  Biol-06 (UC-S)  ENGL-06A UC-H)  *JPN-01B  MUSG-14 (UC-H)
ANC-14  Biol-09 (UC-S)  ENGL-06B(UC-H)  KINE-01  MUSG-17
ANC-16  Biol-16 w/lab (UC-S)  ENGL-07 UC-H)  KINE-02  MUSG-17
ANC-17  Biol-18 w/lab (UC-S)  ENGL-08  *KINE-03  MUST-01
ANC-18  Biol-20 w/lab (UC-S)  ENGL-08  *KINE-03  MUST-01
ANC-19  credit if taken after SU16)  ENGL-11 UC-H)  KINE-09  MUST-03
ANTH-01 w/lab (UC-S)  Biol-32 (UC-S)  ENGL-12  *KINE-12A  MUST-04
ANTH-02 (UC-B)  Biol-32L BUS-10  ENGL-13/PHIL-13 UC-E)  *KINE-12B  MUST-09
ANTH-10 (UC-B)  BUS-18A  ENGL-13H/PHIL-13H  *KINE-13 ea  NUTR-10
ARCH-01 (UC-S)  Chem-02A w/lab (UC-S)  UC-E)  *KINE-14 ea  PHIL-01 (UC-H)
ART-01 (UC-H)  CHEM-04A w/lab (UC-S)  ENGL-14 UC-H)  *KINE-15  PHIL-01H (UC-H)
ART-02 (UC-H)  CHEM-04B w/lab (UC-S)  ENGL-15  *KINE-16 ea  PHIL-02
ART-06 (UC-H)  CHEM-12A w/lab (UC-S)  ENGL-18 UC-H)  *KINE-19  PHIL-03 UC-H)
ART-12A  CHEM-12B w/lab (UC-S)  **FREN-01  *KINE-20 ea  PHIL-04 (UC-H)
ART-12B  Cldv-01 (UC-B)  FREN-02  KINE-23 ea  PHIL-05 UC-H)
ART-15  Cldv-02 (UC-B)  FREN-03 UC-H)  *KINE-24A  PHIL-10 UC-H)
ART-17A  Cldv-09/PSYC-09  FREN-04 (UC-H)  *KINE-24B  PHIL-12 UC-H)
ART-17B  Comm-01  GEOG-01 UC-S)  *KINE-24C  PHIL-13 UC-E)
ART-20A  Comm-01H  GEOG-01L  *KINE-30 ea  PHIL-13 UC-E)
ART-20B  Comm-02/ENGL-02  GEOG-02 (UC-B)  *KINE-31 ea  UC-E)
ART-23A  Comm-04  GEOG-12 UC-B)  *KINE-32 ea  UC-15 (UC-H)
ART-23B  Comm-30 UC-B)  GEOG-15 UC-B)  *KINE-33 ea  PHOT-10A
ART-24A  CPSC-01  GEOF-01 (UC-S)  *KINE-34 ea  PHOT-10B
ART-24B  CPSC-05  GEOF-02 UC-S)  *KINE-35 2ea  PHOT-11A
ART-26A  CPSC-06  *GEO-03  *KINE-41 ea  PHOT-33 UC-H)
ART-26B  CPSC-07/MATH-07  **GERN-01 UC-H)  KINE-42 ea  *PHED-20
ART-29A  CPSC/ENGR-14  02 UC-H)  LAND-10A  PHED-20
ART-29B  CPSC-30/AOM-30 (effective 01 UC-H)  LAND-10B  *PHED-36D
ARTD-40A  CPSC-39  GERN-03 UC-H)  LAND-12  PHSC-01 UC-S)
ARTD-40B  CPSC-39  GERN-04 UC-H)  LAND-16  PHSC-01 UC-S)
ARTD-41A  CPSC-42  GUID-30  LRNR-30  PHSC-02
ARTD-41B  CRIM-02  *HLTH-10  *LBST-10  PHSC-02L
ARTD-42A  CRIM-04  *HLTH-15  LBST-20  *PHYS-02A w/lab (UC-S)
ARTD-45A  CRIM-05  HIST-04A UC-H)  +MATH-02 UC-M)  *PHYS-02B w/lab (UC-S)
ASTR-01 (UC-S)  HIST-04B UC-H)  +MATH-02H UC-M)  *PHYS-04A w/lab (UC-S)
ASTR-01L  HIST-05 UC-B/H)  MATH-04A UC-M)  *PHYS-04B w/lab (UC-S)
*ATHL-01A  HIST-05 (UC-B/H)  MATH-04B UC-M)  *PHYS-04C w/lab (UC-S)
*ATHL-01B  HIST-17A UC-B/H)  MATH-04C UC-M) +PHYS-10 UC-S)
*ATHL-01D ea  HIST-17AH UC-B/H)  MATH-06 UC-M)  PLSC-10 UC-S)
*ATHL-01G  HIST-17B UC-B/H)  MATH-07/CPSC-07  PLSC-13
*ATHL-01I ea  HIST-17B UC-B/H)  MATH-08 UC-M)  POSC-01 UC-B)
*ATHL-01J  HIST-17B UC-B/H)  MATH-10 UC-M)  POSC-02 UC-B)
*ATHL-01K  HIST-17B UC-B/H)  MATH-15 UC-M)  PSYC-01A UC-B)
*ATHL-01L  HIST-22 UC-B)  **MATH-20A  PSYC-01AH UC-B)
*ATHL-02A  HIST-23 UC-B)  **MATH-20B  PSYC-01B UC-B)
*ATHL-02B  HIST-29 UC-B/H)  +MATH-26 UC-M)  PSYC-05 UC-M)
*ATHL-02D  HIST-29 UC-B/H)  HMNG-02 UC-H)  MUSA-09 UC-09/CLDV-09 UC-B)
*ATHL-02G  HIST-30 UC-H)  MUSA-21A  PSYC-15 UC-B)
*ATHL-02I  HIST-30 UC-H)  MUSA-21B  PSYC-22 UC-B)

SEE NEXT PAGE FOR IMPORTANT INFORMATION ABOUT UC’S TRANSFERABLE COURSE AGREEMENTS.
IMPORTANT INFORMATION ABOUT UC'S TRANSFERABLE COURSE AGREEMENTS

Variable Topics Courses:
These courses are also called “Independent Studies”, “Special Studies”, “Special Topics”, “Field Work”, etc. Credit for variable topics courses is given only after a review of the scope and content of the course by the enrolling UC campus. This usually occurs after transfer and may require recommendations from faculty. Information about internships may also be presented for review, but credit for internships rarely transfers to UC. UC does not grant credit for variable topics courses in Journalism, Photography, Health, Business Administration, Architecture, Administration of Justice (Criminology) or Library Departments because of credit restrictions in these areas.

Honors Course Credit Limitation:
Duplicate credit will not be awarded for both the honors and regular versions of a course. Credit will only be awarded to the first course completed with a grade of C or better.

Course Repeatability:
An “ea” after the unit value of a course on this agreement is meant to indicate that the course may be repeated for credit under CCC campus policies. Since campus policies on repeatability vary, the “ea” indicator does not guarantee that UC will grant credit for every course that appears multiple times on a student's transcript.

LEGEND:
* Any or all of these PE Activity courses combined: maximum credit, 4 units
+ATHL: Any or all of these courses combined: maximum credit, 8 units
*BIOI-01: No credit for BIOI-01 if taken after BIOI-04A (per catalog)
 o CHEM-02A No credit for CHEM-2A if taken after CHEM -4A
**FREN-01 Corresponds to two years of high school study
*GEOL-03 No credit if taken after a college level course in Astronomy, Geology, Oceanography or Meteorology
**GERN-01 Corresponds to two years of high school study
*HLTH-10 and HLTH-15 combined: maximum credit, one course
**HMNG-01 Corresponds to two years of high school study
**JPNS-01B Corresponds to two years of high school study
+ KINE: Any or all of these courses combined: maximum credit, 8 units
* KINE: Any or all of these PE Activity courses combined: maximum credit, 4 units
*LAND-10A and 10B combined: maximum credit, one course
*LBST-10 and LBST-20 combined: maximum credit, one course
+MATH -02, MATH-2H and -26 combined: maximum credit, 5 semester units
**MATH-20A and MATH -20B combined: maximum credit, one course
*PHOT-10B AND PHOT-11A combined: maximum credit, one course
*PHED: Any or all of these PE activity courses combined: maximum credit, 4 semester units
+PHED: Any or all of these courses combined: maximum credit: 8 units
*PHSC-01: No credit for PHSC-01 if taken after a college level courses in Astronomy, Geology, or Physics
*PHSC-02/PHSC-02L: No credit if taken after a more advanced course I Chemistry or Physics
*PHYS-02A, PHYS-02B and PHYS-04A, PHYS-04B, PHYS-04C combined: maximum credit, one series; deduct credit for duplication of topics
+PHYS-10: No credit if taken after PHYS-02A or PHYS-04A
*SPAN-01 and SPAN -10 combined: maximum credit, one course – corresponds to two years of high school study
 oSPAN-02 and SPAN-11 combined: maximum credit, one course
The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. A C-ID number next to a course signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course number. Thus, if a schedule of classes or catalog lists a course bearing a C-ID number, for example C-ID COMM 110, students at that college can be assured that it will be accepted in lieu of a course bearing the C-ID COMM 110 designation at another community college. In other words, the C-ID designation can be used to identify comparable courses at different community colleges. However, students should always go to www.assist.org to confirm how each college's course will be accepted at a particular four year college or university for transfer credit.

The C-ID numbering system is useful for students attending more than one community college and is applied to many of the transferable courses students need as preparation for transfer. Because these course requirements may change and because courses may be modified and qualified for or deleted from the C-ID database, students should always check with a counselor to determine how C-ID designated courses fit into their educational plans for transfer.

Students may consult the ASSIST database at www.assist.org for specific information on C-ID course designations. Counselors can always help students interpret or explain this information.

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### Course Identification Numbering System (C-ID) 2018-2019

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08-22-17
Courses Related in Content

The Board of Governors have changed the regulations for course repetition. The changes were made first and foremost to limit the number of times a student can enroll in the same or similar courses in physical education, visual and performing arts. In addition, changes were made to clarify the limited circumstances under which a student could enroll more than once in the same course. The regulations set upper limits on the number of times and circumstances in which a district may permit a student to enroll in the same credit course.

Active Participatory Courses in Physical Education, Visual and Performing Arts

Title 5 sections 55000, 55040, and 55041, now identifies and limits the number of times a student can enroll in active participatory courses in physical education, visual and performing arts that are related in content. A course related in content includes any course with similar primary education activities in which skill levels or variations are separated into distinct courses with different student learning outcomes for each level or variation. Students are limited to four semester or six quarter enrollments in all levels and/or variation. ALL GRADES COUNT, INCLUDING F, W, FW, or NP.

The following is the list of courses that are approved by the committee as Courses Related in Content:

* Course is currently approved to be repeated. Please read course description for the limited number of repeats allowed.
+ Course is not active.
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<th>Life Fitness</th>
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Mathematics Pathways

- **Degree applicable courses**
  - Transferable
  - Meets the Math Competency requirements
- **Degree applicable courses**
  - Non Transferable
  - Meets the Math Competency requirements
- **Non degree applicable basic skills courses**
  - Non Transferable
  - Does not meet the Math Competency requirements

**Shape = Transferability**
**Color = Pathway**

### STEM Pathway
- MATH-10 or PSYC-05 Statistics 3 units
- MATH-15 Finite Math 3 units
- MATH-20A Basic Structures of Math I 3 units
- MATH-20B Basic Structures of Math II 3 units
- MATH-26 College Algebra for Liberal Arts 3 units
- MATH-02 Pre-Calculus 4 units
- MATH-04A Calculus I 4 units
- MATH-04B Calculus II 4 units
- MATH-04C Calculus III 4 units
- MATH-06 Differential Equations 3 units
- MATH-07 Discrete Structures 3 units
- MATH-08 Linear Algebra 3 units

### Non-STEM Pathway
- MATH-10 or PSYC-05 Statistics 3 units
- MATH-15 Finite Math 3 units
- MATH-20A Basic Structures of Math I 3 units
- MATH-20B Basic Structures of Math II 3 units
- MATH-26 College Algebra for Liberal Arts 3 units

### Statistics Pathway
- MATH-10 or PSYC-05 Statistics 3 units
- MATH-80 Pre-Algebra 4 units
- MATH-81 Beg Algebra 4 units
- MATH-82 Algebra for Liberal Arts 5 units
- MATH-61 Algebra for STEM 6 units
- MATH-62 Inter Algebra 4 units
- MATH-63 Pre-Stats 4 units
- MATH-64 Decimals & Fractions 3 units
- MATH-65 Arithmetic 3 units

### Additional Courses
- MATH-C
- MATH-01
- MATH-02
- MATH-03
- MATH-04

### May 11, 2018
Business & Community Programs

Community Services
The Community Services program at Merced College has been an integral part of the College’s commitment to provide education, enrichment, and adventure to the community. The Community Services Program offers:

1. Fee-based classes to district residents interested in studying specific interests and enrichment areas.
2. Special programs for children and young adults during the summer session, known as College for Kids classes, sports camps, and swimming as well as throughout the year in our Kids Corner.
3. Trips and tours to museums, historic sites, sporting events, and cultural events or performances in other areas of California. Nominal fees are charged to offset the cost of the events and transportation. Escorted tours to locations throughout the world are also offered each year.
4. Traffic Safety School, licensed by the Department of Motor Vehicles, for adults and juveniles. With permission from the court of jurisdiction, taking this course will prevent your citation from appearing on your record. Traffic School Online, in English and in Spanish, is also available.

For more information about Community Services, call (209) 384-6224 or visit www.mercedcommunityservices.com.

Career Advancement Academy (CAA)
The Career Advancement Academy (CAA) also known as the Employer-Focused Training Center (ETC) is dedicated to meeting the needs of employees and job seekers interested in short-term vocational training. Courses available include the Technical Office Occupations (TOO) program and the Medical Assistant (MA) program. In addition, the Medical Assistant Program prepares students for the California Certified Medical Assistant (CCMA-AC) exam. Both of these programs are located at the Merced College Business Resource Center in downtown Merced. For more information about CAA, call (209) 386-6738 or visit www.mercedcollegecaa.org.

Center for International Trade Development (CITD)-Global Trade & Logistics (GT&L)
The CITDs enhance the competitive strength of California business in the international marketplace and support international trade development in their local and regional communities. The network has existing working relationships with local, industry, federal and international partners, and has contractual relationships with the U.S. Department of Commerce, International Trade Administration, the Western United States Agricultural Trade Association, US Agency for International Development, and the U.S. Department of Education, Business and International Education Programs. CITD serves over 2000 California businesses annually and offers the following value-added services:

- Individualized assistance to help existing companies and new ventures strategically evaluate and pursue international business opportunities
- International business conferences, workshops, and seminars designed to provide information and tools to help enterprises and organizations capitalize on global business
- Reference and referral services for specific customs, regulatory, and operational challenges
- International matchmaking services to include introducing California companies to potential trading partners through overseas trade missions, hosting of inbound delegations, and trade lead distribution
- Assist community colleges in internationalizing their curricula and developing specialized programs and courses in international trade to help prepare California’s workforce to compete and contribute in the global economy.

The Global Trade and Logistics (GT&L) Program is hosted at Merced College District to serve the Central Mother Lode Region of Central California to support the following sector specific objectives:

- Expand the number of colleges offering global course content
- Expose more students to the global business and workplace environment
- Arm incumbent workers with an industry recognized credential to make them more globally competitive
- Promote exports which creates and supports high paying jobs, and helps with layoff aversion

To learn more, phone (209) 384-5892.

Retail, Hospitality, and Tourism / Learn & Earn (RHTLE)
Merced College hosts the Central and Mother Lode region’s Deputy Sector Navigator (DSN) for Retail, Hospitality, and Tourism industries from San Joaquin to Kern as well as Amador to Inyo Counties. The RHTLE DSN acts as a facilitator within all three of these economic sub-sectors, connecting industry employers with incumbent worker training and pipeline development with students within the public education system. The RHTLE DSN acts as a central point of contact for the sector within the region, offering a wide variety of workforce and educational resources in support of the statewide “Doing What Matters - for Jobs and the Economy” campaign (part of the California Community College Chancellor’s Office). For more information about RHTLE DSN, call (209) 386-6734 or visit www.doingwhatmatters.cccco.edu or www.centralvalley-motherloderhtl.org.

Workplace Learning Resource Center
The Workplace Learning Resource Center (WpLRC) provides Contract Education training to local employers in the greater Merced area with customized training, leadership, and development programs. The trainings offered are soft skills, manager/supervisory, technical, and certification skills that employees can immediately apply to their job upon completion of the training. Since its inception in 1994, the WpLRC has increased Merced College’s capacity to deliver training services to regional businesses, industry partners, and individuals through research, in-service training, and the development and implementation of innovative training options. The WpLRC supports essential elements of the California Community College Mission and Goals, which is to advance California’s economic growth and global competitiveness through education, training, and services that contribute to continuous workforce improvement. For more information about WpLRC, call (209) 386-6733 or visit www.mercedworkplacecenter.org.
Programs by School

Allied Health

Dean
Bobby Anderson
Phone (209) 384-6309
Area Office AHC-126
Counseling (209) 384-6314
Cooperative Work Experience (209) 384-6364

Associate in Arts
Nursing, Vocational, A.A. (12550.AA)
Minimum requirements for admission to the LVN program:
1. Must be a high school graduate or the equivalent as measured by the General Education Development (GED) test or California State High School Proficiency Examination.
2. Must be in good health.
3. Must have completed within five years of the date of application the following courses or their equivalent with a grade of 'C' or better: BIOL 50 or BIOL 16; NUTR 10; VOCN 46A; and *ALLH 67.

*ALLH 67 has no recency.

Program Application
Qualified applicants must meet the above prerequisites, provide transcripts documenting high school graduation or G.E.D./Proficiency score results and file a completed application with the Allied Health Office. Applications are accepted year-round, but enrollment is determined on a first come, first served basis. Applications are available from the divisions web site.

Requirements for Accepted Applicants ONLY

The following must be completed prior to starting the first course in the LVN program and is addressed at the mandatory orientation meeting:

1. Health clearance (including a physical and necessary immunizations or proof of immunity by titer)
2. Criminal background check (requires proof of valid social security number) and drug screening
3. Current CPR Certification for the Healthcare Provider (American Heart Association ONLY)

Note: All students must provide their own transportation to clinical/hospital facilities assigned.

Program Start Dates
Fall 2017, Spring 2019, Fall 2020

An Associate in Arts Degree is available for those students who complete the Merced College General Education requirements and the following courses.

Program Student Learning Outcomes
A. Collaborate with the health care team in providing care.
B. Incorporate knowledge of nursing curriculum to pass the NCLEX exam.
C. Utilize the nursing process to establish a plan of care, recognizing value and commitment to the practice of nursing standards.
D. Apply a code of ethics in solving ethical dilemmas while providing patient/family care.
E. Utilize therapeutic communication to obtain positive outcome in planning and goal setting for patient care.
F. Demonstrate effective knowledge, skills, and abilities to a nursing career that is constantly evolving and to focus intently on innovative approaches to patient care.

Program Requirements:
Program Core: (55 Units)
Prerequisites:
BIOL - 16 General Human Anatomy .......................... 4
or
BIOL - 50 Survey of Anatomy and Physiology ............... 3
NUTR - 10 Nutrition ............................................. 3
ALLH - 67 Medical Terminology ................................ 3
VOCN - 46A Applied Mathematics for Pharmacology ...... 1
First Semester
VOCN - 40 Foundations of Nursing ......................... 11
VOCN - 46B Pharmacology for Nurses .................... 2
VOCN - 47A Nursing Guidance I ............................ 1
Second Semester
VOCN - 42 Principles and Practices of Nursing Care I ...... 14
VOCN - 47B Nursing Guidance II ........................... 1
VOCN - 44 Principles and Practices of Nursing Care II ...... 14
VOCN - 47C Nursing Guidance III ........................... 1
Total: (55 Units)

Note:
A student must achieve a final score of 75% or better in each of the core nursing courses to continue in the program. When two courses must be taken concurrently, passing grades must be maintained in both for the student to continue in either course.

Associate of Science
Diagnostic Radiologic Technology, A.S. (12700.AS)
Requirements for Application (program prerequisites)
ALLH 67, BIOL 16, CHEM 02A, ENGL 01A, MATH C, and RADT 50. In order to progress satisfactorily in the program, students must complete all program courses in the specified sequence with a minimum grade of "C" in each course, and maintain an overall GPA of 2.75 in supportive and program course work. If a student withdraws or is dismissed from the program, they will no longer be eligible for re-admittance into the program.

Program requirements must be satisfied prior to submitting an application to the program. An official transcript listing all program prerequisites must accompany an application before the application will be officially accepted. Applications are accepted year-round. For additional program information and applications forms, refer to the Diagnostic Radiologic Technology Handbook available online at: http://www.mccd.edu/academics/alliedhealth/diag-rad/index.html
See an Allied Health Counselor for further clarification.

Upon selection into the program, students will have to provide evidence of criminal background and drug screening clearances two weeks before the first day of class. If a student is unable to provide evidence of these clearances by the time frame listed, the student will be deemed ineligible for selection at this time. The student may request that their application be placed at the bottom of the wait list. Student must also supply evidence of current inoculations, a negative TB screening (annual) or chest x-ray report and a current CPR card (American Heart Association) while in the program.

Also upon admission, additional information on uniforms will be provided. While enrolled in the program, students will be assigned to various clinical facilities in addition to the on-campus portions of the program. This ensures the strongest educational experience for each student. By application
and acceptance into this program, the student agrees to accept clinical assignments in whichever hospital or clinical site the student is assigned within our 75 mile service area. During internship (last year of the program), clinical assignments may include day, evening and weekend hours.

A.S. Degree breadth requirements and the listed required core courses must be completed by the end of the fourth session (i.e., Third Semester - Fall), at which time an Associate in Science Degree in Diagnostic Radiologic Technology is awarded.

Program Student Learning Objectives
A. Communicate effectively.
B. Apply clinical reasoning skills in their daily practice.
C. Perform successfully as entry level radiographers.
D. Perform as competent radiographers assimilating all professional, ethical, and legal principles.

Program Requirements:
Program Core: (35.5 Units)
First Semester (Fall)
RADT - 10 Introduction to Radiologic Sciences and Health Care 4
RADT - 11 Radiologic Procedures I ................................. 4
Second Semester (Spring)
RADT - 12A Radiologic Procedures II ................................. 4
RADT - 12B Clinical Education I ................................. 5
RADT - 13 Radiologic Sciences I ................................. 3
First Summer Session
RADT - 14A Radiologic Sciences II ................................. 2
RADT - 14B Clinical Education II ................................. 3.5
Third Semester (Fall)
RADT - 15A Radiologic Procedures III ................................. 1
RADT - 15B Clinical Education III ................................. 5.5
RADT - 15C Advanced Radiologic Procedures I ................................. 2
RADT - 15D Radiographic Pathology ................................. 1.5
Total: (35.5 Units)

The Internship Portion of the RADT Program Commences with:
Fourth Semester (Spring)
RADT - 16A Advanced Radiologic Procedures II ................................. 2.5
RADT - 16B Advanced Clinical Education I ................................. 10
RADT - 16C Fluoroscopy ................................. 2.25
Second Summer Session
RADT - 17A Radiologic Sciences III ................................. 2
RADT - 17B Advanced Clinical Education II ................................. 7
Fifth Semester (Fall)
RADT - 18A Integrative Study in Radiography ................................. 2
RADT - 18B Advanced Clinical Education III ................................. 9
RADT - 18C Sectional Anatomy ................................. 1

American Registry of Radiologic Technologist (ARRT) Examination for Radiography

Upon successful completion of the Associate in Science Degree AND Certificate of Achievement in Diagnostic Radiologic Technology, graduates are eligible to write the American Registry of Radiologic Technologist (ARRT) Examination for Radiography, and, if successful, to obtain the credentials necessary for employment in the field.

Nursing, Registered, A.S. (12500.AS)

Policy for Denial of Licensure
The California BRN protects the public by screening applicants for licensure in order to indentify potentially unsafe practioners. Statutory authority for denial of licensure is contained in the Business and Professions Code. Any student considering a career in nursing who has a criminal record is advised to go to the BRN website at rn.ca.gov and search Enforcement and then License Discipline and Convictions prior to applying to the nursing program.

Highlights

The Allied Health Center houses a complete Registered Nursing Skills Lab, large computer lab, conference rooms, study rooms and multiple large and small classrooms. The Registered Nursing Program has state of the art equipment and software that assist students with learning current procedures.

Mission Statement
The mission of the Merced College Registered Nursing Program is to prepare our students for careers as professional Registered Nurses that will best serve the community to a recognized standard of excellence. The Merced College Registered Nursing program focuses on 1) student success; 2) cultural diversity; 3) interrelationships of life experiences and knowledge; by providing a continually improving educational program which is accredited by the California Board of Registered Nursing. The Merced College Registered nurse graduate is educated for full participation in the life of the community, both professionally and as a citizen, and is instilled with a commitment to continue professional growth and lifelong learning.

Nursing, Registered
The Registered Nursing Program at Merced College prepares students to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN), leading to licensure as a Registered Nurse (RN) and is designed to prepare competent nurses for service in the community.

The Registered Nursing Program requires two academic years beyond the completion of the prerequisite courses and non-nursing breadth requirements. Graduates will earn the Associate of Science Degree upon completion of designated courses and competency requirements.

Program Application
Applications are available from the division’s web site. It is the applicant’s responsibility to submit all required paperwork within the specified dates and times. Applications will be accepted during mid-spring. Specific dates and times will be noted on the web site.

Selection Process
The Merced College RN Program class selection process is determined using the multi-criteria screening process established by the California Community College Chancellor’s office in accordance with AB 1559. A multi-criteria score is determined for each candidate based on previous degrees/certificates, work/volunteer experience in a healthcare setting, identified coursework GPA, life experience/special circumstances, foreign language proficiency and TEAS V or ATI TEAS assessment score. These students will be sequentially numbered from one to the maximum allowed for the in-coming class, including a predetermined number of alternate students. Depending on the number of qualified applicants and constraints of the Chancellor’s Office multi-criteria screening model, the selection pool will vary in size from semester to semester.

The minimum qualification for application includes a 2.5 GPA in Anatomy, Physiology, Microbiology, English-01A and Math-C (or higher). Minimum qualification also includes a composite score of at least 62 on the TEAS V test. Students not meeting these minimum qualifications are ineligible to apply.

Multiple Applications
There is no waiting list maintained for the R.N. Program. Applicants applying to the program a second time must fill out the "Enrollment Application". The applicant will be responsible for updating any other information that may change their point total and must comply with local and/or statement requirements. It is possible to be accepted into the qualified selection pool more than once during a selection period.

If an applicant has applied to the program more than once consecutively, the applicant’s name will be added to the application pool an additional time for each such application. An applicant is considered qualified for this purpose if all admission requirements have been met, the applicant meets minimum qualifications on the multi-criteria selection process, and a complete application packet has been submitted by the application deadline. IF YOU DO NOT APPLY CONSECUTIVELY, YOUR APPLICATION WILL BE DESTROYED.
Upon the applicant’s fourth consecutive qualified application, their name will be assigned in the next school year. If the applicant declines their seat in the program and decides to apply in any subsequent application period, they will be considered a new applicant. All “consecutive applications” will become null and void.

Requirements for Accepted Applicants Only
The following must be completed prior to starting the first course in the RN program and is addressed at the mandatory orientation meeting:

1. Health clearance (including a physical and necessary immunizations or proof of immunity by titer)
2. Criminal background check (requires proof of valid social security number) and drug screening
3. Current CPR Certification for the Healthcare Provider (American Heart Association ONLY)

Note: Criminal background check and drug screening is repeated between the third and fourth semesters as a requirement prior to the mental health rotation.

All students must provide their own transportation to clinical/hospital facilities assigned.

Preassessment Testing Requirement
Prospective RN program students must pass an assessment test, Test of Essential Academic Skills (TEAS) TEAS V or ATI TEAS. The “first test” result of the TEAS testing by ATI will need a minimum score of 62, otherwise the student will be ineligible to apply to the program. If a student has already taken TEAS V or ATI TEAS from another college, they need to include verification of this score with the application. As part of the application paperwork, we will be asking for students to sign and confirm that their TEAS result is from a “first test”. Any false information provided on the application will be grounds for immediate disqualification. Limited supplies of review books may be checked out from the Allied Health office and other practice links may accessed on the Registering Nursing web page. ATI does provide (for a fee) remediation and study guides on their website. We highly encourage students to prepare for the TEAS test due to the need to achieve a 62 score.

Merced College Registered Nursing Military Policy
http://www.mccd.edu/academics/alliedhealth/nurse-registered/apply.html
http://www.mccd.edu/academics/alliedhealth/nurse-registered/information.html

The Registered Nursing Program at Merced College prepares students to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN), leading to licensure as a Registered Nurse (RN) and is designed to prepare competent nurses for service in the community. The Registered Nursing Program requires two academic years beyond the completion of the prerequisite courses and non-nursing breadth requirements. Graduates will earn the Associate in Science Degree upon completion of designated courses and competency requirements.

Program Student Learning Outcomes
A. Administer quality, safe, patient-centered nursing care through evidence-based practice.
B. Collaborate with members of the interdisciplinary team to provide and improve patient care.
C. Connect critical thinking skills, strategies, and clinical reasoning necessary to provide quality patient care.
D. Demonstrate leadership in a variety of healthcare settings for diverse patient populations.
E. Use information technology to communicate, manage knowledge, mitigate error, and support decision-making.
F. Practice as a competent nurse, assimilating all professional, ethical, and legal principles.

Prerequisite Courses: (19-20 Units)
BIOL - 16 General Human Anatomy ........................... 4 **
BIOL - 18 Principles of Physiology ............................... 4 **
BIOL - 20 Microbiology ........................................... 4 **
ENGL - 01A College Composition and Reading .................. 4
or
ENGL - 13 Critical Reasoning and Writing ...................... 3
or
ENGL - 13H Honors Critical Reasoning and Writing ........... 3
or
PHIL - 13 Critical Reasoning and Writing ..................... 3
or
PHIL - 13H Honors Critical Reasoning and Writing ........... 3
MATH - C Intermediate Algebra ................................. 4 or higher

Note: **It is highly recommended that once enrolled in these classes, students do not drop them. Program applicants need to understand that multiple attempts to improve grades earned in these classes can negatively affect their eligibility.

Program Requirements:
Required Courses (non-nursing): (9 Units)
Required courses (non-nursing) which also fulfill A.S. Breadth requirements:
COMM - 01 Fundamentals of Speech ............................. 3
or
COMM - 01H Honors Fundamentals of Speech ................. 3
or
COMM - 04 Small Group Discussion and Problem Solving .... 3
or
COMM - 05 Interpersonal Communication ..................... 3
or
SOC - 01 Introduction to Sociology ............................ 3
or
SOC - 02 Contemporary Social Problems ...................... 3
or
SOC - 03 Marriage and the Family ............................. 3
or
ANTH - 02 Sociocultural Anthropology ....................... 3
or
PSYC - 01A Introduction to Psychology ......................... 3
or
PSYC - 01AH Honors Introduction to Psychology ............. 3
or
PSYC - 09 Human Development ............................... 3
or
CLDV - 09 Human Development ............................... 3

Note: Students are encouraged to meet with a counselor to ensure all other graduation breadth requirements have been met to complete an AS Degree in Nursing.

Required Courses (nursing): (41 Units)
First Semester
REGN - 15 Foundations of Nursing ............................... 9
REGN - 18 Pharmacology in Nursing Practice .................. 3
Second Semester
REGN - 24 Acute Medical/Surgical and Nursing of the Childbearing Family ................. 10
Third Semester
REGN - 34 Advanced Medical/Surgical Nursing and Pediatric Nursing ......................... 10
Fourth Semester
REGN - 44 Acute Medical/Surgical Nursing and Mental Health Nursing ....................... 9

Prerequisite for Admission: (19-20 Units)
Additional BRN Requirement: (3 Units)
Completion of MCCD-GE Breadth pattern: (23 Units)
CSU-General Education Breadth Certification Requirements
Double Counting: (15 Units)
Total: (71-72 Units)

Competencies as Required by Merced College for Graduation:
Certificate
Diagnostic Medical Sonography Certificate (12800.CT)

Students successfully completing the program are awarded a Certificate of Achievement. The entire program is composed of one summer session and four semesters. If you wish to enter the program, you must make a formal application, including verification of completion of prerequisites listed below. Upon submission of a COMPLETED application, the date and time received will be stamped on the application. After your records have been verified, that date and time will become your official application date. You will receive a notice in the mail, advising you of the following:

- That you “Meet All Program Requirements/Prerequisites”
- Your official application date and time, and
- Your number on the enrollment list.

If you do NOT meet all the application requirements, your application will be returned, nullifying any application receipt date. If you are accepted into the program but must decline, your application will be kept on file. Enrollment will be based on a first-come, first-served basis. Only one cohort is in session at a time.

Entrance Requirement:
Associate of Science Professional degree and license in either Radiologic Technology or Registered Nursing or Nuclear Medicine Technology or Respiratory Therapy or Baccalaureate degree (biology) with over 500 hospital-based hours of direct patient care experience. See outline in the programmatic application.

Prerequisites:
BIOL 16, BIOL 18; COMM 01, COMM 01H, or ENGL 01A; MATH 10, MATH 15, MATH 25, MATH 26, or PSYC 05; ALLH 67; and PHYS 10 or RADT 13. All program prerequisites must be passed with a grade of “C” or higher with a minimum cumulative grade of 2.35 GPA

Applications are available from the divisions web site.

Upon admission to the program, you are required to have a physical examination providing evidence of good health and immunization, and must provide annual proof of a negative TB skin test or TB screening, and must have a chest X-ray at least every two years. You must also comply with the technical standards set for working in this field. Additional information on uniforms will be provided at that time.

While enrolled in the program, you will be assigned to various clinic facilities in addition to the on-campus portions of the program. By application and enrollment into the program, you agree to accept clinical assignments in whatever clinical site you are assigned. Clinical assignments will be scheduled during the normal working day hours.

In order to continue in the program, you must complete the Diagnostic Medical Sonography courses in the specified sequence offered per session/semester with a minimum grade of “C” in each course.

If you successfully complete the Diagnostic Medical Sonography Program, you will be awarded a Certificate of Achievement in Diagnostic Medical Sonography and will be eligible to write the following qualifying examinations of the American Registry of Diagnostic Medical Sonographers (ARDMS):
1. physical principles/instrumentation, and
2. Special Examination Option in Abdomen, and
3. Special Examination Option in OB/GYN.

Program Student Learning Outcomes
A. Develop the writing skills to prepare medical manuscripts and present clinical case studies.
B. Analyze the theory of physics, anatomy and pathophysiology, and sonographic appearance of normal and disease processes.
C. Develop an understanding of medical ethical standards and cultural diversity.
D. Develop both initial and final competencies in the various modalities of sonography.

Program Requirements:
Program Core: (49 Units)
First Semester (Fall)
SONO - 40 Basic Ultrasound Physics .................. 1.5
SONO - 41 Introduction to Sonography ................. 1.5
Second Semester (Spring)
SONO - 42A Abdominal Sonography .................. 4
SONO - 42B Clinical Experience I ...................... 9
Summer Session
SONO - 44A Advanced Ultrasound Physics .......... 1.5

Transfers
Credits earned in the Merced College Registered Nursing Program may be transferable to California State Universities. Since prerequisite science and social science courses vary at each institution, students are advised to consult the catalog of their intended transfer school and establish a transfer plan with the Allied Health Counselor.
### Diagnostic Radiologic Technology Certificate (12700. CF)

**Requirements for Application (program prerequisites)**

ALLH 67, BIOL 16, CHEM 02A, ENGL 01A, MATH C, and RADT 50. In order to progress satisfactorily in the program, students must complete all program courses in the specified sequence with a minimum grade of “C” in each course, and maintain an overall GPA of 2.75 in supportive and program course work. If a student withdraws or is dismissed from the program, they will no longer be eligible for re-admittance into the program.

Program requirements must be satisfied prior to submitting an application to the program. An official transcript listing all program prerequisites must accompany an application before the application will be officially accepted. Applications are accepted year-round. For additional program information and applications forms, refer to the Diagnostic Radiologic Technology Handbook available online at: [http://www.mccd.edu/academics/alliedhealth/diag-rad/index.html](http://www.mccd.edu/academics/alliedhealth/diag-rad/index.html)

See an Allied Health Counselor for further clarification.

Upon selection into the program, students will have to provide evidence of criminal background and drug screening clearances two weeks before the first day of class. If a student is unable to provide evidence of these clearances by the time frame listed, the student will be deemed ineligible for selection at this time. The student may request that their application be placed at the bottom of the wait list. Students must also supply evidence of current inoculations, a negative TB screening (annual) or chest x-ray report and a current CPR card (American Heart Association) while in the program. Also upon admission, additional information on uniforms will be provided. While enrolled in the program, students will be assigned to various clinical facilities in addition to the on-campus portions of the program. This ensures the strongest educational experience for each student. By application and acceptance into this program, the student agrees to accept clinical assignments in whichever hospital or clinical site the student is assigned within our 75 mile service area. During internship (last year of the program), clinical assignments may include day, evening and weekend hours.

### Note to Transfer Students

Schedule an appointment with an Allied Health Counselor to discuss any questions concerning prerequisite or A.S. Degree coursework.

Students sanctioned (dismissed) for any of the following infractions will not be considered for enrollment.

- Under the influence of drugs or alcohol while on duty
- Physical abuse to the patient, visitor or other personnel
- Petty theft
- Sexual misconduct
- Unsafe clinical practice
- Academic dishonesty
- Breach of confidentiality (HIPPA)
- Being dropped or withdrawing from an RT Program due to academic weakness or any of the above infractions

Only academic credit earned in regionally accredited institutions of higher education and JRCERT approved schools of Radiologic Technology for comparable prelicensure courses will be considered for transfer. Transfers are based on space availability and students must meet ALL current requirements for admission.

### Advisement

The Diagnostic Radiologic Technology Program is a demanding full-time program. Students will find it difficult to work while attending. Students are also expected to complete intense homework assignments.

In order to progress satisfactorily in the program, students must complete all program courses in the specified sequence with a minimum grade of “C” in each course, and maintain an overall GPA of 2.75 in supportive and program course work. If a student withdraws or is dismissed from the program, they will no longer be eligible for re-admittance into the program.

### Disclaimer

The RADT Program reserves the right to revise degree requirements and selections procedures. It is your responsibility to know these requirements and procedures. Students successfully completing the courses listed below are awarded a Certificate of Achievement in Diagnostic Radiologic Technology and are eligible to sit for the ARRT examination.

### Program Student Learning Outcomes

A. Communicate effectively.
B. Apply clinical reasoning skills in their daily practice.
C. Perform successfully as entry level radiographers.
D. Perform as competent radiographers assimilating all professional, ethical, and legal principles.

### Program Requirements:

**Program Core: (71.25 Units)**

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**Total: (71.25 Units)**

American Registry of Radiologic Technologist (ARRT) Examination for Radiography

Upon successful completion of the Associate in Science Degree AND Certificate of Achievement in Diagnostic Radiologic Technology, graduates are eligible to write the American Registry of Radiologic Technologist (ARRT) Examination for Radiography, and, if successful, to obtain the credentials necessary for employment in the field.

### Nursing Assistant Certificate (12150.CO)

**Orientation**

Students must attend a Nurse Assistant Orientation. Go to [www.mccd.edu](http://www.mccd.edu).

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**SONO - 44B**  
Clinical Experience II ........................................ 4.5

**SONO - 44C**  
Superficial Structures ............................................. 1

**SONO - 43A**  
OB/GYN Sonography ................................................ 4

**SONO - 43B**  
Clinical Experience III ........................................... 9

**SONO - 45A**  
Integrative Study in Sonography .................................. 2

**SONO - 45B**  
Clinical Experience IV ............................................ 9

**SONO - 45C**  
Basics of Vascular Sonography ..................................... 2

**Total: (49 Units)**
edu/alliedhealth; select Nurse Assistant; then select Getting Started for complete information. Students must also purchase a Merced college Nurse Assistant Program Handbook at the Merced College Bookstore prior to orientation. The orientation will provide the necessary information needed to successfully complete the requirements prior to registration.

Program prerequisites: Orientation workshop; CPR card - Module A/C; negative TB skin test or chest X-ray within past six months; physical within past six months; DOJ fingerprint clearance; Penal Code violations clearance.

A statement of eligibility will be awarded upon the satisfactory completion of the following course.

Program Student Learning Outcomes:

A. Evaluate the responsibilities of a nursing assistant
B. Distinguish safety hazards in described simulated clinical situations
C. Explain the need for good hand washing techniques
D. Choose good body mechanics used by self and others
E. Plan techniques needed to assist clients with activities of daily living
F. Plan techniques needed to assist clients with rehabilitation procedures

Program Requirements:

Program Core: (6 Units)

ALLH - 63 Nurse Assistant ............................................ 6

Total: (6 Units)

Note:
Successful completion of the above course is required to apply for the CNA certification examination.

Nursing, Vocational Certificate (12550.CT)

Minimum requirements for admission to the LVN program:

1. Must be a high school graduate or the equivalent as measured by the General Education Development (GED) test or California State High School Proficiency Examination.
2. Must be in good health.
3. Must have completed within five years of the date of application the following courses or their equivalent with a grade of 'C' or better: BIOL 50 or BIOL 16; NUTR 10; VOCN 46A; and *ALLH 67.

*ALLH 67 has no recency.

Program Application

Qualified applicants must meet the above prerequisites, provide transcripts documenting high school graduation or G.E.D./Proficiency score results and file a completed application with the Allied Health Office. Applications are accepted year round, but enrollment is determined on a first come, first served basis. Applications are available from the divisions web site.

Requirements for Accepted Applicants ONLY

The following must be completed prior to starting the first course in the LVN program and is addressed at the mandatory orientation meeting:

1. Health clearance (including a physical and necessary immunizations or proof of immunity by titer)
2. Criminal background check (requires proof of valid social security number) and drug screening
3. Current CPR Certification for the Healthcare Provider (American Heart Association ONLY)

Note: All students must provide their own transportation to clinical/hospital facilities assigned.

Program Start Dates
Fall 2017, Spring 2019, Fall 2020

Upon satisfactory completion of the prerequisites and the nursing courses, a Certificate of Achievement is awarded and the student is then eligible for the National Licensure Examination.

Program Requirements:

Program Core: (55 Units)

Prerequisites:

BIOL - 16 General Human Anatomy .............................. 4
or
BIOL - 50 Survey of Anatomy and Physiology ................. 3

NUTR - 10 Nutrition ...................................................... 3

ALLH - 67 Medical Terminology ...................................... 3

VOCN - 46A Applied Mathematics for Pharmacology .......... 1

First Semester

VOCN - 40 Foundations of Nursing .................................... 11

VOCN - 46B Pharmacology for Nurses ............................. 2

VOCN - 47A Nursing Guidance I ...................................... 1

Second Semester

VOCN - 42 Principles and Practices of Nursing Care I .......... 14

VOCN - 47B Nursing Guidance II ..................................... 1

Third Semester

VOCN - 44 Principles and Practices of Nursing Care II ......... 14

VOCN - 47C Nursing Guidance III .................................... 1

Total: (55 Units)

Note:
A student must achieve a final score of 75% or better in each of the core nursing courses to continue in the program. When two courses must be taken concurrently, passing grades must be maintained in both for the student to continue in either course.

Agriculture

Dean
Toni Pirtle
Phone (209) 384-6250
Area Office
Mech Ag
Counseling (209) 384-6314
Cooperative Work Experience (209) 384-6364
Web site http://www.mccd.edu/academics/ag/index.html

Associate of Science for Transfer Agriculture Business, A.S.-T. (01000.AST)

The Associate in Science in Agriculture Business for Transfer degree is designed for students looking to obtain a well-rounded education in Agriculture Business. Upon completion, students with an AS-T in Agriculture Business will be eligible to transfer with junior standing into an equivalent major within the CA State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

Program Student Learning Outcomes:

A. Analyze the core concepts of various agriculture business disciplines.
B. Analyze local, state, and national agricultural issues and trends.
C. Examine economic principles with respect to the production and distribution of agricultural products and services.
D. Develop communication and problem solving skills to work effectively, respectfully, ethically, and professionally with people of diverse age, gender, ethnicity and culture in agribusines.
E. Combine team building skills and collaborative behaviors in the accomplishment of group goals and objectives.

For an Associate in Science in Agriculture Business for Transfer (AS-T), students must complete the following:

1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education
Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (24-26 Units)
AGBS - 10 Introduction to Agriculture Business .................. 3
AGBS - 11 Agricultural Economics ............................... 3
AGBS - 12 Agricultural Accounting ................................. 3
AGBS - 17 Agricultural Sales and Communication .................. 3
AGBS - 18 Agricultural Computer Applications ..................... 3
ECON - 02 Introduction to Macroeconomics ......................... 3
SOIL - 10 Soil Science .............................................. 3
or
CHEM - 02A Introductory Chemistry .................................. 4
or
CHEM - 04A General Chemistry I .................................... 5
MATH - 10 Elementary Statistics ..................................... 3
or
PSYC - 05 Introduction to Statistics in Psychology .................. 3
Total Units that may be double counted: (-13 Units)

General Education Units: (37-39 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
Elective (CSU Transferable) Units: (8-12 Units)
Total: (60 Units)

Associate of Arts
Crop Science, A.A. (01150.AA)
The Associate in Arts Degree is available upon satisfactory completion of the graduation requirements in addition to 19 units from the following list. The core must be completed for this degree.

Program Student Learning Outcomes

A. Given various pieces of Agricultural Equipment and the proper and safe operation instructions, students will demonstrate proper and safe use of said equipment.
B. Given the required equipment and materials and a set of plans/instructions, students will demonstrate the ability to assemble a sample project by selecting the correct equipment and performing basic welding operations related to the welding field.
C. Given the proper criteria for selection and application students will identify and select the most appropriate plants and crops with their decision based on the environment conditions, plant characteristics and customer preferences.
D. Given a computer with the proper software and the parameters of a hypothetical or actual problem students will be able to demonstrate the ability to compose a word processing document, a mathematical spreadsheet, and/or an information database given the parameters of a hypothetical problem.

Program Requirements:
Program Core: (22 Units)
AGBS - 18 Agricultural Computer Applications ..................... 3
AGRI - 10 Agriculture, Environment, and Society .................. 3
ANSC - 10 Elements of Animal Science ............................. 3
LAND - 11 Elements of Landscape Horticulture...................... 3
MECH - 31 Equipment Safety ....................................... 1
Plus nine units from three of the five following areas:
Agriculture Business
AGBS - 10 Introduction to Agriculture Business .................. 3
AGBS - 12 Agricultural Accounting .................................. 3
AGBS - 13 Agricultural Marketing .................................... 3
AGBS - 17 Agricultural Sales and Communication ................. 3
Animal Science
ANSC - 13 Animal Disease and Parasite Control ...................... 3
ANSC - 14 Elements of Animal Nutrition ............................ 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock .......... 1.5
Crop Science/Plant Science/Soil Science
CROP - 10 Elements of Cereal Grain Production .................... 3
CROP - 12 Commercial Vegetable and Garden Production ........... 3
CROP - 13 Forage Crops ............................................. 3
PLSC - 13 Economic Entomology ..................................... 3
SOIL - 11 Fertilizers and Soil Amendments ............................ 3
Landscape Horticulture
LAND - 10A Plant Identification and Usage .......................... Fall 3
LAND - 12 Landscape Design ........................................ 3
LAND - 14 Landscape Construction and Installation ................ 3
LAND - 16 Plant Propagation ....................................... 3
Mechanized Agriculture
MECH - 06 Fundamentals of Oxy-Fuel Welding and Shielded
Education Breadth Requirements.

* Transfer students should consult with their counselor regarding General Education Breadth.

Note:
- SOIL - 10 Soil Science
- PLSC - 10 Elements of Plant Science

Total: (60 Units)

Electives (as needed to reach 60 units): (12 Units)

Associate Degree Breadth Requirements

Completion of MCCD-GE Breadth: (23 Units)

Total: (22 Units)

Suggested agriculture courses to meet General Education Breadth Requirements:

**AGBS - 11** Agricultural Economics ........................................... 3 (Area D) *
**PLSC - 10** Elements of Plant Science ........................................ 3 (Area B) *
**SOIL - 10** Soil Science .......................................................... 3 (Area B) *

Note:
- * Course can be repeated.

Suggested agriculture courses to meet General Education Breadth Requirements: AGBS 11 (Area D); ANSC 10 or PLSC 10 (area B); and SOIL 10 (area B).

AGBS - 11 Agricultural Economics ............................................... 3
ANSC - 10 Elements of Animal Science ......................................... 3
PLSC - 10 Elements of Plant Science ............................................ 3
SOIL - 10 Soil Science .............................................................. 3

Suggested Sequence:

Fall 1
- AGBS - 10 Introduction to Agriculture Business .......................... 3
- AGBS - 18 Agricultural Computer Applications .......................... 3
- AGBS - 11 Agricultural Economics ............................................ 3
- AGBS - 13 Agricultural Marketing ............................................. 3
- AGBS - 12 Agricultural Accounting ........................................... 3

Animal Science, A.S. (011000.AS)

The Associate in Science degree in Animal Science is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a "C" in each course in the degree, and maintain a 2.0 GPA.

Program Student Learning Outcomes

A. Demonstrate necessary skills in genetics, reproduction, nutrition, and housing in order to operate efficient and profitable livestock operations.
B. Identify proper production practices, good animal health, proper animal nutrition, and good reproduction and management practices.
C. Demonstrate the ability to perform calculations needed in the field, use good communication skills, and apply good computer skills in the animal industry.
D. Demonstrate the ability to learn and develop skills to deal with potential changes and diversity in animal science and other related industries.
E. Appraise diverse ethical practices within the livestock industry.

Program Requirements:

Program Core: (30 Units)

AGBS - 18 Agricultural Computer Applications ........................... 3
ANSC - 10 Elements of Animal Science ........................................ 3
ANSC - 13 Animal Disease and Parasite Control ............................ 3
ANSC - 14 Elements of Animal Nutrition ...................................... 3
CROP - 10 Crops ....................................................................... 3
CROP - 14 Managing the Crop Production ..................................... 3
DAIR - 10 Dairy ........................................................................... 3
Pluses 8 units from the following electives: (8 Units)

**AGBS - 12** Agricultural Accounting ............................................. 3
**ANSC - 30** Fitting, Showing, and Merchandising Livestock ......... 3
**MECH - 12** Agriculture Equipment - Fall ................................. 3
**WELD - 06** Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding 3

Suggested agriculture courses to meet General Education Breadth Requirements:

Fall 1
- AGBS - 18 Agricultural Computer Applications .......................... 3
- ANSC - 10 Elements of Animal Science ...................................... 3

Note:
- * Course can be repeated.

Suggested Sequence:

Fall 1
- AGBS - 18 Agricultural Computer Applications .......................... 3
- ANSC - 10 Elements of Animal Science ...................................... 3

Associate of Science

Agriculture Business, A.S. (010000.AS)

The Associate in Science degree in Agriculture Business is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a "C" in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes

A. Analyze the core concepts of various agriculture business disciplines.
B. Analyze local, state, and national agricultural issues and trends.
C. Examine economic principles with respect to the production and distribution of agricultural products and services
D. Develop communication and problem solving skills to work effectively, respectfully, ethically, and professionally with people of diverse age, gender, ethnicity and culture in agribusiness.
E. Combine team building skills and collaborative behaviors in the accomplishment of group goals and objectives.

Program Requirements:

Program Core: (25 Units)

AGBS - 10 Introduction to Agriculture Business ............................... 3
AGBS - 11 Agricultural Economics .................................................. 3
AGBS - 12 Agricultural Accounting .................................................. 3
AGBS - 13 Agricultural Marketing .................................................... 3
AGBS - 17 Agricultural Sales and Communication ............................ 3
AGBS - 18 Agricultural Computer Applications ............................... 3
MECH - 31 Equipment Safety .......................................................... 1
Six units from these electives: (6 Units)

AGBS - 14 Farm Management .......................................................... 3
AGBS - 30A Elements of Agricultural Leadership ........................... 2
AGBS - 30B Agriculture Leadership - Personal Development .......... 2
AGBS - 30C Agriculture Leadership - Team Leadership ................ 2
AGBS - 31A Agricultural Ambassadors - Introduction .................... 2
AGBS - 31B Agricultural Ambassadors - Recruitment ..................... 2
AGBS - 31C Agricultural Ambassadors - Public Relations ............... 2
AGRI - 10 Agriculture, Environment, and Society .......................... 3
ANSC - 10 Elements of Animal Science ......................................... 3
ANSC - 13 Animal Disease and Parasite Control ............................. 3
ANSC - 14 Elements of Animal Nutrition ....................................... 3
CROP - 10 Crops ....................................................................... 3
CROP - 14 Managing the Crop Production ..................................... 3
DAIR - 10 Dairy ........................................................................... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding 3

Completion of MCCD-GE Breadth: (23 Units)

Total: (60 Units)

Electives (as needed to reach 60 units): (12 Units)

Total: (60 Units)
ANSC - 30 Fitting, Showing, and Merchandising Livestock .... 1.5
Production Class in Rotation:
ANSC - 16 Horse Husbandry ...................................... 3
ANSC - 17 Beef Production ........................................ 3
ANSC - 18 Sheep and Meat Goat Science ..................... 3
ANSC - 19 Swine Production ...................................... 3
DAIR - 10 Elements of Dairy ...................................... 3
Spring 1
ANSC - 14 Elements of Animal Nutrition ...................... 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock .... 1.5
MECH - 31 Equipment Safety ..................................... 1
Production Class in Rotation:
ANSC - 16 Horse Husbandry ...................................... 3
ANSC - 17 Beef Production ........................................ 3
ANSC - 18 Sheep and Meat Goat Science ..................... 3
ANSC - 19 Swine Production ...................................... 3
DAIR - 10 Elements of Dairy ...................................... 3
Fall 2
ANSC - 13 Animal Disease and Parasite Control ............... 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock .... 1.5
CROP - 13 Forage Crops ........................................... 3
Production Class in Rotation:
ANSC - 16 Horse Husbandry ...................................... 3
ANSC - 17 Beef Production ........................................ 3
ANSC - 18 Sheep and Meat Goat Science ..................... 3
ANSC - 19 Swine Production ...................................... 3
DAIR - 10 Elements of Dairy ...................................... 3
Spring 2
ANSC - 12 Livestock Breeding and Selection .................... 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock .... 1.5
CROP - 13 Forage Crops ........................................... 3
Crop Science, A.S. (01150.AS)
The Associate in Science Degree in Crop Science is available upon satisfactory completion of the graduation requirements in addition to 30 units from the following list. The core must be completed for this degree.

Program Student Learning Outcomes
A. With an emphasis on science, properly plant different varieties of plants and analyze soil conditions and type for testing.
B. With an emphasis on science, read the instructions, calibrate the equipment, and perform a soil analysis to determine soil type, soil structure and nutrient availability to determine the nutrient deficiencies in the soil.
C. With an emphasis on science, identify and select the most appropriate plants and soils with the decision based on the environment conditions, plant characteristics and soil conditions.
D. With an emphasis on science, faced with either a hypothetical or actual problems dealing with planting and soil conditions and the appropriate references, determine a solution to the problem.

Program Requirements:
Program Core: (30 Units)
CROP - 10 Elements of Cereal Grain Production ................ 3
CROP - 12 Commercial Vegetable and Garden Production .. 3
PLSC - 12 Weeds .................................................... 3
SOIL - 10 Soil Science .............................................. 3
SOIL - 11 Fertilizers and Soil Amendments ...................... 3
MECH - 12 Agriculture Equipment - Fall ....................... 3
MECH - 31 Equipment Safety ...................................... 1
Plus 11 additional units from the following electives:
AGBS - 18 Agricultural Computer Applications .............. 3
CROP - 13 Forage Crops ........................................... 3
FPRO - 13 Fruit Tree Maintenance .................................. 3
MECH - 21 Hydraulics ............................................. 3
MECH - 22A Diesel Engines ....................................... 3
PLSC - 13 Economic Entomology ................................ 3
LAND - 16 Plant Propagation .................................... 3
Total: (30 Units)
Suggested Sequence:
Fall 1
CROP - 10 Elements of Cereal Grain Production ............... 3
PLSC - 12 Commercial Vegetable and Garden Production .. 3
Spring 1
CROP - 13 Forage Crops ........................................... 3
SOIL - 10 Soil Science .............................................. 3
Fall 2
ANSC - 19 Swine Production ...................................... 3
DAIR - 10 Elements of Dairy ...................................... 3

Diesel Equipment Technology, A.S. (01200.AS)
The Associate in Science Degree in Diesel Equipment Technology is available upon satisfactory completion of the graduation requirements and completion of 33-35 units from the following major requirements with a minimum grade of 2.0 in each course required for the degree.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a system malfunction and prepare a solution.
D. Demonstrate the correct tools/supplies required to diagnose/repair a malfunction.
E. Evaluate the path of repair by testing and/or completing a work order/report.

Program Requirements:
Program Core: (32 Units)
MECH - 21 Hydraulics ............................................. 3
MECH - 22A Diesel Engines ....................................... 4
MECH - 23 Diesel Fuel Systems Diagnostics ................... 2
MECH - 24 Power Trains .......................................... 4
MECH - 26 Power Equipment Electrical Systems .............. 3
MECH - 27 Applied Diesel Technical Skills ..................... 2
MECH - 30 Equipment Mechanics Skills ........................ 2
MECH - 32 Applied Electrical and Hydraulic Service ........ 3
MECH - 33 Power Equipment Air Conditioning ................. 2
MECH - 51 Truck Brake and Chassis ............................. 2
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ......................... 3
Plus one of the following courses: (1-3 Units)
MECH - 12 Agriculture Equipment - Fall ....................... 3
MECH - 13 Agriculture Equipment - Spring ................. 3
MECH - 31 Equipment Safety ...................................... 1
Total: (33-35 Units)
Suggested Sequence:
Fall 1
MECH - 21 Hydraulics ............................................. 3
MECH - 22A Diesel Engines ....................................... 4
MECH - 24 Power Trains .......................................... 4
MECH - 27 Applied Diesel Technical Skills ................... 2
MECH - 32 Applied Electrical and Hydraulic Service ........ 3
Fall 2
Equestrian Science and Management, A.S. (01225.AS)
The Associate in Science degree in Equestrian Science and Management is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a "C" in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Evaluate the scientific principles of Horse Management.
B. Develop skills to deal with potential changes and diversity in Horse Management and related industries.
C. Appraise diverse ethical practices within the equine industry.

Program Requirements:
Program Core: (29 Units)
AGBS - 12 Agricultural Accounting .............................................. 3
AGBS - 18 Agricultural Computer Applications ............................ 3
ANSC - 10 Elements of Animal Science ......................................... 3
ANSC - 14 Elements of Animal Nutrition ....................................... 3
ANSC - 16 Horse Husbandry ...................................................... 3
CROP - 13 Forage Crops ............................................................ 3
MECH - 31 Equipment Safety .................................................... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ......................................................... 3
Seven units from the following electives: (7 Units)
AGBS - 13 Agricultural Marketing ................................................. 3
ANSC - 12 Livestock Breeding and Selection ................................ 3
ANSC - 13 Animal Disease and Parasite Control ............................ 3
ANSC - 40 Beginning Horsemanship (Western) .............................. 2
ANSC - 41 Intermediate Horsemanship (Western) .......................... 2
MECH - 12 Agriculture Equipment - Fall ..................................... 3

Total: (29 Units)

General Agriculture, Advanced, A.S. (01040.AS)
The Associate in Science Degree is available upon satisfactory completion of the graduation requirements in addition to the General Agriculture Core and 18 units from the elective list. Students must complete elective courses from three of the five agricultural areas.

Program Student Learning Outcomes
A. Given various pieces of Agricultural Equipment and the proper and safe operation instructions, students will demonstrate proper and safe use of said equipment.
B. Given the required equipment and materials and a set of plans/instructions, students will demonstrate the ability to assemble a sample project by selecting the correct equipment and performing basic welding operations related to the welding field.
C. Given the proper criteria for selection and application students will identify and select the most appropriate plants and trees with their decision based on the environment conditions, plant characteristics and customer preferences.
D. Given a computer with the proper software and the parameters of a hypothetical or actual problem students will be able to demonstrate the ability to compose a word processing document, a mathematical spreadsheet, and/or an information database given the parameters of a hypothetical problem.

Program Requirements:
Program Core: (31 Units)
AGBS - 18 Agricultural Computer Applications ............................ 3
AGRI - 10 Agriculture, Environment, and Society ........................ 3
ANSC - 10 Elements of Animal Science ......................................... 3
LAND - 11 Elements of Landscape Horticulture ............................ 3
MECH - 31 Equipment Safety .................................................... 1

Plus 18 units from three of the following areas:
Agriculture Business
AGBS - 10 Introduction to Agriculture Business .......................... 3
AGBS - 12 Agricultural Accounting ............................................. 3
AGBS - 13 Agricultural Marketing .............................................. 3
AGBS - 17 Agricultural Sales and Communication ........................ 3
Animal Science
ANSC - 13 Animal Disease and Parasite Control ........................... 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock .............. 3
Crop Science/Plant Science/Soil Science
CROP - 10 Elements of Cereal Grain Production .......................... 3
CROP - 12 Commercial Vegetable and Garden Production .............. 3
CROP - 13 Forage Crops ............................................................ 3
PLSC - 13 Economic Entomology ............................................... 3
SOIL - 11 Fertilizers and Soil Amendments .................................. 3

Landscape Horticulture
LAND - 10A Plant Identification and Usage: Fall ............................ 3
LAND - 12 Landscape Design ..................................................... 3
LAND - 14 Landscape Construction and Installation ...................... 3
LAND - 16 Plant Propagation ..................................................... 3

Total: (31 Units)

Suggested agriculture courses to meet General Education Breadth Requirements:
AGBS - 11 Agricultural Economics ............................................. 3*
PLSC - 10 Elements of Plant Science .......................................... 3*
SOIL - 10 Soil Science ............................................................. 3*

Note: * Transfer students should consult with their counselor regarding General Education Breadth Requirements.

Landscape Horticulture, A.S. (01350.AS)
The Associate in Science degree is earned upon satisfactory completion of the 19-unit core and electives for a total of 30 units in addition to the graduation requirements.

Program Student Learning Outcomes
A. Given an area to be landscaped and customer parameters, plan a workable landscape design including the bid and customer presentation.
B. Demonstrate the ability to perform the hands on skills and abilities to build/construct various projects related to the landscape industry. These will include, but not be limited to, carpentry, electrical, plumbing and irrigation, concrete, site preparation, and bid and job estimation.
C. Identify and select the most appropriate plants and trees with the decision based on the environment conditions, plant characteristics and customer preferences.
D. Faced with either a hypothetical or actual problem dealing with plantings or sprinkler/irrigation systems and the appropriate references, determine a solution to the problem.

Program Requirements:
Program Core: (30 Units)
LAND - 10A Plant Identification and Usage: Fall ............................ 3

or
LAND - 10B Plant Identification and Usage: Spring .......................... 3

LAND - 11 Elements of Landscape Horticulture ............................ 3
LAND - 12 Landscape Design ..................................................... 3
LAND - 14 Landscape Construction and Installation ...................... 3
MECH - 31 Equipment Safety .................................................... 1

• Programs by School •
Mechanized Agriculture Technology, A.S. (01450.AS)

The Associate in Science Degree in Mechanized Agriculture Technology is available upon completion of the graduation requirements, the 21 unit core, and 15 units from the elective list, with a minimum grade of a “C” in each course in the degree, and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a system malfunction in order to prepare a solution.
D. Demonstrate the correct tools/supplies required to diagnose/repair a malfunction.
E. Evaluate the path of repair by testing and/or completing a work order/report.

Program Requirements:
Program Core: (21 Units)
MECH - 12 Agriculture Equipment - Fall ................................. 3
MECH - 21 Hydraulics ................................................................. 3
MECH - 22A Diesel Engines ...................................................... 4
MECH - 24 Power Trains .............................................................. 4
MECH - 26 Power Equipment Electrical Systems ....................... 3
MECH - 30 Equipment Mechanics Skills .................................... 2
MECH - 33 Power Equipment Air Conditioning .......................... 2

Plus 15 units from the following electives:
MECH - 13 Agriculture Equipment - Spring ............................ 3
MECH - 15 Small Engine Repair/Maintenance ........................... 3
MECH - 23 Diesel Fuel Systems Diagnostics ............................ 2
MECH - 27 Applied Diesel Technical Skills ............................... 2
MECH - 32 Applied Electrical and Hydraulic Service .................. 2
MECH - 35 Compact Power Equipment ..................................... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ......................................................... 3

Total: (30 Units)

Certificate

Agricultural Chemicals Certificate (01052.CL)

A Certificate of Achievement in Agricultural Chemicals will be awarded upon satisfactory completion of the 18-unit core courses listed below.

Program Student Learning Outcomes
A. Given various pieces of agricultural Equipment and the proper and safe operation instructions, students will demonstrate proper and safe use of said equipment.
B. Given the proper criteria for selection and application students will identify and select the most appropriate plants and trees with their decision based on the environment conditions, plant characteristics and customer preferences.
C. Given the required equipment and materials and a set of plans/instructions, students will demonstrate the ability to assemble a sample project by selecting the correct equipment and performing basic welding operations related to the welding field.
D. Given a computer with the proper software and the parameters of a hypothetical or actual problem students will be able to demonstrate the ability to compose a word processing document, a mathematical spreadsheet, and/or an information database given the parameters of a hypothetical problem.

Program Requirements:
Program Core: (18 Units)
AGBS - 18 Agricultural Computer Applications ...................... 3
PLSC - 10 Elements of Plant Science ...................................... 3
PLSC - 12 Weeds ................................................................. 3
PLSC - 13 Economic Entomology .......................................... 3
SOIL - 10 Soil Science .......................................................... 3
SOIL - 11 Fertilizers and Soil Amendments ........................................... 3

Total: (18 Units)

Agriculture Business Certificate (01000.CT)

A Certificate of Achievement will be awarded upon satisfactory completion of the 19 unit core, plus 15 units from the electives below with a minimum grade of "C" in each course required for the certificate.

Program Student Learning Outcomes
A. Analyze the core concepts of various agriculture business disciplines.
B. Analyze local, state, and national agricultural issues and trends.
C. Examine economic principles with respect to the production and distribution of agricultural products and services.
D. Develop communication and problem solving skills to work effectively, respectfully, ethically, and professionally with people of diverse age, gender, ethnicity and culture in agribusiness.
E. Combine team building skills and collaborative behaviors in the accomplishment of group goals and objectives.

Program Requirements:
Program Core: (34 Units)
AGBS - 10 Introduction to Agriculture Business ....................... 3
AGBS - 11 Agricultural Economics ......................................... 3
AGBS - 12 Agricultural Accounting ....................................... 3
AGBS - 13 Agricultural Marketing ......................................... 3
AGBS - 17 Agricultural Sales and Communication .................... 3
Animal Science Certificate (01100.CT)
A Certificate of Achievement in Animal Science will be awarded upon the satisfactory completion of the curriculum listed below, with a minimum grade of a "C" in each course in the certificate and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Demonstrate necessary skills in genetics, reproduction, nutrition, and housing in order to operate efficient and profitable livestock operations.
B. Identify proper production practices, good animal health, proper animal nutrition, and good reproduction and management practices.
C. Demonstrate the ability to perform calculations needed in the field, use good communication skills, and apply good computer skills in the animal industry.
D. Demonstrate the ability to learn and develop skills to deal with potential changes and diversity in animal science and other related industries.
E. Appraise diverse ethical practices within the livestock industry.

Program Requirements:
Program Core: (36 Units)
AGBS - 18 Agricultural Computer Applications .................. 3
ANSC - 10 Elements of Animal Science .......................... 3
ANSC - 12 Livestock Breeding and Selection ....................... 3
ANSC - 13 Animal Disease and Parasite Control .................. 3
ANSC - 14 Elements of Animal Nutrition ......................... 3
CROP - 13 Forage Crops ........................................... 3
MECH - 31 Equipment Safety .................................... 3

Three unit animal production course from the following list: (3 Units)
ANSC - 16 Horse Husbandry ...................................... 3
ANSC - 17 Beef Production ........................................ 3
ANSC - 18 Sheep and Meat Goat Science ......................... 3
ANSC - 19 Swine Production ...................................... 3
DAIR - 10 Elements of Dairy ..................................... 3

Plus 14 units from these electives: (14 Units)
Including any courses above, not already used. (3-12)

Compact Power Equipment Certificate (01453.CL)
A Certificate of Achievement in Compact Power Equipment will be awarded to students who successfully complete the following core courses.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a system malfunction and prepare a solution.
D. Demonstrate the correct tools/supplies required to diagnose/repair a malfunction.
E. Evaluate if the path of repair was correct by testing and/or completing a work order/report.

Program Requirements:
Program Core: (19-21 Units)
MECH - 15 Small Engine Repair/Maintenance ..................... 3
MECH - 21 Hydraulics .............................................. 3
MECH - 22A Diesel Engines ...................................... 4
MECH - 26 Power Equipment Electrical Systems ................ 3
MECH - 30 Equipment Mechanics Skills ......................... 2
MECH - 35 Compact Power Equipment .......................... 3

Plus one course from the following:
MECH - 12 Agriculture Equipment - Fall ......................... 3
MECH - 13 Agriculture Equipment - Spring ..................... 3
MECH - 31 Equipment Safety .................................... 1

Total: (19-21 Units)

Crop Science Certificate (01150.CT)
A Certificate of Achievement in Crop Science will be awarded upon satisfactory completion of the 19 unit core and 18 units from the electives below.

Program Student Learning Outcomes
A. Properly plant different varieties of plants and analyze soil conditions and type for testing.
B. Read the instructions, calibrate the equipment, and perform a soil analysis to determine soil type, soil structure and nutrient availability.
to determine the nutrient deficiencies in the soil.
C. Identify and select the most appropriate plants and soils with the decision based on the environment conditions, plant characteristics and soil conditions.
D. Faced with either a hypothetical or actual problems dealing with plantings and soil conditions and the appropriate references, determine a solution to the problem.

Program Requirements:
Program Core: (37 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP - 10</td>
<td>Elements of Cereal Grain Production</td>
<td>3</td>
</tr>
<tr>
<td>CROP - 12</td>
<td>Commercial Vegetable and Garden Production</td>
<td>3</td>
</tr>
<tr>
<td>PLSC - 12</td>
<td>Weeds</td>
<td>3</td>
</tr>
<tr>
<td>SOIL - 10</td>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>SOIL - 11</td>
<td>Fertilizers and Soil Amendments</td>
<td>3</td>
</tr>
<tr>
<td>MECH - 12</td>
<td>Agriculture Equipment - Fall</td>
<td>3</td>
</tr>
<tr>
<td>MECH - 31</td>
<td>Equipment Safety</td>
<td>1</td>
</tr>
</tbody>
</table>

Plus 18 additional units from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGBS - 18</td>
<td>Agricultural Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>CROP - 13</td>
<td>Forage Crops</td>
<td>3</td>
</tr>
<tr>
<td>FPPO - 13</td>
<td>Fruit Tree Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>MECH - 21</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>MECH - 22A</td>
<td>Diesel Engines</td>
<td>4</td>
</tr>
<tr>
<td>PLSC - 13</td>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>LAND - 16</td>
<td>Plant Propagation</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: (37 Units)

Suggested Sequence:
Fall 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP - 10</td>
<td>Elements of Cereal Grain Production</td>
<td>3</td>
</tr>
<tr>
<td>PLSC - 13</td>
<td>Economic Entomology</td>
<td>3</td>
</tr>
</tbody>
</table>

Spring 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP - 12</td>
<td>Commercial Vegetable and Garden Production</td>
<td>3</td>
</tr>
<tr>
<td>SOIL - 10</td>
<td>Soil Science</td>
<td>3</td>
</tr>
</tbody>
</table>

Fall 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPPO - 13</td>
<td>Fruit Tree Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>SOIL - 11</td>
<td>Fertilizers and Soil Amendments</td>
<td>3</td>
</tr>
</tbody>
</table>

Spring 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROP - 13</td>
<td>Forage Crops</td>
<td>3</td>
</tr>
<tr>
<td>PLSC - 12</td>
<td>Weeds</td>
<td>3</td>
</tr>
</tbody>
</table>

Equine Science and Management Certificate (01225.CT)

A Certificate of Achievement in Equine Science and Management will be awarded upon the satisfactory completion of the curriculum listed below, with a minimum grade of a “C” in each course and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Evaluate the scientific principles of Horse Management.
B. Develop skills to deal with potential changes and diversity in Horse Management and related industries.
C. Appraise diverse ethical practices within the equine industry.

Program Requirements:

Program Core: (30 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC - 40</td>
<td>Beginning Horsemanship (Western)</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 10</td>
<td>Elements of Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 14</td>
<td>Elements of Animal Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 16</td>
<td>Horse Husbandry</td>
<td>3</td>
</tr>
<tr>
<td>CROP - 13</td>
<td>Forage Crops</td>
<td>3</td>
</tr>
<tr>
<td>MECH - 31</td>
<td>Equipment Safety</td>
<td>1</td>
</tr>
<tr>
<td>WELD - 06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding</td>
<td>3</td>
</tr>
</tbody>
</table>

Eight units from the following electives: (8 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGBS - 13</td>
<td>Agricultural Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 12</td>
<td>Livestock Breeding and Selection</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 13</td>
<td>Animal Disease and Parasite Control</td>
<td>3</td>
</tr>
<tr>
<td>ANSC - 40</td>
<td>Beginning Horsemanship (Western)</td>
<td>2</td>
</tr>
<tr>
<td>ANSC - 41</td>
<td>Intermediate Horsemanship (Western)</td>
<td>2</td>
</tr>
<tr>
<td>MECH - 12</td>
<td>Agriculture Equipment - Fall</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: (30 Units)

General Agriculture Certificate (01050.CT)

A Certificate of Achievement will be awarded upon satisfactory completion of the 13-unit core plus 24 units from the elective list. Students must complete elective courses from all five agricultural areas.

Program Student Learning Outcomes
A. Given various pieces of Agricultural Equipment and the proper and safe operation instructions, students will demonstrate proper and safe
use of said equipment.

B. Given the proper criteria for selection and application students will identify and select the most appropriate plants and trees with their decision based on the environment conditions, plant characteristics and customer preferences.

C. Given the required equipment and materials and a set of plans/ instructions, students will demonstrate the ability to assemble a sample project by selecting the correct equipment and performing basic welding operations related to the welding field.

D. Given a computer with the proper software and the parameters of a hypothetical or actual problem students will be able to demonstrate the ability to compose a word processing document, a mathematical spreadsheet, and/or an information database given the parameters of a hypothetical problem.

Program Requirements:
Program Core: (37 Units)
AGBS - 18 Agricultural Computer Applications .................. 3
AGRI - 10 Agriculture, Environment, and Society ................. 3
ANSC - 10 Elements of Animal Science .......................... 3
LAND - 11 Elements of Landscape Horticulture ................ 3
MECH - 31 Equipment Safety ..................................... 1
Plus 24 units from the following areas:
Agribusiness: .......................... 3
AGBS - 10 Introduction to Agriculture Business .................. 3
AGBS - 12 Agricultural Accounting .................................. 3
AGBS - 13 Agricultural Marketing .................................. 3
AGBS - 17 Agricultural Sales and Communication ................ 3
Animal Science:
ANSC - 13 Animal Disease and Parasite Control .................. 3
ANSC - 14 Elements of Animal Nutrition .......................... 3
ANSC - 30 Fitting, Showing, and Merchandising Livestock ...... 1.5
Crop Science/Soil Science:
CROP - 10 Elements of Cereal Grain Production .................. 3
CROP - 12 Commercial Vegetable and Garden Production ........ 3
CROP - 13 Forage Crops ............................................. 3
PLSC - 13 Economic Entomology ................................. 3
SOIL - 11 Fertilizers and Soil Amendments ........................ 3
Landscape Horticulture:
LAND - 10A Plant Identification and Usage - Fall ................. 3
LAND - 12 Landscape Design ........................................ 3
LAND - 14 Landscape Construction and Installation ............. 3
LAND - 16 Plant Propagation ....................................... 3
Mechanized Agriculture:
MECH - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ................................. 3
MECH - 10 Agricultural and Industrial Technical Skills ............ 3
MECH - 15 Small Engine Repair/Maintenance ...................... 3
MECH - 35 Compact Power Equipment .............................. 3
Total: (37 Units)

Landscape Horticulture Certificate (01350.CT)
A Certificate of Achievement will be awarded upon the satisfactory completion of the 19 unit core and 18 units from the electives below.

Program Student Learning Outcomes
A. Given an area to be landscaped and customer parameters, plan a workable landscape design including the bid and customer presentation.

B. Demonstrate the ability to perform the hands on skills and abilities to build/construct various projects related to the landscape industry. These will include, but not be limited to, carpentry, electrical, plumbing and irrigation, concrete, site preparation, and bid and job estimation.

C. Identify and select the most appropriate plants and trees with the decision based on the environment conditions, plant characteristics and customer preferences.

D. Faced with either a hypothetical or actual problem dealing with plantings or sprinkler/irrigation systems and the appropriate references, determine a solution to the problem.

Mechanized Agriculture Technology Certificate (01450.CT)
A Certificate of Achievement in Mechanized Agriculture Technology will be awarded upon completion of the 34 units from the major requirements listed below with a minimum grade of C in each course required for the certificate.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or system for the course of instruction based on industry standards.

B. Analyze a scenario based upon an equipment system failure/problem/complaint.

C. Employ a systematic approach to troubleshooting a system malfunction and prepare a solution.

D. Demonstrate the correct tools/supplies required to diagnose/repair a malfunction.

E. Evaluate the path of repair by testing and/or completing a work order/report.

Program Requirements:
Program Core: (34 Units)
MECH - 12 Agriculture Equipment - Fall .......................... 3
MECH - 21 Hydraulics ................................................. 3
MECH - 22A Diesel Engines ......................................... 4
MECH - 23 Diesel Fuel Systems Diagnostics ....................... 2
MECH - 24 Power Trains .............................................. 4
MECH - 26 Power Equipment Electrical Systems .................. 3
MECH - 27 Applied Diesel Technical Skills ......................... 2
MECH - 30 Equipment Mechanics Skills ............................ 2
MECH - 32 Applied Electrical and Hydraulic Service ............ 3
MECH - 33 Power Equipment Air Conditioning ..................... 2
MECH - 35 Compact Power Equipment ............................... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ................................. 3
Total: (34 Units)

Suggested Sequence:
Fall 1
MECH - 12 Agriculture Equipment - Fall .......................... 3
MECH - 21 Hydraulics ................................................. 3
MECH - 22A Diesel Engines ......................................... 4
Business

Associate of Science for Transfer
Business Administration, A.S.-T. (05100.AST)
The Associate in Science in Business Administration for Transfer degree is designed for students looking to obtain a well-rounded education in Business Administration. Upon completion, students with an AS-T in Business Administration will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

For an Associate in Science in Business Administration for Transfer (AST), students must complete 60 semester units that are eligible for transfer to the California State University with a minimum grade point average of 2.0, including both of the following:
1. Certification of the Inter-segmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.
2. A minimum of 27-28 semester units from the lists below (Required Core, List A, & List B), with a minimum grade of a C in each class.
3. Complete a maximum of 60 semester CSU-transferable units, with a minimum grade point average of 2.0.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Program Student Learning Outcomes:
A. Communicate interpersonally in order to establish positive business relationships using oral, written, and electronic media.
B. Formulate recommendations for courses of action based on identifying and analyzing a business’ strengths, weaknesses, opportunities and threats.
C. Demonstrate awareness of the economic, environmental, social, political, ethical, legal, regulatory, and technological factors affecting business.
D. Develop management skills to work effectively, respectfully, ethically, and professionally with people of diverse age, gender, ethnicity, and culture.

Program Requirements:
Program Core: (27-28 Units)
ACTG - 04A Financial Accounting ............................. 4
ACTG - 04B Managerial Accounting .......................... 4
BUS - 18A Business Law ........................................ 4
ECON - 01 Introduction to Microeconomics .................. 3
ECON - 02 Introduction to Macroeconomics ................. 3
List A:
Select 1 of the following:
MATH - 10 Elementary Statistics ............................ 3
MATH - 15 Finite Mathematics ................................. 3
List B:
Select 2 of the following:
Any course from list A not used above .......................... 3
BUS - 10 Introduction to Business ........................... 3
CPSC - 01 Introduction to Computer Information Systems 4
Additional courses toward IGETC or CSU GE certification and transferable electives: (38-40 Units)
Intersegmental General Education Transfer Curriculum or
CSU-General Education Breadth Certification Requirements
Total: (60 Units)

Suggested Sequence:
Fall
ECON - 01 Introduction to Microeconomics .................. 3
or
BUS - 10 Introduction to Business ........................... 3
or
CPSC - 01 Introduction to Computer Information Systems 4
Spring
ACTG - 04A Financial Accounting ............................. 4
ECON - 02 Introduction to Macroeconomics ................. 3
Fall
ACTG - 04B Managerial Accounting .......................... 4
MATH - 15 Finite Mathematics ................................. 3
Spring
BUS - 18A Business Law ........................................ 4
MATH - 10 Elementary Statistics ............................ 3

Computer Science, A.S.-T. (07200.AST)
The Associate in Science in Computer Science for transfer is designed for students pursuing degrees in Computer Science or Computer Engineering. Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

For an Associate in Science in Computer Science for Transfer (AS-T), students must complete the following:
1. Certification of the CSU Inter-segmental General Education Transfer Curriculum (IGETC) Requirements, with a minimum grade point average of 2.0.
2. The required core 29 units, with a minimum grade of a C in each class.
3. Complete a maximum of 60 semester CSU-transferable units, with a minimum grade point average of 2.0.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Program Student Learning Outcomes:
A. Demonstrate the ability to understand the ethical, mathematical, and physical concepts that underlie computer science.
B. Demonstrate the ability to understand the different levels of abstraction that comprise computer science.
C. Create efficient, working computer programs that use fundamental programming constructs to solve real-life problems.

Program Requirements:
Program Core: (29 Units)
CPSC - 06 Programming Concepts and Methodology I ........ 3
or
CPSC - 14 C++ Programming .................................... 3
or
ENGR - 14 C++ Programming ................................... 3
CPSC - 39 Programming Concepts and Methodology II ....... 4
CPSC - 42 Computer Architecture and Organization .......... 3
CPSC - 07 Discrete Structures ................................... 3
C. Compare properties of food composition in preparation including digestion and absorption.

B. Analyze Nutrition with a focus on the scientific processes of nutrients 3) To help students compare properties of food composition in preparation including digestion and absorption.

Additional courses toward IGETC certification and transferable electives: (31 Units)

Intersegmental General Education Transfer Curriculum
Total: (60 Units)

Note: Care should be taken in selecting courses appropriate to meet the student's professional and intended transfer institution requirements.

Suggested Sequence:

Fall 1
- CPSC - 06 Programming Concepts and Methodology I ........................................... 3
- MATH - 04A Calculus I ........................................................................... 4
- 3 GE classes ................................................................................................. 9

Spring 1
- CPSC - 39 Programming Concepts and Methodology II ........................................ 4
- MATH - 04B Calculus II ............................................................................... 4
- 3 GE classes ................................................................................................. 9

Fall 2
- CPSC - 42 Computer Architecture and Organization ............................................ 3
- PHYS - 04A Physics I ...................................................................................... 4
- 2 GE classes ................................................................................................ 6

Spring 2
- CPSC - 07 Discrete Structures ......................................................................... 3
- or
- MATH - 07 Discrete Structures ....................................................................... 3
- PHYS - 04B Physics II ...................................................................................... 6
- 2 GE classes ................................................................................................ 6

Nutrition and Dietetics, A.S.-T. (13160.AST)
The Foods and Nutrition Department at Merced College offers students a robust and interesting curriculum. It is designed to provide students with understanding in food safety, nutrition and food preparation and be able to utilize those skills in a management setting. The primary goals of the Associate in Science in Nutrition and Dietetic for Transfer are: 1) To enable students to demonstrate an understanding of the fundamental principles of chemistry and 2) To analyze nutrition with a focus on the scientific processes of nutrients 3) To help students compare properties of food composition in preparation and 4) To identify critical components, and prevention procedures for food safety and sanitation. The Associate in Science in Nutrition and Dietetic for Transfer degree is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Nutrition and Dietetic or similar major.

Program Student Learning Outcomes
A. Demonstrate an understanding of the fundamental principles of chemistry by solving problems utilizing concepts and equations.
B. Analyze Nutrition with a focus on the scientific processes of nutrients including digestion and absorption.
C. Compare properties of food composition in preparation including phytochemicals.
D. Evaluate critical components, and prevention of food borne illness for food safety and sanitation.

For an Associate in Science in Nutrition and Dietetics for Transfer (AS-T), students must complete the following:

1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. Obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (25-28 Units)
- NUTR - 10 Nutrition ................................................................. 3
- BIOL - 20 Microbiology ................................................................. 4
- CHEM - 04A General Chemistry I ............................................... 5
- PSYC - 01A Introduction to Psychology ......................................... 3
- or
- PSYC - 01AH Honors Introduction to Psychology .......................... 3
- List A: (7-10 Units)

Select 2 courses from the following:
- BIOL - 16 General Human Anatomy .............................................. 4
- BIOL - 18 Principles of Physiology .................................................... 4
- CHEM - 04B General Chemistry II .................................................... 5
- CHEM - 12A Organic Chemistry I ..................................................... 5
- MATH - 10 Elementary Statistics ...................................................... 3
- or
- PSYC - 05 Introduction to Statistics in Psychology ....................... 3
- List B: (3-4 Units)

Select 1 course from the following:
- NUTR - 20 Principles of Foods ......................................................... 3
- or
- General Education Pattern: (37-39 Units)
- Intersegmental General Education Transfer Curriculum
- or
- CSU-General Education Breadth Certification Requirements
- Electives (as needed) (CSU transferrable): (5-12 Units)

Double-Counted: (10-16 Units)

Total: (60 Units)

Associate of Arts Accounting, A.A. (05000.AA)
An Associate in Arts Degree in Accounting is available in preparation for employment in the field of bookkeeping or accounting as a full-charg bookkeeper or junior accountant. For the A.A. Degree, students must meet the graduation requirements and complete the following courses.

Program Student Learning Outcomes
A. Read, analyze, evaluate, and communicate, both orally and in written form, an appropriate financial interpretation of accounting documents, including proper maintenance of accounting records using the basics of bookkeeping.
B. Analyze an accounting problem and/or scenario and apply appropriate mathematical and accounting concepts to develop and verify a solution.
C. Analyze and apply critical/creative thinking to an accounting problem or scenario in order to formulate a set of alternatives, then recommend the best course of action.

Program Requirements:
Program Core: (30 Units)
- ACTG - 04A Financial Accounting ......................................................... 4
- ACTG - 04B Managerial Accounting ..................................................... 4

...
ACTG - 31  Computerized Accounting ................. 2
ACTG - 51  Applied Accounting ....................... 4
AOM-30  Introduction to Computer Applications .......... 3
BUS - 10   Introduction to Business .................... 3
BUS - 18A  Business Law ................................ 4
Plus six units from the following:
ACTG - 52  Payroll Records and Accounting ............. 3
ACTG - 53  Fundamentals of Income Tax Accounting .... 3
Total: (30 Units)

Suggested electives include:
CPSC - 01  Introduction to Computer Information Systems ... 4
ECON - 01  Introduction to Microeconomics ............... 3
ECON - 02  Introduction to Macroeconomics .............. 3
MATH - 10  Elementary Statistics .......................... 3
MATH - 15  Finite Mathematics ............................ 3

Suggested Sequence:
Fall 1
ACTG - 51  Applied Accounting ....................... 4
BUS - 10   Introduction to Business .................... 3
Spring 1
ACTG - 04A  Financial Accounting ..................... 4
ACTG - 31  Computerized Accounting ................... 2
Fall 2
ACTG - 04B  Managerial Accounting .................... 4
Plus three units from the following:
ACTG - 52  Payroll Records and Accounting ............. 3
ACTG - 53  Fundamentals of Income Tax Accounting .... 3
Spring 2
BUS - 18A  Business Law ................................ 4
Plus three units from the following:
ACTG - 52  Payroll Records and Accounting ............. 3
ACTG - 53  Fundamentals of Income Tax Accounting .... 3

Administrative Medical Office Professional, A.A. (05007.AA)

Refer to the general education requirements for specific information regarding general education, unit and scholarship requirements. Completion of the certificate program, in addition to the general education and district requirements, qualifies the student for an Associate in Arts Degree.

Program Student Learning Outcomes
A. Produce effective administrative documents by using computer applications.
B. Apply correct medical billing and coding procedures.
C. Understand the role of an administrative office professional.

Program Requirements:
Program Core: (19 Units)
AOM - 30  Introduction To Computer Applications ........ 3
AOM - 43  Essentials of Business Communication ........ 3
AOM - 50B  Document Formatting .......................... 3
AOM - 50C  Learn To Type .................................. 1
AOM - 52C  Keyboarding Speed and Accuracy ............ 1
AOM - 56  Office Procedures ................................ 3
AOM - 58A  Web Site Development ........................ 2
VIRT - 51  Social Media .................................... 3
Total: (19 Units)

Suggested Sequence:
Fall 1
AOM - 50B  Document Formatting .......................... 3
AOM - 56  Office Procedures ................................ 3
Spring 1
AOM - 30  Introduction To Computer Applications ........ 3
AOM - 43  Essentials of Business Communication ........ 3
AOM - 52C  Keyboarding Speed and Accuracy ............ 1
Fall 2
AOM - 58A  Web Site Development ........................ 2

General Business, A.A. (05150.AA)
The mission of the Merced College General Business (A.A.) program is to provide students with general preparation for entry into employment in the business community. We seek to educate the whole person, to help students develop a global perspective, to provide students a basis for lifelong learning, to encourage students to seek opportunities to serve others, and to prepare students for success in the business environment of the 21st century.

Students must meet the graduation requirements and complete the following major requirements.

Program Student Learning Outcomes
A. Communicate interpersonally in order to establish positive business relationships; and logically and effectively construct and deliver business presentations in oral and written formats, utilizing a variety of presentation tools and media.
B. Demonstrate comprehension of the core concepts of each business discipline - accounting, finance, information systems, economics,
management, and marketing.
C. Analyze business problem situations systematically and effectively, and apply knowledge from multiple disciplines to the problem.
D. Use word-processing, spreadsheet, database, and collaborative software and World Wide Web tools and apply them to analysis of business decision situations.
E. Work effectively, respectfully, ethically and professionally with people of diverse ethnic, cultural, gender and other backgrounds and with people with different organizational roles, social affiliations and personalities.
F. Use team building skills and collaborative behaviors in the accomplishment of group goals and objectives.

Program Requirements:
Program Core: (23 Units)
ACTG - 51 Applied Accounting ...........................................4
AOM - 50B Document Formatting ........................................3
BUS - 10 Introduction to Business ......................................3
BUS - 18A Business Law ...................................................4
BUS - 35 Money Management ..............................................3
AOM-30 Introduction to Computer Applications .....................3
ECON - 02 Introduction to Macroeconomics .............................3
Total: (23 Units)

Suggested electives include:
MGMT - 31 Principles of Management ...................................3
MGMT - 37 Small Business Entrepreneurship ..........................3
MKTG - 30 Principles of Marketing .......................................3
MKTG - 31 Retailing and E-Commerce ....................................3
MKTG - 33 Advertising ......................................................3

Note:
Students should refer to the catalog of the school to which they plan to transfer to determine whether that school requires any specific courses in addition to, or other than, those listed above.

Suggested Sequence:
Fall 1
ACTG - 51 Applied Accounting ...........................................4
AOM - 50B Document Formatting ........................................3
BUS - 10 Introduction to Business ......................................3
Spring 1
BUS - 35 Money Management ..............................................3
Summer I
BUS - 10 Introduction to Business ......................................3
BUS - 35 Money Management ..............................................3
Fall 2
ECON - 02 Introduction to Macroeconomics .............................3
Suggested electives:
CPSC - 01 Introduction to Computer Information Systems .............4
BUS - 18A Business Law ...................................................4
Suggested electives:
BUS - 49A-ZZ Special Topics in Business ..............................5-3
MGMT - 31 Principles of Management ...................................3
MGMT - 33 Elements of Effective Leadership ..........................3

Management, Supervisory Training, A.A. (05450.AA)
The Associate in Arts Degree in Management/Supervisory Training is in preparation for entry levels in management/supervision as well as for advanced preparation for those employed in supervisory positions. Students must meet the graduation requirements and complete the major requirements with the following courses.

Program Requirements:
Program Core: (28 Units)
ACTG - 40A Financial Accounting .........................................4
or
ACTG - 51 Applied Accounting ...........................................4
BUS - 18A Business Law ...................................................4
CPSC - 01 Introduction to Computer Information Systems .............4
or
AOM-30 Introduction to Computer Applications ..........................3
ECON - 02 Introduction to Macroeconomics .............................3
MGMT - 31 Principles of Management ...................................3
MGMT - 32 Human Resource Management ................................3
MGMT - 33 Elements of Effective Leadership ..........................3
MGMT - 34 Employment Law ............................................3
MGMT-50 Management Series Units(s): ½ - 3 ½
Total: (29-30 Units)

Suggested electives include:
BUS - 10 Introduction to Business ......................................3
BUS - 35 Money Management ..............................................3
BUS - 49A-ZZ Special Topics in Business ..............................5-3
COMM - 04 Small Group Discussion and Problem Solving ............3
ECON - 01 Introduction to Microeconomics .............................3
MGMT - 37 Small Business Entrepreneurship ..........................3
MGMT-50 Management Series Units(s): ½ - 3 ½
MGMT-51 Management Series Units(s): ½ - 3 ½
MGMT-52 Management Series Units(s): ½ - 3 ½

Nutrition and Foods, A.A. (13161.AA)
An Associate in Arts Degree in Nutrition and Foods prepares students for entry-level management/supervisory roles in the food service area. Upon satisfactory completion (a minimum grade of a “C” is required in all courses and maintain a 2.0 GPA) students will receive their Dietetic Service Supervisor Certificate as well as their AA Degree. Students completing this degree have demonstrated the knowledge and hands on experience with specialized coursework in their area of interest to work effectively in the field of Nutrition and Foods. Students must pass the ServSafe Manager or equivalent Food Safety Certification, earn a minimum of a “C” in each major course, maintain a 2.0 GPA, and meet the graduation requirements.

Program Student Learning Outcomes
A. Produce safe, satisfying and nutritionally adequate food for patients/ customers with attention to available resources.
B. Examine supervisory skills in a food service setting including the ability to train in food safety, participate in quantity meal production and create menus for special populations.
C. Formulate effective communication in a food service setting with diverse cultures.
D. Utilize materials in the specialization coursework

Program Requirements:
Program Core: (28 Units)
NUTR - 10 Nutrition ......................................................3
NUTR - 20 Principles of Foods ...........................................3
NUTR - 37 Nutrition and Food Service Supervised Field Experience ................................................3
NUTR - 40 Menu Planning for Food Service Operations .............3
NUTR - 42 Quantity Food Preparation ...................................3
NUTR - 44 Food Safety and Sanitation ...................................3
NUTR - 45 Introduction to Therapeutic Diets ............................2
Management Courses: (2 Units)
MGMT - 50A Challenges of Leadership: Difficult People/Tough Conversations ......................................................0.5
MGMT - 50B Values and Ethics ...........................................0.5
MGMT - 50C Time Management ...........................................0.5
MGMT - 50D Communication in the Workplace .................. 0.5
MGMT - 50F Decision Making and Problem Solving .......... 0.5
MGMT - 50H Customer Service .................................. 0.5
MGMT - 50I Attitude in the Workplace ......................... 0.5
MGMT - 50J Thrive and Survive in the Workplace .......... 0.5
MGMT - 50K Generational Diversity. Managing Cross Generational Teams .................................................. 0.5
MGMT - 50L Authentic Leadership: Know Yourself/Lead Your People .................................................. 0.5
MGMT - 50M Cultural Diversity ..................................... 0.5
MGMT - 50N Employee Engagement ............................... 0.5
MGMT - 50P Emotional Intelligence .............................. 0.5
MGMT - 50S Leading With Your Strengths ..................... 0.5
MGMT - 51C Leadership Essentials. What Emerging Leaders Need to Know ............................................. 0.5
MGMT - 51F Conflict Resolution .................................. 0.5
MGMT - 51G Stress Management .................................. 0.5
MGMT - 52C Successful Business Speaking ..................... 0.5
MGMT - 52D Managing Organizational Change .................. 0.5

Restricted Electives from the following courses: (7 Units)

AOI - 30 Introduction To Computer Applications .................. 3
NUTR - 24 Work Experience in Nutrition ........................... 1-8
NUTR - 41 Infant and Toddler Feeding ............................... 1
NUTR - 43 Children and Weight Concerns ......................... 1
NUTR - 50 Baking Basics and Business ............................ 1.5
NUTR - 60 Sports and Exercise Nutrition ........................ 3
NUTR - 70A-ZZ Special Topics in Foods and Nutrition ........ 1-3
PLSC - 10 Elements of Plant Science ................................ 3

GE Pattern MCCD GE Breadth: (23 Units)

Associate Degree Breadth Requirements

Electives (as needed) (CSU transferrable): (12-15 Units)

Double-Counted: (3-6 Units)

Total: (60 Units)

Suggested Sequence:

1st Semester: (17 units)

NUTR - 40 Menu Planning for Food Service Operations ........ 3
NUTR - 44 Food Safety and Sanitaiton ............................ 2

2nd Semester: (17 units)

ACTG - 31 Computerized Accounting .............................. 2
ACTG - 04A Financial Accounting .................................. 4 (prerequisite for ACTG 31)
ACTG - 51 Applied Accounting ....................................... 4 (prerequisite for ACTG 31)
MGMT - 31 Principles of Management ............................ 3
MKTG - 50 Principles of Marketing ................................ 3

Suggested Sequence:

1st Semester: (17 units)

NUTR - 24 Work Experience in Nutrition ........................... 1-8
NUTR - 41 Infant and Toddler Feeding ............................... 1
NUTR - 43 Children and Weight Concerns ......................... 1
NUTR - 50 Baking Basics and Business ............................ 1.5
NUTR - 60 Sports and Exercise Nutrition ........................ 3
NUTR - 70A-ZZ Special Topics in Foods and Nutrition ........ 1-3
PLSC - 10 Elements of Plant Science ................................ 3

GE Pattern MCCD GE Breadth: (23 Units)

Associate Degree Breadth Requirements

Electives (as needed) (CSU transferrable): (12-15 Units)

Double-Counted: (3-6 Units)

Total: (60 Units)

Suggested Sequence:

1st Semester: (17 units)

NUTR - 40 Menu Planning for Food Service Operations ........ 3
NUTR - 44 Food Safety and Sanitaiton ............................ 2

2nd Semester: (17 units)

ACTG - 31 Computerized Accounting .............................. 2
ACTG - 04A Financial Accounting .................................. 4 (prerequisite for ACTG 31)
ACTG - 51 Applied Accounting ....................................... 4 (prerequisite for ACTG 31)

Small Business Entrepreneurship, A.A. (05700.AA)

An Associate in Arts Degree in Small Business Entrepreneurship is available upon satisfactory completion of the graduation requirements and completing the 30 units of course work.

Program Student Learning Outcomes
A. Students will understand the mathematical and scientific concepts that underlie management information systems.
B. Students will apply the cognitive method to analyze, synthesize and evaluate academic and real life problems relating to business and management.
C. Students will assess requirements of an information system.
D. Students will demonstrate an appreciation for lifelong learning.

Program Requirements:

Program Core: (30 Units)

ACTG - 04A Financial Accounting .............................. 4
ACTG - 04B Managerial Accounting ............................ 4
BUS - 18A Business Law ............................................ 4
CPSC - 01 Introduction to Computer Information Systems ...... 4
Marketing, A.S. (05460.AS)
The Marketing A.S. degree is intended to prepare students for employment in the broad field of marketing, which includes (but is not limited to) sales, promotion, design, copy writing, distribution, research, and public relations. Additionally, the A.S. degree in Marketing can be used to prepare students for transfer to a four-year institution where they can earn their bachelor’s degree. Potential four-year schools offering programs in Marketing include Fresno State University, CSU Stanislaus, San Jose State University, and many others.

Students must meet the graduation requirements as well as the Marketing core requirements. Students must earn a grade of “C” or higher for courses within the Marketing core.

Program Student Learning Outcomes
A. Recognize the major components of a marketing plan including market segmentation and targeting.
B. Demonstrate an understanding of the marketing mix.
C. Analyze the psychological factors affecting the consumer buying process.

Program Requirements:
Program Core: (30 Units)
AOM-30 Introduction to Computer Applications ............. 3

ACTG - 04A Financial Accounting ............. 4

ACTG - 04B Managerial Accounting ............. 4

ACTG - 51 Principles of Management ............. 4

AOM - 50B Document Formatting ............. 3

BUS - 18A Business Law ............. 4

BUS - 10 Introduction to Business ............. 3

BUS - 18A Business Law ............. 4

MKTG - 30 Principles of Marketing ............. 3

MKTG - 31 Retailing and E-Commerce ............. 3

MKTG - 33 Advertising ............. 3

VIRT - 51 Social Media ............. 3

VIRT - 56 Introduction to Search Engine Optimization ............. 1

Certificate

Accounting Certificate (05000.CT)
A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Accounting.

Program Student Learning Outcomes
A. Read, analyze, evaluate, and communicate, both orally and in written form, an appropriate financial interpretation of the material, including proper maintenance of accounting records using the basics of bookkeeping.
B. Analyze, make computations and solve a variety of complex accounting problems and scenarios.
C. Apply analytical and critical thinking skills to contemplate a given accounting scenario and propose a solution after contemplating a variety of courses of action.

Program Requirements:
Program Core: (30 Units)
ACTG - 04A Financial Accounting ............. 4

ACTG - 04B Managerial Accounting ............. 4

ACTG - 31 Computerized Accounting ............. 2

ACTG - 51 Applied Accounting ............. 4

AOM-30 Introduction to Computer Applications ............. 3

BUS - 10 Introduction to Business ............. 3

BUS - 18A Business Law ............. 4

Plus six units from the following:
ACTG - 52 Payroll Records and Accounting ............. 3

ACTG - 53 Fundamentals of Income Tax Accounting ............. 3

Total: (30 Units)
Program Requirements:
Program Core: (23 Units)
AOM - 30 Introduction To Computer Applications .......................... 3
AOM - 43 Essentials of Business Communication .......................... 3
AOM - 50B Document Formatting ............................................. 3
AOM - 50C Learn to Type ...................................................... 1
AOM - 52C Keyboarding Speed and Accuracy .............................. 1
AOM - 56 Office Procedures .................................................. 1
AOM - 58A Web Site Development .......................................... 2
AOM - 59A Medical Coding and Billing .................................... 4
VIRT - 51 Social Media ....................................................... 3
Total: (23 Units)

Administrative Office Professional Certificate
(05008.CT)
Certificate of Achievement will be awarded upon the successful completion of
core courses.

Program Student Learning Outcomes
A. Produce effective administrative documents by using computer
applications.
B. Utilize appropriate social media for a business environment ethically and
effectively.
C. Understand the role of an administrative office professional.

Program Requirements:
Program Core: (19 Units)
AOM - 30 Introduction To Computer Applications .......................... 3
AOM - 43 Essentials of Business Communication .......................... 3
AOM - 50B Document Formatting ............................................. 3
AOM - 50C Learn to Type ...................................................... 1
AOM - 52C Keyboarding Speed and Accuracy .............................. 1
AOM - 56 Office Procedures .................................................. 1
AOM - 58A Web Site Development .......................................... 2
AOM - 59A Medical Coding and Billing .................................... 4
VIRT - 51 Social Media ....................................................... 3
Total: (19 Units)

Business Information Worker Certificate (05150.CE)
The Business Information Worker is a job readiness pathway or certificate
for office workers, developed in conjunction with local employers.

Enrolled students are prepared in a broad range of entry-level office skills
and applications which promote success in a variety of office environments.
With a solid foundation in Microsoft Windows and Office as well as strong
digital and Web literacy skills, the Business Information Worker brings
efficiency and productivity to the workplace.

Completion of the Business Information Worker pathway also brings
indispensable critical thinking, problem solving, and interpersonal skills to
the workplace, essential components of the curriculum.

Program Student Learning Outcomes
A. Develop the ability to type at least 30 WPM.
B. Demonstrate the ability to treat customers appropriately.
C. Develop the ability to effectively communicate in business.
D. Develop effective use of the computer with an operating system, word
processing, spreadsheets, and e-mail.

Program Requirements:
Program Core: (10 Units)
AOM - 30 Introduction To Computer Applications .......................... 3
AOM - 43 Essentials of Business Communication .......................... 3
AOM - 50B Document Formatting ............................................. 3
Management Courses: (1 Unit, any two .50 unit course)

Customer Service Academy Certificate (05200.CO)
For a Customer Service Academy Certificate, students must complete all
ten management courses listed below.

Program Requirements:
Program Core: (5 Units)
MGMT - 50B Values and Ethics .............................................. 0.5
MGMT - 50C Time Management ............................................. 0.5
MGMT - 50D Communication in the Workplace .......................... 0.5
MGMT - 50F Team Building .................................................. 0.5
MGMT - 50G Decision Making and Problem Solving ...................... 0.5
MGMT - 50H Customer Service .............................................. 0.5
MGMT - 50I Attitude in the Workplace ..................................... 0.5
MGMT - 50J Thrive and Survive in the Workplace ......................... 0.5
MGMT - 50K Generational Diversity. Managing Cross Generational
Teams ................................................................. 0.5
MGMT - 50L Authentic Leadership: Know Yourself/Lead Your
People ................................................................. 0.5
MGMT - 50M Cultural Diversity .............................................. 0.5
MGMT - 50N Employee Engagement ....................................... 0.5
MGMT - 50P Emotional Intelligence ....................................... 0.5
MGMT - 50S Leading With Your Strengths ................................ 0.5
MGMT - 51C Leadership Essentials: What Emerging Leaders
Need to Know .......................................................... 0.5
MGMT - 51F Conflict Resolution ............................................ 0.5
MGMT - 51G Stress Management ............................................ 0.5
MGMT - 52C Successful Business Speaking ................................ 0.5
MGMT - 52D Managing Organizational Change ........................... 0.5
Total: (10 Units)

Dietetic Services Supervisor Certificate (13180.CL)
The Dietetic Services Supervisor Program prepares students for entry
level management in a food service department. This program fulfills the
required training for supervisory positions in acute care hospitals, skilled
nursing facilities, acute psychiatric hospitals, intermediate care facilities
and school food service. The Merced College Dietetic Service Supervisor
Program is approved by the California Department of Public Health.

Upon satisfactory completion(a minimum grade of a “C” is required in all
courses) of the 18-unit core listed below, students meet the California
Department of Public Health certification licensing requirements for
Dietetic Service Supervisor. Earning the Dietetic Service Supervisor
Certificate with appropriate work experience may allow the student to take
the Certified Dietary Manager’s Exam.

Program Student Learning Outcomes
A. Demonstrates ability to provide safe, satisfying, and nutritionally
adequate food for patients/customers with attention to available
resources.
B. Apply supervisory skills in a food service setting including the ability to train in food safety, participate in quantity meal production and create menus for special populations.

Program Requirements:
Program Core: (18 Units)
NUTR - 20 Principles of Foods .................................................. 3
NUTR - 37 Nutrition and Food Service Supervised Field ................. 3
NUTR - 40 Menu Planning for Food Service Operations ................. 3
NUTR - 44 Food Safety and Sanitation ......................................... 2
NUTR - 45 Introduction to Therapeutic Diets ............................... 2

Management Courses (select 4 courses): (2 Units)
MGMT - 50A Challenges of Leadership: Difficult People/Tough Conversations ................................................. 0.5
MGMT - 50B Values and Ethics .................................................. 0.5
MGMT - 50C Time Management ................................................ 0.5
MGMT - 50D Communication in the Workplace .......................... 0.5
MGMT - 50F Team Building ..................................................... 0.5
MGMT - 50G Decision Making and Problem Solving ..................... 0.5
MGMT - 50H Customer Service ................................................ 0.5
MGMT - 50I Attitude in the Workplace ...................................... 0.5
MGMT - 50J Thrive and Survive in the Workplace ......................... 0.5
MGMT - 50K Generational Diversity. Managing Cross Generational Teams ......................................................... 0.5
MGMT - 50L Authentic Leadership: Know Yourself/Lead Your People .............................................................. 0.5
MGMT - 50M Cultural Diversity ................................................. 0.5
MGMT - 50N Employee Engagement ......................................... 0.5
MGMT - 50P Emotional Intelligence .......................................... 0.5
MGMT - 50S Leading With Your Strengths ............................... 0.5
MGMT - 51C Leadership Essentials: What Emerging Leaders Need to Know ......................................................... 0.5

Total: (18 Units)

Suggested Sequence:
Fall 1
NUTR - 20 Principles of Foods .................................................. 3
NUTR - 37 Nutrition and Food Service Supervised Field ................. 3
NUTR - 44 Food Safety and Sanitation ......................................... 2

Spring 1
NUTR - 42 Quantity Food Preparation ........................................ 3
NUTR - 45 Introduction to Therapeutic Diets ............................... 2

Note:
*MGMT-50-52 courses may be completed during any semester.

Emerging Leaders Institute Certificate (05250.CO)
The Emerging Leaders Institute is for high potential employees and new mangers who are ready to focus on core leadership skills and are poised to move up in their organization. Seasoned managers would benefit from this program as well, as they would refresh themselves with current and proven leadership strategies. The theme of the program is Employee Engagement. All courses will help equip leaders with the skills and strategies to engage their team.

Program Student Learning Outcomes
A. Examine the key strategies that can engage employees in the workplace.
B. Analyze various elements that contribute to professionalism in the workplace.
C. Assess the various components that build trust between leaders and their followers.
D. Identify team member’s strengths to leverage the effectiveness of a team.
E. Examine values and how they influence our actions.

Program Requirements:
Program Core:
MGMT - 50A Challenges of Leadership: Difficult People/Tough Conversations ................................................. 0.5
MGMT - 50B Values and Ethics .................................................. 0.5
MGMT - 50K Generational Diversity: Managing Cross Generational Teams ......................................................... 0.5
MGMT - 50L Authentic Leadership: Know Yourself/Lead Your People .............................................................. 0.5
MGMT - 50N Employee Engagement ......................................... 0.5
MGMT - 50P Emotional Intelligence .......................................... 0.5
MGMT - 50S Leading With Your Strengths ............................... 0.5
MGMT - 51C Leadership Essentials: What Emerging Leaders Need to Know ......................................................... 0.5

General Business Certificate (05150.CT)
The mission of the Merced College GENERAL BUSINESS (Certificate) program is to provide students with general preparation for entry into employment in the business community. We seek to educate the whole person, to help students develop a global perspective, to provide students a basis for life-long learning, to encourage students to seek opportunities to serve others, and to prepare students for success in the business environment of the 21st century.

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in General Business.

Program Student Learning Outcomes
A. Communicate interpersonally in order to establish positive business relationships; and logically and effectively construct and deliver business presentations in oral and written formats, utilizing a variety of presentation tools and media.
B. Demonstrate comprehension of the core concepts of each business discipline - accounting, finance, information systems, economics, management, and marketing.
C. Analyze business problem situations systematically and effectively, and apply knowledge from multiple disciplines to the problem.
D. Use word-processing, spreadsheet, database, and collaborative software and World Wide Web tools and apply them to analysis of business decision situations.
E. Work effectively, respectfully, ethically and professionally with people of diverse ethnic, cultural, gender and other backgrounds and with people with different organizational roles, social affiliations and personalities.
F. Use team building skills and collaborative behaviors in the accomplishment of group goals and objectives.

Program Requirements:
Program Core: (30 Units)
ACTG - 51 Applied Accounting ................................................. 4
AOM-30 Introduction to Computer Applications .............................. 3
AOM - 50B Document Formatting ............................................... 3
BUS - 10 Introduction to Business ............................................. 3
BUS - 18A Business Law ......................................................... 4
BUS - 35 Money Management .................................................. 3
ECON - 02 Introduction to Macroeconomics ................................ 3

Plus 7 additional units in this area of study: (7 Units)
Total: (30 Units)

Suggested electives include:
MGMT - 31 Principles of Management ........................................ 3
MGMT - 37 Small Business Entrepreneurship ............................. 3
MKTG - 30 Principles of Marketing ............................................ 3
MKTG - 31 Retailing and E-Commerce ........................................ 3
Management, Supervisory Training Certificate (05450.CT)

A Certificate of Achievement will be awarded upon the satisfactory completion of 29-30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Management/Supervisory Training.

Program Student Learning Outcomes
A. Student will be able to explain the fundamental theories of management and leadership in the workplace.
B. Student will be able to identify and describe various management styles and how to be an effective team leader.
C. Student will develop an awareness of skills needed to be successful in Management/Supervision, including communication, decision making, planning, and motivation.

Program Requirements:
Program Core: (29-30 Units)
ACTG - 04A  Financial Accounting ........................................... 4
or
ACTG - 51  Applied Accounting .................................................. 4
BUS - 18A  Business Law ............................................................. 4
CPSC - 01  Introduction to Computer Information Systems .......... 4
or
AOM-30  Introduction to Computer Applications .................... 3
ECON - 02  Introduction to Macroeconomics ............................ 3
MGMT - 31  Principles of Management ...................................... 3
MGMT - 32  Human Resource Management ............................... 3
MGMT - 33  Elements of Effective Leadership ......................... 3
MGMT - 34  Employment Law .................................................... 3
Management Courses: (3 units)
MGMT - 50A  Challenges of Leadership: Difficult People/Tough Conversations ............................................. 0.5
MGMT - 50B  Values and Ethics .................................................... 0.5
MGMT - 50C  Time Management .................................................. 0.5
MGMT - 50D  Communication in the Workplace ......................... 0.5
MGMT - 50F  Team Building ........................................................ 0.5
MGMT - 50G  Decision Making and Problem Solving .................. 0.5
MGMT - 50H  Customer Service ................................................... 0.5
MGMT - 50I  Attitude in the Workplace ..................................... 0.5
MGMT - 50J  Thrive and Survive in the Workplace ...................... 0.5

Suggested Sequence:
Fall 1
ACTG - 04A  Financial Accounting ........................................... 4
or
ACTG - 51  Applied Accounting .................................................. 4
ECON - 02  Introduction to Macroeconomics ............................ 3
MGMT - 32  Human Resource Management ............................... 3
MGMT - 33  Elements of Effective Leadership ......................... 3
Total: (29-30 Units)

Marketing Certificate (05460.CT)

The Certificate of Achievement in Marketing is intended to prepare students for employment in the broad field of marketing, which includes (but is not limited to) sales, promotion, design, copy writing, distribution, research, and public relations.

A Certificate of Achievement in Marketing will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the Certificate of Achievement in Marketing. Students must complete the requirements with a minimum grade point of "C" in each course required for the certificate.

Program Student Learning Outcomes
A. Recognize the major components of a marketing plan including market segmentation and targeting.
B. Demonstrate an understanding of the marketing mix.
C. Analyze the psychological factors affecting the consumer buying process.
D. Analyze different distribution systems for different products or services and their respective target markets.

Program Requirements:
Program Core: (30 Units)
ACTG - 04A  Financial Accounting ........................................... 4
or
ACTG - 51  Applied Accounting .................................................. 4
AOM - 50B  Document Formatting ................................................ 3
or
AOM - 43  Essentials of Business Communication .................... 3
AOM - 30  Introduction to Computer Applications .................... 3
BUS - 10  Introduction to Business ........................................... 3
BUS - 18A  Business Law ............................................................. 4
MKTG - 30  Principles of Marketing ......................................... 3
MKTG - 31  Retailing and E-Commerce ..................................... 3
MKTG - 33  Advertising ............................................................. 3
VIRT - 51  Social Media ............................................................... 3
VIRT - 56  Introduction to Search Engine Optimization .......... 1
Total: (30 Units)

Suggested Sequence:
Fall 1
ACTG - 04A  Financial Accounting ........................................... 4
or
ACTG - 51  Applied Accounting .................................................. 4
VIRT - 56  Introduction to Search Engine Optimization .......... 1
Spring 1
MKTG - 30  Principles of Marketing ......................................... 3
MKTG - 33  Advertising ............................................................. 3
or
AOM - 43  Essentials of Business Communication .................... 3
Nutrition and Foods Certificate (13161.CL)
A Certificate of Achievement in Nutrition and Foods provides a foundation and introduction to the core courses in the program as well as a choice of other more specialized courses. A student may select the seven additional units in their area of study. This Certificate will be awarded upon satisfactory completion of the curriculum listed below with a minimum grade of a “C” in each course required for the certificate.

Program Student Learning Outcomes
A. Provide safe, satisfying, and nutritionally adequate food for patients/customers with attention to available resources.
B. Examine supervisory skills in a food service setting including the ability to train in food safety, participate in quantity meal production and create menus for special populations.
C. Formulate effective communication in a food service setting with diverse cultures.
D. Utilize materials in the specialization coursework.

Program Requirements:
Program Core: (28 Units)
NUTR - 10 Nutrition ......................................................... 3
NUTR - 20 Principles of Foods ........................................... 3
NUTR - 37 Nutrition and Food Service Supervised Field Experience ........................................................................ 3
NUTR - 40 Menu Planning for Food Service Operations ....... 3
NUTR - 42 Quantity Food Preparation .................................. 3
NUTR - 44 Food Safety and Sanitation ................................ 2
NUTR - 45 Introduction to Therapeutic Diets ....................... 2
Management Courses: (2 Units)
MGMT - 50A Challenges of Leadership: Difficult People/Tough Conversations .................................................. 0.5
MGMT - 50B Values and Ethics ............................................... 0.5
MGMT - 50C Time Management ............................................ 0.5
MGMT - 50D Communication in the Workplace .................. 0.5
MGMT - 50F Team Building .................................................. 0.5
MGMT - 50G Decision Making and Problem Solving .......... 0.5
MGMT - 50H Customer Service ............................................ 0.5
MGMT - 50I Attitude in the Workplace ................................. 0.5
MGMT - 50J Thrive and Survive in the Workplace ............... 0.5
MGMT - 50K Generational Diversity: Managing Cross Generational Teams ....................................................... 0.5
MGMT - 50L Authentic Leadership: Know Yourself/Lead Your People ................................................................. 0.5
MGMT - 50M Cultural Diversity ............................................. 0.5
MGMT - 50N Employee Engagement ................................. 0.5
MGMT - 50P Emotional Intelligence .................................... 0.5
MGMT - 50S Leading With Your Strengths .......................... 0.5
MGMT - 51C Leadership Essentials: What Emerging Leaders Need to Know ...................................................... 0.5
MGMT - 51F Conflict Resolution .......................................... 0.5
MGMT - 51G Stress Management ......................................... 0.5
MGMT - 52C Successful Business Speaking ....................... 0.5
MGMT - 52D Managing Organizational Change ................... 0.5
Restricted Electives from the following courses: (7 Units)
AOM - 30 Introduction To Computer Applications ................. 3
NUTR - 24 Work Experience in Nutrition ............................. 1-8
NUTR - 41 Infant and Toddler Feeding ................................. 1
NUTR - 43 Children and Weight Concerns ............................ 1
NUTR - 50 Baking Basics and Business ............................... 1.5
NUTR - 60 Sports and Exercise Nutrition ............................. 3
NUTR - 70A-ZZ Special Topics in Foods and Nutrition ......... 1-3
PLSC - 10 Elements of Plant Science ................................ 3

Total: (28 Units)
Suggested Sequence:
Fall 1
NUTR - 20 Principles of Foods ........................................... 3
NUTR - 40 Menu Planning for Food Service Operations ....... 3
NUTR - 44 Food Safety and Sanitation ................................ 2
Spring 1
NUTR - 37 Nutrition and Food Service Supervised Field Experience .......................................................... 3
NUTR - 42 Quantity Food Preparation ................................. 3
NUTR - 45 Introduction to Therapeutic Diets ....................... 2
Fall 2 and Spring 2
AOM - 30 Introduction To Computer Applications ................. 3
NUTR - 10 Nutrition ......................................................... 3
NUTR - 41 Infant and Toddler Feeding ................................. 1
NUTR - 43 Children and Weight Concerns ............................ 1
PLSC - 10 Elements of Plant Science ................................ 3

Real Estate Salesperson License Certificate (05600.CE)
Enter positions open to graduates who pass the California State examination for a salesperson’s or broker’s license include those of sales agent, junior appraiser, rental agent, or property manager for a bank or land-development company; or in the property department of a corporation, a savings-and-loan company, or an insurance company. Graduates may also search titles and close transactions in the escrow departments of any of these establishments or for escrow companies.

A Certificate of Proficiency will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Describe property escrow procedures.
B. Compose accurate listing and sales contracts.
C. Produce documents that follow California real estate statutes and regulations.

Program Requirements:
Program Core: (9-10 Units)
REAL - 42 Real Estate Principles ........................................... 3
REAL - 43 Real Estate Practices ............................................ 3
Plus 3-4 units from the following: (3-4 Units)
ACTG - 04A Financial Accounting ...................................... 4
ACTG - 51 Applied Accounting .......................................... 4
AGBS - 11 Agricultural Economics .................................... 3
BUS - 18A Business Law .................................................. 4
BUS - 35 Money Management ........................................... 3
ECON - 01 Introduction to Microeconomics ....................... 3
MATH - 15 Finite Mathematics .......................................... 3
Total: (9-10 Units)

Small Business Entrepreneurship Certificate (05700.CT)
A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Small Business Entrepreneurship.

Program Student Learning Outcomes
A. Perform an analysis to assess a new business’ potential in the external environment in order to distinguish between a business idea and a business opportunity;
B. Prepare and analyze financial information associated with starting up a new business and maintaining an existing business;
C. Write a business plan suitable for presentation to potential investors.
and/or financial lending institutions and present it to an audience;
D. Learn techniques to manage, promote, and finance a new business venture using pertinent and current methods.

Program Requirements:
Program Core: (30 Units)
ACTG - 31 Computerized Accounting ......................... 2
BUS - 10 Introduction to Business ............................... 3
BUS - 35 Money Management .................................. 3
AOM-30 Introduction to Computer Applications .......... 3
AOM - 43 Essentials of Business Communication ........ 3
MGMT - 31 Principles of Management ....................... 3
MGMT - 33 Elements of Effective Leadership ............. 3
MGMT - 37 Small Business Entrepreneurship ............. 3
MKTG - 30 Principles of Marketing ......................... 3
MKTG - 33 Advertising .................................... 3

Required:
Select two courses from Management Series:

MGMT - 50B Values and Ethics ................................. 0.5
MGMT - 50C Time Management .............................. 0.5
MGMT - 50D Communication in the Workplace .......... 0.5
MGMT - 50F Team Building .................................. 0.5
MGMT - 50G Decision Making and Problem Solving .... 0.5
MGMT - 50H Customer Service .............................. 0.5
MGMT - 50I Attitude in the Workplace .................... 0.5
MGMT - 50J Thrive and Survive in the Workplace .... 0.5
MGMT - 51C Leadership Essentials: What Emerging Leaders Need to Know .................................. 0.5
MGMT - 51F Conflict Resolution ............................ 0.5
MGMT - 51G Stress Management ............................ 0.5
MGMT - 52C Successful Business Speaking .............. 0.5
MGMT - 52D Managing Organizational Change .......... 0.5

Total: (30 Units)

Suggested Sequence:
1st Semester: (17 units)
ACTG - 04A Financial Accounting ......................... 4
or
ACTG - 51 Applied Accounting ...................... 4
BUS - 10 Introduction to Business ......................... 3
MGMT - 31 Principles of Management ................... 3
MGMT-50-53 2 classes .................................. 1
MKTG - 30 Principles of Marketing .................... 3

2nd Semester: (17 units)
ACTG - 31 Computerized Accounting .................. 2
BUS - 35 Money Management .............................. 3
AOM - 43 Essentials of Business Communication .... 3
MGMT - 33 Elements of Effective Leadership .......... 3
MGMT - 37 Small Business Entrepreneurship .......... 3
MKTG - 33 Advertising .................................. 3

Social Media Certificate (05725.CE)
This certificate focuses on social networks, social media tools and strategies. Whether for business, for non-profit, or for fun, courses within the certificate introduce how to effectively use social media and how to develop best practices.

A. Certificate of Proficiency will be awarded upon successful completion of the required courses below. For successful completion a student must complete the requirements with a minimum grade of a 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Use advanced technological modes of communication and data delivery to assist clients.
B. Develop a social media strategy plan.

Program Requirements:
Program Core: (14 Units)
AOM - 30 Introduction To Computer Applications ........ 3
AOM - 58A Web Site Development .......................... 3
VIRT - 50 Virtual Office ..................................... 3
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (14 Units)

Suggested Sequence:
Fall 1
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3
Spring 1
AOM - 30 Introduction To Computer Applications ..... 3
AOM - 58A Web Site Development ........................ 2
VIRT - 50 Virtual Office ..................................... 3

Program Core: (6 Units)
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (6 Units)

Virtual Office Professional Certificate (05800.CE)
A Virtual Office Professional is an independent entrepreneur providing administrative, creative and/or technical services. Using advanced technological modes of communication and data delivery, a professional Virtual Office Professional assists clients from their own office on a contractual basis.

Successful completion of the Virtual Office Certificate of Proficiency prepares students for starting/working for a virtual office business. The certificate addresses issues of creating and managing their own virtual offices.

Students are prepared to assume positions in business and industries that utilize virtual administrative support, including executive assistants and office support specialists.

A Certificate of Proficiency will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Use advanced technological modes of communication and data delivery to assist clients in their virtual office on a contractual basis.
B. Construct a virtual office business plan for the creation and management of a virtual office.
C. Use appropriate social media and web page design knowledge to meet client needs.

Career Opportunities
Virtual business owner, virtual assistant, executive assistant, web designer, social media coordinator.

Program Requirements:
Program Core: (14 Units)
AOM - 30 Introduction To Computer Applications ........ 3
AOM - 58A Web Site Development .......................... 3
VIRT - 50 Virtual Office ..................................... 3
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (14 Units)

Suggested Sequence:
Fall 1
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3
Spring 1
AOM - 30 Introduction To Computer Applications ..... 3
AOM - 58A Web Site Development ........................ 2
VIRT - 50 Virtual Office ..................................... 3

Program Core: (6 Units)
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (6 Units)

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A Virtual Office Professional is an independent entrepreneur providing administrative, creative and/or technical services. Using advanced technological modes of communication and data delivery, a professional Virtual Office Professional assists clients from their own office on a contractual basis.

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A Certificate of Proficiency will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Use advanced technological modes of communication and data delivery to assist clients in their virtual office on a contractual basis.
B. Construct a virtual office business plan for the creation and management of a virtual office.
C. Use appropriate social media and web page design knowledge to meet client needs.

Career Opportunities
Virtual business owner, virtual assistant, executive assistant, web designer, social media coordinator.

Program Requirements:
Program Core: (14 Units)
AOM - 30 Introduction To Computer Applications ........ 3
AOM - 58A Web Site Development .......................... 3
VIRT - 50 Virtual Office ..................................... 3
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (14 Units)

Suggested Sequence:
Fall 1
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3
Spring 1
AOM - 30 Introduction To Computer Applications ..... 3
AOM - 58A Web Site Development ........................ 2
VIRT - 50 Virtual Office ..................................... 3

Program Core: (6 Units)
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (6 Units)

Virtual Office Professional Certificate (05800.CE)
A Virtual Office Professional is an independent entrepreneur providing administrative, creative and/or technical services. Using advanced technological modes of communication and data delivery, a professional Virtual Office Professional assists clients from their own office on a contractual basis.

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Students are prepared to assume positions in business and industries that utilize virtual administrative support, including executive assistants and office support specialists.

A Certificate of Proficiency will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Use advanced technological modes of communication and data delivery to assist clients in their virtual office on a contractual basis.
B. Construct a virtual office business plan for the creation and management of a virtual office.
C. Use appropriate social media and web page design knowledge to meet client needs.

Career Opportunities
Virtual business owner, virtual assistant, executive assistant, web designer, social media coordinator.

Program Requirements:
Program Core: (14 Units)
AOM - 30 Introduction To Computer Applications ........ 3
AOM - 58A Web Site Development .......................... 3
VIRT - 50 Virtual Office ..................................... 3
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (14 Units)

Suggested Sequence:
Fall 1
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3
Spring 1
AOM - 30 Introduction To Computer Applications ..... 3
AOM - 58A Web Site Development ........................ 2
VIRT - 50 Virtual Office ..................................... 3

Program Core: (6 Units)
VIRT - 51 Social Media ..................................... 3
VIRT - 55 Social Media Marketing and Strategy ........ 3

Total: (6 Units)
Associate of Arts for Transfer
Communication Studies, A.A.-T. (15601.AAT)
The Associate in Arts in Communication Studies for Transfer (AA-T) is designed for students as both a terminal degree as well as for those planning on transferring to a California State University. Upon completion of the associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

For an Associate in Arts in Communication Studies for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE).

Program Student Learning Outcomes:
A. Appraise core concepts, skills, and/or theories in various communication contexts (public, interpersonal, small group, or intercultural).
B. Construct written, oral, and visual communication appropriate for the purpose, audience, and context.
C. Evaluate success of written, oral, and/or visual communication through critical thinking.

Program Requirements:
Program Core: (18 Units)
COMM - 01 Fundamentals of Speech ..................................... 3
or
COMM - 01H Honors Fundamentals of Speech ......................... 3 **
COMM - 02 Oral Interpretation ............................................ 3 *
or
ENGL - 02 Oral Interpretation ............................................ 3
COMM - 04 Small Group Discussion and Problem Solving .......... 3
COMM - 05 Interpersonal Communication ............................ 3
COMM - 30 Introduction to Intercultural Communication .......... 3
Plus three units from the following electives: (3 Units)
ANTH - 02 Sociocultural Anthropology ............................... 3
ENGL - 13 Critical Reasoning and Writing ............................ 3
or
ENGL - 13H Honors Critical Reasoning and Writing ................ 3
or
PHIL - 13 Critical Reasoning and Writing ............................. 3
or
PHIL - 13H Honors Critical Reasoning and Writing ................ 3
PSYC - 01A Introduction to Psychology ............................... 3

Note:
* Only offered during the spring semester.
** Only offered during the fall semester. Students must be enrolled in the Honors Program prior to registering for the course.

English, A.A.-T. (15200.AAT)
The Associate of Arts in English for Transfer degree (AA-T) is designed for students planning on transferring to a California State University (CSU). Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the CSU system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

Program Student Learning Outcomes
A. Students will be able to compose a thesis-based essay that clearly communicates a logical, evidence-supported argument with documentation.
B. Students will demonstrate, in writing, comprehension and critical analysis of college-level texts.

Program Requirements:
Program Core (18-20 Units)
ENGL - 01B Introduction to Literature ................................. 3
ENGL - 13 Critical Reasoning and Writing ............................ 3
or
ENGL - 13H Honors Critical Reasoning and Writing ............... 3
or
PHIL - 13 Critical Reasoning and Writing ............................. 3
or
PHIL - 13H Honors Critical Reasoning and Writing ............... 3
List A: (6 Units)
Select a minimum of 6 units from the following:
ENGL - 04A Introduction to World Literature: Ancients to 1650 .. 3
ENGL - 04B Introduction to World Literature: 1650 to Present .. 3
ENGL - 06A Major English Writers to the Late 18Th Century .... 3
ENGL - 06B Major English Writers Since the Late 18Th Century 3
ENGL - 10 American Literature From Beginnings to Civil War .. 3
ENGL - 11 American Literature From Post-Civil War to Present 3
List B: (3 Units)
Select a minimum of 3 units from the following:
Any course from List A not used above. ........................................... 3
ENGL - 05 Introduction to Fiction ........................................... 3
ENGL - 12 Creative Writing ...................................................... 3

List C: (3 Units)
Selective a minimum of 3 units from the following:
Any course from List A or List B not used above. ........................... 3
DRAM - 01 Introduction to Theater ........................................... 3
ENGL - 02 Oral Interpretation ................................................. 3
or
COMM - 02 Oral Interpretation ................................................. 3

ENGL - 07 Studies in Literature: Poetry ........................................ 3
ENGL - 08 Introduction to Shakespeare ........................................ 3
ENGL - 14 Introduction to Film .................................................. 3
ENGL - 15 History of Dramatic Literature .................................... 3
ENGL - 18 African and African American Literature ......................... 3
FREN - 03 Intermediate French I ............................................... 5
FREN - 04 Intermediate French II ............................................... 5
GERN - 03 Intermediate German I ............................................. 5
GERN - 04 Intermediate German II ............................................. 5
HUM - 01 Studies in Humanities—Ancient Through Renaissance ....... 3
SPAN - 03 Intermediate Spanish I .............................................. 3
SPAN - 04 Intermediate Spanish ............................................... 3

Total Units that may be double counted: (19-12 Units)
General Education Units: (37-39 Units)

CSU-General Education Breadth Certification Requirements
Elective (CSU Transferable) Units: (11-14 Units)
Total: (60 Units)

Suggested Sequence:
ENGL 01A and ENGL 01B will be offered every semester. In addition, the following degree applicable classes will be offered the following terms.
Fall 1
ENGL - 04A Introduction to World Literature....... Ancients to 1650 3
ENGL - 10 American Literature From Beginnings to Civil War .. 3
ENGL - 14 Introduction to Film .................................................. 3

Spring 1
ENGL - 04B Introduction to World Literature....... 1650 to Present 3
ENGL - 07 Studies in Literature ................................................. 5
ENGL - 11 American Literature From Post-Civil War to Present 3
ENGL - 12 Creative Writing ...................................................... 3

Fall 2
ENGL - 06A Major English Writers to the Late 18th Century ..... 3
ENGL - 15 History of Dramatic Literature .................................... 3
ENGL - 18 African and African American Literature ......................... 3

Spring 2
ENGL - 05 Introduction to Fiction ........................................... 3
ENGL - 06B Major English Writers Since the Late 18th Century 3
ENGL - 08 Introduction to Shakespeare ........................................ 3
ENGL - 12 Creative Writing ...................................................... 3

Philosophy, A.A.-T. (15400.AAT)
The Associate in Arts in Philosophy for Transfer is designed around a core education that includes the history of philosophy, ethics, and logic. Students choose among elective courses in humanities and comparative religions. Upon completion, students with an Associate in Arts in Philosophy for Transfer will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis. The Associate in Arts in Philosophy for Transfer is to assist students in the seamless transferring to a California State University. Upon completion of the AA-T in Philosophy, students will be able to:

Program Student Learning Outcomes:
A. Demonstrate a basic knowledge of the fundamental concepts of the major figures in the history of Western philosophy, as well as some figures outside the traditional Western canon.
B. Analyze primary philosophical texts and the philosophical arguments contained in them.
C. Defend positions on important philosophical issues, questions, and/or problems in written form.

Program Requirements:
Program Core: (18 Units)
PHIL - 01 Introduction to Philosophy ........................................... 3
PHIL - 01H Honors Introduction to Philosophy ................................ 3
PHIL - 03 Ancient Philosophy .................................................... 3
PHIL - 04 Modern Philosophy .................................................... 3
PHIL - 05 Contemporary Ethical Issues ........................................ 3
PHIL - 12 Introduction to Logic .................................................. 3
Elective: Select one of the following: (3 Units)
PHIL - 15 Comparative Religions ................................................ 3
HUM - 01 Studies in Humanities—Ancient Through Renaissance ....... 3
HUM - 01H Honors Studies in Humanities—Ancient Through Renaissance .................................................. 3
HUM - 02 Studies in Humanities—Renaissance to Present .. 3
HUM - 02H Honors Studies in Humanities—Renaissance to Present .................................................. 3

Important note:
**HUM-01 is only offered in the fall semester.
**HUM-02 is only offered in the spring semester.
**PHIL-04 will be offered Spring 2015 and Spring 2016.
Total Units that may be double counted: (6-9 Units)
General Education Units: (37-39 Units)

Spanish, A.A.-T. (11600.AAT)
The Associate in Arts in Spanish for Transfer is designed around a core education. Upon completion, students with an Associate in Arts in Spanish for Transfer will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

Program Student Learning Outcomes:
A. Demonstrate the ability to initiate, sustain and close basic communicative tasks. (Speaking)
B. Develop an understanding of connected discourse over longer
stretches on a number of topics pertaining to different times and places. (Listening Comprehension)

C. Produce writing focusing on most practical writing needs and limited social demands with an emerging ability to describe and narrate in paragraphs. (Writing)

D. Distinguish consistently pervasive values of the Spanish-speaking cultures. (Cultural Awareness)

E. Evaluate consistently and with full understanding simple connected texts with an emerging ability to comprehend advanced reading. (Reading Comprehension)

Program Requirements:
Program Core: (23-25)
20 units from the following.

Note: students who are placed at a higher level than SPAN 01 will need to obtain units from List B.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN - 01</td>
<td>Elementary Spanish I</td>
<td>5</td>
</tr>
<tr>
<td>SPAN - 02</td>
<td>Elementary Spanish II</td>
<td>5</td>
</tr>
<tr>
<td>SPAN - 03</td>
<td>Intermediate Spanish I</td>
<td>5</td>
</tr>
<tr>
<td>SPAN - 10</td>
<td>Spanish for Spanish Speakers I</td>
<td>3</td>
</tr>
<tr>
<td>SPAN - 04</td>
<td>Intermediate Spanish</td>
<td>5</td>
</tr>
<tr>
<td>SPAN - 11</td>
<td>Spanish for Spanish Speakers II</td>
<td>5</td>
</tr>
</tbody>
</table>

List A: (3-5 Units)
3-5 units from the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL - 04A</td>
<td>Introduction to World Literature........Ancients to 1650</td>
<td>3</td>
</tr>
<tr>
<td>ENGL - 04B</td>
<td>Introduction to World Literature.......1650 to Present</td>
<td>3</td>
</tr>
<tr>
<td>FREN - 01</td>
<td>Elementary French I</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 02</td>
<td>Elementary French II</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 03</td>
<td>Intermediate French I</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 04</td>
<td>Intermediate French II</td>
<td>5</td>
</tr>
</tbody>
</table>

List B:
Students who are placed at a higher level than SPAN 01 will have to take courses to substitute for the units they have placed out of. Any course from List A not already used can be taken in List B.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH - 02</td>
<td>Sociocultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>COMM - 30</td>
<td>Introduction to Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL - 04A</td>
<td>Introduction to World Literature.......Ancients to 1650</td>
<td>3</td>
</tr>
<tr>
<td>ENGL - 04B</td>
<td>Introduction to World Literature.......1650 to Present</td>
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<tr>
<td>FREN - 01</td>
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<td>FREN - 03</td>
<td>Intermediate French I</td>
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<td>FREN - 04</td>
<td>Intermediate French II</td>
<td>5</td>
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<tr>
<td>HIST - 04A</td>
<td>World History Part 1</td>
<td>3</td>
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<tr>
<td>HIST - 04B</td>
<td>World History Part II</td>
<td>3</td>
</tr>
<tr>
<td>HIST - 23</td>
<td>The History of Hispanic-Americans in the Southwest U.S.</td>
<td>3</td>
</tr>
<tr>
<td>SOC - 01</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units that may be double counted: (10 Units)

Total: (60 Units)

Important Note:
SPAN 03 is only offered in the fall semester.
SPAN 04 is only offered in the spring semester.

Suggested Sequence:
Non-Native Speakers
Fall 1

Spanish for Heritage Speakers

The entry level course for heritage speakers of Spanish is SPAN 10.

Fall 1
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN - 10</td>
<td>Spanish for Spanish Speakers I</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 01</td>
<td>Intermediate French I</td>
<td>5</td>
</tr>
<tr>
<td>ENGL - 04A</td>
<td>Introduction to World Literature.......Ancients to 1650</td>
<td>3</td>
</tr>
</tbody>
</table>

Spring 1
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN - 11</td>
<td>Spanish for Spanish Speakers II</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 02</td>
<td>Intermediate French II</td>
<td>5</td>
</tr>
<tr>
<td>ENGL - 04A</td>
<td>Introduction to World Literature.......Ancients to 1650</td>
<td>3</td>
</tr>
</tbody>
</table>

*Any course(s) from list B can be substituted if necessary.

Associate of Arts
French, A.A. (11200.AA)

For an Associate in Arts Degree in French students should meet the graduation requirements and complete the 26-unit curriculum as listed below. The courses listed below must be in addition to the basic graduation requirements.

Program Student Learning Outcomes
A. Speaking: Initiate, minimally sustain, and close in a simple way basic communicative tasks.
B. Listening: Distill information from such discourse and demonstrate understanding.
C. Writing: Compose a simple narrative and meet practical needs.
D. Culture: Recognize pervasive values of the culture.
E. Reading: Understand main ideas.

Program Requirements:
Program Core: (26 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN - 01</td>
<td>Elementary French I</td>
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</tr>
<tr>
<td>FREN - 02</td>
<td>Elementary French II</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 03</td>
<td>Intermediate French I</td>
<td>5</td>
</tr>
<tr>
<td>FREN - 04</td>
<td>Intermediate French II</td>
<td>5</td>
</tr>
<tr>
<td>HIST - 04A</td>
<td>World History Part 1</td>
<td>3</td>
</tr>
<tr>
<td>HIST - 04B</td>
<td>World History Part II</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: (26 Units)

Suggested Sequence:
Fall 1
<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>Elementary French I</td>
<td>5</td>
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<tr>
<td>HIST - 04A</td>
<td>World History Part 1</td>
<td>3</td>
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Spring 1
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<tr>
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<th>Units</th>
</tr>
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<tbody>
<tr>
<td>FREN - 02</td>
<td>Elementary French II</td>
<td>5</td>
</tr>
<tr>
<td>HIST - 04B</td>
<td>History of Civilization: Part II</td>
<td>3</td>
</tr>
</tbody>
</table>

Fall 2
German, A.A. (11400.AA)
For an Associate in Arts Degree in German students should meet the graduation requirements and complete the 26-unit curriculum as listed below. The courses listed below must be in addition to the basic graduation requirements.

Program Student Learning Outcomes
A. Speaking: Create spoken German at the Intermediate-Mid level as described by the American Council on the Teaching of Foreign Languages (ACTFL).
B. Listening: Assess spoken German at the Intermediate-Mid level as described by the American Council on the Teaching of Foreign Languages (ACTFL).
C. Writing: Compose writings at the Intermediate-Mid level as described by the American Council on the Teaching of Foreign Languages (ACTFL).
D. Culture: Recognize a number of pervasive values of the German-speaking cultures.
E. Reading: Appraise reading materials at the Intermediate-Mid level as described by the American Council on the Teaching of Foreign Languages (ACTFL).

Program Requirements:
Program Core: (26 Units)
GERN - 01 Elementary German I .................................... 5
GERN - 02 Elementary German II .................................. 5
GERN - 03 Intermediate German I .................................. 5
GERN - 04 Intermediate German II .................................. 5
HIST - 04A World History Part 1 .................................. 3
or HUM - 01 Studies in Humanities--Ancient Through Renaissance ................................. 3
or HUM - 01H Honors Studies in Humanities--Ancient Through Renaissance ....................... 3
HIST - 04B History of Civilization Part II ....................... 3
or HUM - 02 Studies in Humanities--Renaissance to Present .... 3
or HUM - 02H Honors Studies in Humanities--Renaissance to Present ..................... 3
GE Pattern MCCD GE Breadth Requirements
Associate Degree Breadth Requirements
Electives (as needed) (CSU transferrable): (17 Units)
Double-Counted: (6 Units)
Total: (60 Units)

Suggested Sequence:
Fall 1
GERN - 01 Elementary German I .................................... 5
HIST - 04A World History Part 1 .................................. 3
or HUM - 01 Studies in Humanities--Ancient Through Renaissance ................................. 3
or HUM - 01H Honors Studies in Humanities--Ancient Through Renaissance ....................... 3
Spring 1
GERN - 02 Elementary German II .................................. 5
HIST - 04B History of Civilization Part II ....................... 3
or HUM - 02 Studies in Humanities--Renaissance to Present .... 3

Humanities, A.A. (49300.AA)
For an Associate in Arts Degree in Humanities, students must meet the graduation requirements and complete the 20-unit curriculum listed below. These courses must be in addition to those taken to satisfy the basic graduation requirements.

Program Student Learning Outcomes
A. Distinguish the specific purposes of the various disciplines within the humanities.
B. Examine or analyze sophisticated texts.
C. Compose thoughtful analyzes of texts.
D. Compare and contrast various ideas and points of view.
E. Assess the significance and value of multicultural issues and influences.

Program Requirements:
Program Core: (20 Units)
HUM - 01 Studies in Humanities--Ancient Through Renaissance ........................................... 3
or HUM - 01H Honors Studies in Humanities--Ancient Through Renaissance ....................... 3
HUM - 02 Studies in Humanities--Renaissance to Present .............................................. 3
or HUM - 02H Honors Studies in Humanities--Renaissance to Present ............................ 3

Plus an additional 14 units from the electives below
(Students must take at least three units from each of the four elective areas.)

Literature (3 Units)
ENGL - 01B Introduction to Literature ........................... 3
ENGL - 06A Major English Writers to the Late 18Th Century ................................. 3
ENGL - 06B Major English Writers Since the Late 18Th Century ................................. 3
ENGL - 08 Introduction to Shakespeare ..................................... 3
ENGL - 10 American Literature From Beginnings to Civil War ...... 3
ENGL - 11 American Literature From Civil War to Present .... 3
ENGL - 18 African and American Literature .................................. 3

Philosophy and Humanities (3 Units)
PHIL - 03 Ancient Philosophy ........................................... 3
PHIL - 04 Modern Philosophy ........................................... 3
PHIL - 05 Contemporary Ethical Issues ................................ 3
PHIL - 15 Comparative Religions ...................................... 3
HUM - 15 Comparative Cultures ........................................... 3
HUM - 21 Humanities and Film ........................................... 3

Art and Music (3 Units)
ART - 01 Art History: Ancient Through Gothic ......................... 3
ART - 02 Art History: Renaissance Through 20Th Century .......... 3
ART - 03 Art History: European Modernism .............................. 3
ART - 04 Art History: American Modernism .............................. 3
MUSG - 11 Classical Music History I .................................... 3
MUSG - 12 Classical Music History II ..................................... 3
MUSG - 13 Jazz Music History ............................................. 3
MUSG - 14 American Popular Music History .......................... 3

Foreign Language (5 Units)
FREN - 03 French History ............................................. 3
FREN - 04 French History ............................................. 3
GERN - 02 Elementary German II .................................. 5
GERN - 03 Intermediate German I .................................... 5
GERN - 04 Intermediate German II .................................... 5
HMNG - 02 Elementary Hmong II ...................................... 5

209.384.6000
Fine & Performing Arts

Associate of Arts for Transfer
Music, A.A.-T. (10400.AAT)
Students completing this degree are guaranteed admission to the CSU system, but not a particular campus or major. Students should be aware that most CSU campuses require placement exams for music majors, even with a completed AA-T Music degree.

For more information on the AA-T Music degree, contact your counselor or Merced College music faculty.

Program Student Learning Outcomes
A. Perform selected exercises and compositions that reflect the standard repertoire of lower division instrumental or vocal performance courses at four-year institutions.
B. Apply standard theoretical concepts in the understanding of existing compositions, the organization of musical sounds, and in the creation of original compositions.
C. Demonstrate an understanding of performance ensemble skills including blend, balance, intonation and interpretation as a part of either vocal or instrumental performance groups using a variety of musical styles.
D. Demonstrate piano proficiency.

For an Associate in Arts in Music for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (22 Units)
MUST - 01 Music Theory I (Diatonic Harmony) ........................................... 3
MUST - 02 Music Theory II (Diatonic Harmony II) ...................................... 3
MUST - 03 Music Theory III (Chromatic Harmony) .................................... 3
MUST - 04 Music Theory IV (Music Theory of the 20th & 21st Centuries) ................................................................. 3
MUST - 05 Aural Skills I ................................................................. 1
MUST - 06 Aural Skills II .............................................................. 1
MUST - 07 Aural Skills III ............................................................. 1
MUST - 08 Aural Skills IV ............................................................. 1
MUSA - 20 Applied Music ............................................................ 0.5
Music Ensembles: (4 Units)
MUSE - 41 Concert Band .............................................................. 1
MUSE - 42 Jazz Ensemble ............................................................. 1
MUSE - 43 Guitar Ensemble .......................................................... 1
MUSE - 44 Chorale ................................................................. 1
MUSE - 45 Chamber Singers ....................................................... 1

Elective Units: (0-1 Units)

Total Units that may be double counted: (0 Units)
General Education (IGETC) Units: (37 Units)

Suggested Sequence:
Fall 1
MUST - 01 Music Theory I (Diatonic Harmony) ........................................... 3
MUST - 05 Aural Skills I ................................................................. 1
MUSA - 20 Applied Music ............................................................ 0.5
MUSE Performance Ensemble .......................................................... 1

Spring 1
MUST - 02 Music Theory II (Diatonic Harmony II) ...................................... 3
MUST - 06 Aural Skills II .............................................................. 1
MUSA - 20 Applied Music ............................................................ 0.5
MUSE Performance Ensemble .......................................................... 1

Fall 2
MUST - 03 Music Theory III (Chromatic Harmony) .................................... 3
MUST - 07 Aural Skills III ............................................................. 1
MUSA - 20 Applied Music ............................................................ 0.5
MUSE Performance Ensemble .......................................................... 1

Spring 2
MUST - 04 Music Theory IV (Music Theory of the 20th & 21st Centuries) ................................................................. 3
MUST - 08 Aural Skills IV ............................................................. 1
MUSA - 20 Applied Music ............................................................ 0.5
MUSE Performance Ensemble .......................................................... 1

Studio Arts, A.A.-T. (10550.AAT)
The Associate in Arts in Studio Arts degree is designed around a core education that includes the study of various media in the visual arts and art history. Upon completion, students with an AA-T in Studio Art will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student's community college area of emphasis.

The Associate in Arts in Studio Arts Transfer degree is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Studio Arts or similar major.

Program Student Learning Outcomes:
A. Demonstrate knowledge of techniques and processes involved in a variety of two and three dimensional art forms.
B. Create works of art integrating aesthetics with the elements and principles of design theory as applies to areas of interest in drawing, painting, design, printmaking, digital art, sculpture, ceramics, or mixed media.
C. Distinguish individual styles as applied to various media, historic art periods and/or cultural diversity.
D. Develop an appreciation and understanding of a wide range of historical content through the visual arts both traditional and contemporary.

For an Associate in Arts in Studio Arts for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. (the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
**Program Core: (24 Units)**

**ART - 02**  
Art History: Renaissance Through 20Th Century  
List A:

Select a minimum of 3 units

**ART - 12A**  
Sculpture: 3-D Foundations  
**ART - 15**  
Design: 2-D Foundations  
**ART - 24A**  
Drawing I

**List B:**

Select a minimum of 9 units

**ART - 12B**  
Intermediate Sculpture  
**ART - 17A**  
Introduction to Ceramics  
**ART - 17B**  
Intermediate Ceramics  
**ART - 20A**  
Introduction to Printmaking  
**ART - 20B**  
Intermediate Printmaking  
**ART - 23A**  
Introduction to Painting

**ART - 24B**  
Intermediate Drawing  
**ART - 26A**  
Introduction to Figure Drawing

**ARTD - 41A**  
Introduction to Graphic Design  
**ARTD - 41B**  
Introduction to Graphic Design

**PHOT - 10A**  
Introduction to Photography  

**Elective (CSU Transferable) Units: (2-5 Units)**

or

CSU-General Education Breadth Certification Requirements

or

Intersegmental General Education Transfer Curriculum

**General Education Units: (37-39 Units)**

**Total: (60 Units)**

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**Theatre Arts, A.A.-T. (10600.AAT)**

The Theatre curriculum is designed to meet the lower division requirements of most California State Universities offering a general major in Theatre or Drama. Students who complete an AA-T in Theatre from Merced College will be prepared for upper division course work in Theatre, Theatre Arts or Drama at a California State University.

The Associate in Arts Degree in Theatre Arts for Transfer will prepare the student for transfer as a junior-level student to selected general Theatre or Drama programs in the California State University system. In addition, it will also prepare the student for pre-professional theatre work, community theatre work, future Theatre conservatory training, and some specialized BFA programs in Performance and Technical Theatre. The student should note that the AA-T in Theatre will not always transfer to specialized BFA programs in Performance or Design in the CSU system.

**Program Requirements:**

**Program Core: (18 Units)**

**List A:**

**DRAM - 01**  
Introduction to Theater

or

**DRAM - 08**  
Theatre History: Ancient to Romanticism

**List B:**

**DRAM - 02L**  
Rehearsal and Performance Lab  
**DRAM - 12**  
Acting I

**Elective: (9 Units)**

**DRAM - 02L**  
Rehearsal and Performance Lab  
**DRAM - 13**  
Acting II  
**DRAM - 15**  
Stagecraft

**DRAM - 16**  
Introduction to Costume Design and Construction

**DRAM - 23**  
Script Analysis: Plays in Performance

**Total: (60 Units)**

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**Associate of Arts**

**Art, A.A. (10110.AA)**

The Associate in Arts Degree in Art is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA.

**Program Student Learning Outcomes**

A. Demonstrate a knowledge of the techniques and processes involved in a variety of two and three dimensional art forms.

B. Create works of art integrating aesthetics with the elements and principles of design theory as applied to areas of interest in drawing, painting, design, printmaking, digital art, sculpture, ceramics or mixed media.

C. Distinguish individual styles as applied to various media, historic art periods and/or cultural diversity.

D. Develop an appreciation and understanding of a wide range of historical content through the visual arts both traditional and contemporary.

**Program Requirements:**

**Program Core: (18 Units)**

**ART - 02**  
Art History: Renaissance Through 20Th Century  
**ART - 12A**  
Sculpture: 3-D Foundations  
**ART - 15**  
Design: 2-D Foundations  
**ART - 23A**  
Introduction to Painting  
**ART - 24A**  
Drawing I  
**ART - 26A**  
Introduction to Figure Drawing

**Plus 3 units from the following Art History courses: (3 Units)**

**ART - 01**  
Art History: Ancient Through Gothic  
**ART - 06**  
Survey of Modern Art

For an Associate in Arts in Theatre for Transfer (AA-T), students must complete the following:

1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).
PHOT - 33 The History of Photography ...................................... 3
Plus 9 units from the following courses: (9 Units)
ART - 12B Intermediate Sculpture .................................. 3
ART - 17A Introduction to Ceramics ................................. 3
ART - 17B Intermediate Ceramics .................................... 3
ART - 20A Introduction to Printmaking ..................... 3
ART - 20B Intermediate Printmaking ......................... 3
ART - 23B Intermediate Painting .................................. 3
ART - 24B Intermediate Drawing .................................. 3
ART - 26B Intermediate Figure Drawing .................. 3
ART - 29A Introduction to Watercolor Painting ............ 3
ART - 29B Intermediate Watercolor Painting ............... 3
ARTD - 40A Introduction to Digital Art ............................. 3
ARTD - 40B Intermediate Digital Art ....................... 3
ARTD - 41A Introduction to Graphic Design .................. 3
ARTD - 41B Intermediate Graphic Design ..................... 3
ARTD - 42A Introduction to Motion Graphics ............. 3
ARTD - 42B Intermediate Motion Graphics .................. 3
ARTD - 45A Animation I: Introduction to Web Design and 2D Animation .............................................. 3
ARTD - 45B Multimedia II: Intermediate Web Design and Animation .................................................. 3
ARTD - 47 Typography I: Introduction to Type Design ........ 3
PHOT - 10A Introduction to Photography .............. 3
PHOT - 11A Introduction to the Digital Camera ............... 3
Total: (30 Units)

Suggested Sequence:

Fall 1
Art History (Choice of ART 01, ART 02, ART 06) ............... 3
ART - 15 Design: 2-D Foundations ................................ 3
ART - 24A Drawing I .................................................. 3
Spring 1
Art History (Choice of ART 01, ART 02, ART 06) ............... 3
ART - 26A Introduction to Figure Drawing .................. 3
Fall 2
ART - 12A Sculpture: 3-D Foundations ..................... 3
ART - 23A Introduction to Painting .............................. 3
Spring 2
ART elective .......................................................... 3

Music, A.A. (10400.AA)
The Associate in Arts Degree in Music is available for students who meet the graduation requirements and complete the following 31-unit curriculum below, with a minimum grade of a "C" in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Perform selected exercises and compositions that reflect the standard repertoire of lower division instrumental performance courses at four year institutions.
B. Apply standard theoretical concepts in the understanding of existing compositions, the organization of musical sounds, and in the creation of original compositions.
C. Demonstrate an understanding of performance ensemble skills including blend, balance, intonation and interpretation as a part of either vocal or instrumental performance groups using a variety of musical styles.
D. Demonstrate piano proficiency.

Program Requirements:
Program Core: (31 Units)
MUSG - 10 Music Fundamentals .................................. 3
MUST - 01 Music Theory I (Diatonic Harmony) ............. 3
MUST - 02 Music Theory II (Diatonic Harmony II) ........ 3
MUST - 03 Music Theory III (Chromatic Harmony) .......... 3
MUST - 04 Music Theory IV (Music Theory of the 20th & 21st Centuries) .................................................. 3
MUST - 05 Aural Skills I ........................................... 1
MUST - 06 Aural Skills II .......................................... 1

Music Applied: (1 Unit)
MUSA - 20 Applied Music .......................................... 0.5

Music Techniques: (6 Units)
Select one pair
MUSA - 21A Voice I .................................................. 3
MUSA - 21B Voice II .................................................. 3
MUSA - 25A Guitar I .................................................. 3
MUSA - 25B Guitar II .................................................. 3

Music Ensembles: (4 Units)
Select four courses
MUSE - 41 Concert Band ........................................ 1
MUSE - 42 Jazz Ensemble .......................................... 1
MUSE - 43 Guitar Ensemble ........................................ 1
MUSE - 44 Chorale .................................................... 1
MUSE - 45 Chamber Singers ...................................... 1

Music Electives: (3 Units)
Select 3 units from the following:
MUSG - 11 Classical Music History I ......................... 3
MUSG - 12 Classical Music History II ....................... 3
MUSG - 13 Jazz Music History .................................. 3
MUSG - 14 American Popular Music History .............. 3
MUSG - 17 Introduction to Digital Music .................. 3
Total: (31 Units)

Note:
*Repeatable for credit.

Suggested Sequence:

Fall 1
MUST - 01 Music Theory I (Diatonic Harmony) ............. 3
MUST - 05 Aural Skills I ........................................... 1
MUSA Techniques Class (Level A) ................................. 3
MUSE Performance Ensemble ................................ 1
Spring 1
MUST - 02 Music Theory II (Diatonic Harmony II) ........ 3
MUST - 06 Aural Skills II .......................................... 1
MUSA Techniques Class (Level B) ................................ 3
MUSE Performance Ensemble ................................ 1
Fall 2
MUST - 03 Music Theory III (Chromatic Harmony) .......... 3
MUSG Music Elective ............................................... 0.5
MUSA - 20 Applied Music .......................................... 0.5
MUSE Performance Ensemble ................................ 1
Spring 2
MUST - 04 Music Theory IV (Music Theory of the 20th & 21st Centuries) .................................................. 3
MUSA - 20 Applied Music .......................................... 0.5
MUSE Performance Ensemble ................................ 1

Photography, A.A. (10500.AA)
The Photography program provides thorough preparation for careers and visual expression in photographic fields. The Associate in Arts degree in Photography is available for students who meet the graduation requirements and complete the 27-unit curriculum listed below, with a minimum grade of a "C" in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Demonstrate a knowledge of the techniques and processes involved in a variety of photographic art forms including traditional black and white photography, digital image captures and emerging photographic mediums.
B. Create photographic works of art integrating visuals with the elements and principles of design theory and composition.
C. Compare and contrast individual photographic styles as contextualized through their aesthetic and cultural significance.
D. Develop personal awareness and understanding of the various multicultural and philosophical patterns of traditional and contemporary photography as the medium relates to the development of art throughout history.

Program Requirements:
Program Core: (27 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART - 15</td>
<td>Design: 2-D Foundations</td>
<td>3</td>
</tr>
<tr>
<td>ARTD - 40A</td>
<td>Introduction to Digital Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTD - 40B</td>
<td>Intermediate Digital Art</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 10A</td>
<td>Introduction to Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 10B</td>
<td>Intermediate Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 11A</td>
<td>Introduction to the Digital Camera</td>
<td>3</td>
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<tr>
<td>PHOT - 35</td>
<td>Studio Careers in Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 36</td>
<td>Photo Portfolio Expressions</td>
<td>3</td>
</tr>
</tbody>
</table>

Three units of Art or Photography History: (3 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART - 06</td>
<td>Survey of Modern Art</td>
<td></td>
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<tr>
<td>PHOT - 33</td>
<td>The History of Photography</td>
<td>3</td>
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</tbody>
</table>

Plus three units from the following electives: (3 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOM - 43</td>
<td>Essentials of Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGMT - 37</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 49</td>
<td>Independent Study in Photography</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: (27 Units)

Suggested Sequence:

Semester 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PHOT - 10A</td>
<td>Introduction to Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART - 15</td>
<td>Design: 2-D Foundations</td>
<td>3</td>
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Semester 2

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<tbody>
<tr>
<td>PHOT - 11A</td>
<td>Introduction to the Digital Camera</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 10B</td>
<td>Intermediate Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 49</td>
<td>Independent Study in Photography</td>
<td>1</td>
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Semester 3

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<th>Course Title</th>
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<tbody>
<tr>
<td>PHOT - 33</td>
<td>The History of Photography</td>
<td>3</td>
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<tr>
<td>ARTD - 40A</td>
<td>Introduction to Digital Art</td>
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Semester 4

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<th>Course Code</th>
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<tbody>
<tr>
<td>PHOT - 35</td>
<td>Studio Careers in Photography</td>
<td>3</td>
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<tr>
<td>PHOT - 36</td>
<td>Photo Portfolio Expressions</td>
<td>3</td>
</tr>
<tr>
<td>ARTD - 40B</td>
<td>Intermediate Digital Art</td>
<td>3</td>
</tr>
<tr>
<td>AOM - 43</td>
<td>Essentials of Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>MGMT - 37</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>PHOT - 49</td>
<td>Independent Study in Photography</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: (27 Units)

Note: students may either enroll in PHOT 49 three times or take AOM 43 or MGMT 37 to fulfill the elective component of the degree.

Theatre Arts, A.A. (10600.AA)

For an Associate in Arts Degree in Theatre Arts is available for students who meet the graduation requirements and complete the following 30-unit curriculum below, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Demonstrate an understanding of theatre as a collaborative art form by performing or participating in a variety of theatrical genres from both contemporary and classical theatre at a level equal to junior-level peers at four-year institutions and pre-professional conservatory or certificate programs.
B. Demonstrate high artistic standards and professional responsibility with regard to acting or technical proficiency, rehearsal preparation and live performance.
C. Employ necessary skills in stage lighting design and operation, properties construction and design, and costume construction and design.
D. Differentiate diverse artistic styles, different genres, varied cultural performance histories and their origins.
E. Develop an understanding and working knowledge of how to produce a play on the stage, including an appreciation of all theatre occupations including playwriting, directing, acting, design and technical production.

Program Requirements:
Program Core: (30 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAM - 01</td>
<td>Introduction to Theater</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 02</td>
<td>Rehearsal and Performance</td>
<td>2</td>
</tr>
<tr>
<td>DRAM - 02L</td>
<td>Rehearsal and Performance Lab</td>
<td>1</td>
</tr>
<tr>
<td>DRAM - 08</td>
<td>Theatre History: Ancient to Romanticism</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 12</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 15</td>
<td>Stagecraft</td>
<td>3</td>
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<tr>
<td>DRAM - 13</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 14</td>
<td>Introduction to Costume Design and Construction</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 23</td>
<td>Script Analysis: Plays in Performance</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 08</td>
<td>Theatre History: Ancient to Romanticism</td>
<td>3</td>
</tr>
<tr>
<td>DRAM - 15</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
</tbody>
</table>

CSU-GE Breadth or IGETC Pattern: (37-39 Units)

Total: (61-63 Units)

Program Student Learning Outcomes
A. Demonstrate a knowledge of the techniques and processes involved in a variety of photographic art forms including traditional black and white photography, digital image captures and emerging photographic mediums.
B. Create photographic works of art integrating visuals with the elements and principles of design theory and composition.
C. Compare and contrast individual photographic styles as contextualized through their aesthetic and cultural significance.
D. Develop personal awareness and understanding of the various multicultural and philosophical patterns of traditional and contemporary photography as the medium relates to the development of art throughout history.

Certificate

Photography Certificate (10500.CL)

A Certificate of Achievement in Photography may be earned by completing the 28-unit curriculum listed below.

Program Student Learning Outcomes
A. Demonstrate a knowledge of the techniques and processes involved in a variety of photographic art forms including traditional black and white photography, digital image captures and emerging photographic mediums.
B. Create photographic works of art integrating visuals with the elements and principles of design theory and composition.
C. Compare and contrast individual photographic styles as contextualized through their aesthetic and cultural significance.
D. Develop personal awareness and understanding of the various multicultural and philosophical patterns of traditional and contemporary photography as the medium relates to the development of art throughout history.
Program Requirements:
Program Core: (27 Units)
ART - 15 Design: 2-D Foundations ............................. 3
ARTD - 40A Introduction to Digital Art ............................. 3
ARTD - 40B Intermediate Digital Art ............................. 3
PHOT - 10A Introduction to Photography ............................. 3
PHOT - 10B Intermediate Photography ............................. 3
PHOT - 11A Introduction to the Digital Camera ............................. 3
PHOT - 35 Studio Careers in Photography ............................. 3
PHOT - 36 Photo Portfolio Expressions ............................. 3
Three units of Art or Photography History: (3 Units)
ART - 06 Survey of Modern Art ............................. 3
PHOT - 33 The History of Photography ............................. 3
Plus three units from the following electives: (3 Units)
AOM - 43 Essentials of Business Communication ............................. 3
MGMT - 37 Small Business Entrepreneurship ............................. 3
PHOT - 49 Independent Study in Photography ............................. 1
Total: (27 Units)

Industrial Technology

Associate of Arts

Commercial Refrigeration Technician, A.A. (09401.AA)
An Associate in Arts Degree in Commercial Refrigeration Technician is available for students who meet the graduation requirements, and complete the options listed below.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or HVAC/R system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an HVAC/R equipment failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a HVAC/R system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of problems.

Program Requirements:
Program Core: (34 Units)
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) .................................................. 3
ELCT - 42A Principles and Applications of Programmable Logic Controllers .................................................. 2
ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution .................................................. 3
ELCT - 52 Introduction to Electricity and Electronics .................................................. 3
INDT - 40 Commercial Refrigeration Systems .................................................. 3
INDT - 49 Electrical Codes and Ordinances .................................................. 3
INDT - 51 HVAC -- Ventilation and Air Conditioning Systems .................................................. 6
MATH - B Applied Mathematics .................................................. 6
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .................................................. 3
WELD - 07 Fundamentals of TIG and MIG Welding .................................................. 3
Total: (34 Units)

Electronics Technician, A.A. (09250.AA)
For an Associate in Arts Degree in Electronics Technician, students must meet the general education requirements and complete the required program courses with a minimum grade of a C in each course and have a minimum grade point average of 2.0.

Program Student Learning Outcomes
A. Develop the lifelong learning skills necessary to think and to act competently in a complex, diverse, and constantly changing technological environment.
B. Differentiate between “Active” and “Passive” electronics components and analyze a basic electronic circuit with DC and/or AC voltage source.
C. Demonstrate autonomous thinking, problem-solving strategies to facilitate working effectively both, in teams and individually, to accomplish an assigned project.
D. Develop practical skills in working with electronics test equipment to be able to trouble shoot electronic circuits.

Program Requirements:
Program Core: (30-32 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting .................................................. 3
ELCT - 30 Exploring the World of Electricity and Electronics .................................................. 3
ELCT - 31 Foundations of Electronics - DC and AC Circuits .................................................. 5
ELCT - 36 Networking Topologies and Cabling .................................................. 3
ELCT - 40C Routing and Switching in the Enterprise .................................................. 3
ELCT - 40D Designing and Supporting Computer Networks .................................................. 3
ELCT - 44 Electronics Project Design, Fabrication and Repair .................................................. 3
ELCT - 51A Personal Computer Configuration, Assembly and Repair .................................................. 3
ELCT - 51B A+ Certification Training .................................................. 3
Total: (33-35 Units)

Computer & Networking Technology, A.A. (09040.AA)
For an Associate in Arts Degree in Computer and Networking Technology, students must meet the graduation requirements and complete the required program courses with a minimum grade of a C in each course and have a minimum grade point average of 2.0.

Program Student Learning Outcomes
A. Demonstrate the ability to communicate effectively in accomplishing job related tasks.
HVAC Technician, A.A. (09400.AA)
An Associate in Arts Degree in HVAC Technician is available for students who meet the graduation requirements, and complete the options listed below.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or HVAC/R system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an HVAC/R equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting an HVAC/R system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of the component failure.
E. Verify if the path of repair was correct by testing and/or completing a work order/report.
F. Demonstrate the correct usage of tools/supplies required to diagnose/repair a malfunction.

Program Requirements:
Program Core: (37 Units)
DRFT - 44 Print Reading and Sketching ..........................3
ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution .................................................3
ELCT - 52 Introduction to Electricity and Electronics ........3
INDT - 49 Electrical Codes and Ordinances ..............3
INDT - 50 HVAC → Heating and Control Systems ..........6
INDT - 51 HVAC → Ventilation and Air Conditioning Systems .6
INDT - 52 Refrigerant Usage Certification and R-410A Safety .1
INDT - 71JJ HVAC Sheet Metal I .....................................1
MATH - B Applied Mathematics ......................................5
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................3
WELD - 07 Fundamentals of TIG and MIG Welding ..........3
Total: (37 Units)

Industrial Electrical Technician, A.A. (09510.AA)
The Associate in Arts degree in Industrial Electrical Technician will be awarded upon the satisfactory completion of the required 31 units of course work listed below and students must meet the basic graduation requirements. For successful completion, a student must complete the requirements with a minimum grade of C in each course with a grade point average of 2.0 or higher.

Program Student Learning Outcomes
A. Communicate effectively in accomplishing job-related tasks.
B. Demonstrate field related entry level theoretical and practical skills.
C. Employ the principles of job related safety requirements.

Program Requirements:
Program Core: (31 Units)
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) ..............................................3
ELCT - 42A Principles and Applications of Programmable Logic Controllers ..................................................2
ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution .................................................3
ELCT - 52 Introduction to Electricity and Electronics ........3
ELCT - 53A Solar Installer Course 1 ..................................3
ELCT - 55 Electrical Conduit Bending Theory and Techniques .1
ELCT - 56 Introduction to Mechatronics ..........................4
INDT - 25 Fluid Power ...................................................3
INDT - 35 Electrical Wiring: Residential and Industrial ..........3
INDT - 41 Industrial Power Transmission ..........................3
INDT - 49 Electrical Codes and Ordinances ....................3
Completion of MCCD-GE Breadth pattern: (23 Units)
Associate Degree Breadth Requirements
Electives (as needed to reach 60 units): (6 Units)

Total: (60 Units)

Industrial Maintenance Technology, A.A. (09550.AA)
An Associate in Arts Degree in Industrial Maintenance Technology is available for students who successfully complete the graduation requirements and complete the following certificate program.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or industrial system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an industrial equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting an industrial system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of the component failure.
E. Verify if the path of repair was correct by testing and/or completing a work order/report.
F. Demonstrate the correct usage of tools/supplies required to diagnose/repair a malfunction

Program Requirements:
Program Core: (44 Units)
DRFT - 44 Print Reading and Sketching ..........................3
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) ..............................................3
ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution .................................................3
ELCT - 52 Introduction to Electricity and Electronics ........3
INDT - 10 Agricultural and Industrial Technical Skills ..........3
INDT - 25 Fluid Power ...................................................3
INDT - 32 Building Construction Concepts ........................3
INDT - 35 Electrical Wiring: Residential and Industrial ..........3
INDT - 41 Industrial Power Transmission ..........................3
INDT - 49 Electrical Codes and Ordinances ....................3
MATH - B Applied Mathematics ......................................5
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................3
WELD - 07 Fundamentals of TIG and MIG Welding ..........3
WELD - 40A Introduction Welding Design and Construction ....3
Total: (44 Units)

Suggested Sequence:
Fall 1
DRFT - 44 Print Reading and Sketching ..........................3
ELCT - 52 Introduction to Electricity and Electronics ..........3
INDT - 10 Agricultural and Industrial Technical Skills ..........3
INDT - 49 Electrical Codes and Ordinances ....................3
MATH - B Applied Mathematics ......................................5
Spring 1
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) ..............................................3
INDT - 25 Fluid Power ...................................................3
INDT - 35 Electrical Wiring: Residential and Industrial ..........3
INDT - 41 Industrial Power Transmission ..........................3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................3
Fall 2
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) ..............................................3
INDT - 32 Building Construction Concepts ........................3
WELD - 07 Fundamentals of TIG and MIG Welding ..........3
WELD - 40A Introduction Welding Design and Construction ....3
Spring 2
DRFT - 44 Print Reading and Sketching ..........................3
INDT - 10 Agricultural and Industrial Technical Skills ..........3
INDT - 35 Electrical Wiring: Residential and Industrial ..........3
MATH - B Applied Mathematics ......................................5
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................3
Instrumentation and Process Control Technology, A.A. (09650.AA)

An Associate in Arts Degree in Instrumentation and Process Control Technology will be awarded upon the completion of the required program courses with a minimum grade of C and the requirements for the general education.

Program Student Learning Outcomes
A. Demonstrate the ability to communicate effectively in accomplishing job related tasks.
B. Analyze electrical circuits for required electrical operation and required electrical codes.
C. Develop safe electrical working practices in accordance with electrical codes and OSHA requirements.

Program Requirements:
Program Core: (29-31 Units)
- ELCT - 31 Foundations of Electronics - DC and AC Circuits ..... 5
- ELCT - 52 Introduction to Electricity and Electronics .......... 3
- ELCT - 34 Digital Logic, Circuits, and Systems (Foundations of Electronics) .......................................................3
- ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) .................................................. 3
- ELCT - 42A Principles and Applications of Programmable Logic Controllers .........................................................2
- ELCT - 42B Advanced Topics in PLC Configuration and Programming .................................................................2
- ELCT - 43A Industrial Instrumentation and Process Control ..... 3
- ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution .........................................................3
- ELCT - 55 Electrical Conduit Bending Theory and Techniques .1
- ELCT - 58 Electrical Printreading for Installation and Troubleshooting .................................................................3
- INDT - 25 Fluid Power .................................................3
- INDT - 49 Electrical Codes and Ordinances ..........................3

Total: (29-31 Units)

Automotive Collision Repair, A.S. (09000.AS)
The Automotive Collision Repair Associate in Science degree will be awarded upon satisfactory completion of the full program option and graduation requirements. The student must complete the requirements with a minimum grade point of 2.0 in each course required for the degree.

Program Student Learning Outcomes
A. Develop knowledge of collision repair safety.
B. Analyze vehicle damage in order to implement appropriate repair techniques.
C. Develop collision repair skills in accordance with industry standards.
D. Demonstrate knowledge of environmental standards related to collision repair.

Program Requirements:
Program Core: (26.5-27 Units)
- AUTO - 04 Automotive Mechanics .........................................................3
- AUTO - 32 Wheel Alignment and Suspension .................................4
- AUTO - 48F Special Problems in Auto Body Repair and Painting ..... 1.5-2.0
- AUTO - 50 Auto Body Repair and Painting ......................................4
- AUTO - 51 Advanced Auto Body Repair and Refinishing ..............4
- AUTO - 63 Basic Automotive Electronics for Technicians ..........4
- AUTO - 66 Automotive Parts and Service Advising ....................3
- WELD - 07 Fundamentals of TIG and MIG Welding .................3

Total: (26.5-27 Units)

CAD Drafting, Architectural Design, A.S. (09104.AS)
The Associate in Science in CAD Drafting - Architectural Design shows that a student is familiar with advanced 3D Architectural tools, CalGreen, and building techniques. An Associate in Science in CAD Drafting - Architectural Design is available for students who meet the graduation requirements and complete the 27-unit core and 6-7 units from the electives list, with a minimum grade of “C” in each course in the degree and maintain a 2.0 GPA.
Program Student Learning Outcomes
A. Create all drawings and documentation needed to explain the design of a building.
B. Apply new building techniques as well as CalGreen codes to building design.
C. Choose the best software package to accomplish stated goals.

Program Requirements:
Program Core: (33-34 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting .......... 3
DRFT - 04B Introduction to 3D ..................................... 3
DRFT - 04C Introduction to Parametric Modeling ................. 3
DRFT - 04D Advanced Parametric Modeling ..................... 3
DRFT - 05 Technical Graphics .................................... 3
DRFT - 06 Production Methods ................................... 3
DRFT - 10 Rendering and Animation ............................ 3
DRFT - 25 Descriptive Geometry ................................ 3
DRFT - 35 Capstone Design Project .............................. 3
DRFT - 44 Print Reading and Sketching ........................... 3
plus 6 units from the following courses: (6 Units)
AOM-30 Introduction to Computer Applications ............... 3
or
CPSC - 01 Introduction to Computer Information Systems ...... 4
or
INDT - 38I Industrial Technology Computer Applications and Literacy ................................................. 3
INDT - 32 Building Construction Concepts ........................ 3
INDT - 49 Electrical Codes and Ordinances ....................... 3
GE Pattern MCCD GE Breadth: (23 Units)

Associate Degree Breadth Requirements
Electives (as needed): (3-4 Units)
Double-Counted: (0 Units)
Total: (60 Units)

Suggested Sequence:
Fall 1
DRFT - 04C Introduction to Parametric Modeling ............... 3
DRFT - 04D Advanced Parametric Modeling ..................... 3
DRFT - 04B Introduction to 3D ..................................... 3
Computers (CPSC 01 or AOM 30) ................................ 3 or 4
Spring 1
DRFT - 04A Fundamentals of Computer-Aided Drafting ........ 3
DRFT - 04B Introduction to 3D ..................................... 3
DRFT - 05 Technical Graphics .................................... 3
Fall 2
DRFT - 06 Production Methods ................................... 3
DRFT - 25 Descriptive Geometry ................................ 3
Spring 2
DRFT - 04D Advanced Parametric Modeling .................... 3
DRFT - 10 Rendering and Animation ............................ 3
DRFT - 35 Capstone Design Project .............................. 3

CAD Draftsman, Architectural, A.S. (09101.AS)
The CAD Draftsman - Architectural A.S. shows that a student knows how to effectively use 2D and 3D drafting programs. Students also are familiar with Architectural standards, and know what is required to produce a complete set of plans. An Associate in Science Degree in CAD Draftsman - Architectural is available for students who meet the graduation requirements and completing the 18-unit core and 3-4 units from the electives list, with a minimum grade of a “C” in each course in the degree, and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Create a set of plans using CAD programs.
B. Organize dimensions in a meaningful manner as required by standards.
C. Employ the newest technology related to Architectural drafting/design.

Program Requirements:
Program Core: (21 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting ........ 3
DRFT - 04B Introduction to 3D ..................................... 3
DRFT - 41 Civil Drafting ........................................ 3
DRFT - 42A Architectural Drafting - Auto Cad ................. 3
DRFT - 42B Architectural Drafting -- 3D ......................... 3
DRFT - 44 Print Reading and Sketching ........................... 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications ............... 3
CPSC - 01 Introduction to Computer Information Systems ...... 4
Total: (21 Units)

Suggested Sequence:
Fall 1
DRFT - 04A Fundamentals of Computer-Aided Drafting ........ 3
DRFT - 44 Print Reading and Sketching ........................... 3
Computers (CPSC 01 or AOM 30) ................................ 3 or 4
Spring 1
DRFT - 04B Introduction to 3D ..................................... 3
DRFT - 42A Architectural Drafting - Auto Cad ................. 3
Fall 2
DRFT - 41 Civil Drafting ........................................ 3
Spring 2
DRFT - 42B Architectural Drafting -- 3D ......................... 3
DRFT - 43 Sustainable Architecture ............................. 3

CAD Draftsman, Mechanical, A.S. (09102.AS)
The CAD Draftsman - Mechanical A.S. shows that a student knows how to effectively use 2D and 3D drafting programs. Students also are familiar with Architectural standards, and know what is required to produce a complete set of plans. Students who meet the graduation requirements and completing the 18-unit core and 3-4 units from the electives list, with a minimum grade of a “C” in each course in the degree, and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Design Mechanical Assemblies.
B. Choose the best software package to accomplish stated goals.
C. Create all the associated drawings, and documentation needed to manufacture the product.

Program Requirements:
Program Core: (33-34 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting ........ 3
DRFT - 04B Introduction to 3D ..................................... 3
DRFT - 04C Introduction to Parametric Modeling ................. 3
DRFT - 04D Advanced Parametric Modeling ..................... 3
DRFT - 05 Technical Graphics .................................... 3
DRFT - 06 Production Methods ................................... 3
DRFT - 10 Rendering and Animation ............................ 3
DRFT - 25 Descriptive Geometry ................................ 3
DRFT - 35 Capstone Design Project .............................. 3
DRFT - 44 Print Reading and Sketching ........................... 3
plus 3-4 units from the following courses: (3-4 Units)
AOM-30 Introduction to Computer Applications ............... 3
or
CPSC - 01 Introduction to Computer Information Systems ...... 4
or
INDT - 38I Industrial Technology Computer Applications and Literacy ................................................. 3
GE Pattern MCCD GE Breadth: (23 Units)
how to effectively use 2D and 3D drafting programs. Students also are familiar with ANSI standards, and know what is required to produce complete drawings. An Associates in Science Degree in CAD Draftsman - Mechanical is available for students who meet the graduation requirements and completing the 18-unit core and 3-4 units from the electives list, with a minimum grade of a "C" in each course in the degree, and maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Create a set of drawings using CAD programs.
B. Organize dimensions in a meaningful manner as required by standards
C. Employ the newest technology related to Mechanical drafting/design

Program Requirements:
Program Core: (21-22 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting .......... 3
DRFT - 04B Introduction to 3D ......................................... 3
DRFT - 04C Introduction to Parametric Modeling .............. 3
DRFT - 05 Technical Graphics ........................................ 3
DRFT - 25 Descriptive Geometry .................................... 3
DRFT - 44 Print Reading and Sketching ......................... 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications .............. 3
CPC-01 Introduction to Computer Information Systems ...... 4
Total: (21-22 Units)

Master Auto Technician, A.S. (09003.AS)
The Master in Automotive Technician Associate in Science Degree will be awarded upon satisfactory completion of the full program option and graduation requirements. The student must complete the requirements with a minimum grade point of 2.0 in each course required for the degree.

Program Student Learning Outcomes:
A. Develop safe work habits with the use of automotive service tools and equipment extending to the advanced level.
B. Inspect automotive components and systems for proper operation extending to the advanced level.
C. Collect automotive service and diagnostic information with the use of computerized tools and resources extending to advanced level systems.

Program Requirements:
Program Core: (51 Units)
AUTO - 04 Automotive Mechanics ......................................... 3
AUTO - 32 Wheel Alignment and Suspension .......................... 4
AUTO - 33 Automotive Brake Systems .................................. 4
AUTO - 36 Automotive Manual Transmissions and Drive Trains 4
AUTO - 41 Automotive Engines ........................................... 4
AUTO - 42 Automotive Electrical Systems .............................. 4
AUTO - 43 Automotive Fuel Systems ..................................... 4
AUTO - 44 Automotive Air Conditioning, Heating System, Cooling System ...................................................... 3
AUTO - 46 Automatic Transmissions ...................................... 4
AUTO - 47 Engine Performance ........................................... 2
AUTO - 55 Automotive Emissions Level 1 and 2 Training ...... 5
AUTO - 56 Advanced Diagnosis and Repair in Automotive Technology .......................................................... 2
AUTO - 66 Automotive Parts and Service Advising ................. 3
Total: (51 Units)

Certificate
Advanced Welding and Metal Fabrication Certificate (09810.CL)
A Certificate of Achievement will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes:
A. Demonstrate competencies in job safety skills and awareness of workplace hazards.
B. Follow written and oral instructions in the interpretation of simple drawings and sketches, including welding symbols and the execution of the fabrication process.
C. Set up welding related equipment in order to maintain and adjust the equipment as necessary.
D. Acquire skills and knowledge to make a successful transition to an entry-level position in the work force.
E. Demonstrate the ability to pass the workmanship tests using common welding processes.

Program Requirements:
Program Core: (19 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting .......... 3
DRFT - 04B Introduction to 3D ......................................... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .............................................. 3
WELD - 07 Fundamentals of TIG and MIG Welding ................. 3
WELD - 40A Introduction Welding Design and Construction .... 3
WELD - 40B Advanced Welding Design and Construction ...... 3
WELD - 46 Advanced Arc Welding Procedures .................... 1 **
Total: (19 Units)

Suggested Sequence:
Fall
DRFT - 04A Fundamentals of Computer-Aided Drafting .......... 3
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .............................................. 3
WELD - 07 Fundamentals of TIG and MIG Welding ................. 3
WELD - 40A Introduction Welding Design and Construction .... 3
WELD - 40B Advanced Welding Design and Construction ...... 3
WELD - 46 Advanced Arc Welding Procedures .................... 1 **
Spring
Note:
*Offered in the fall semester as a night class only. Offered in the spring semester as a day class only.

Automotive Collision Repair Certificate (09009.CL)
For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes:
A. Develop knowledge of collision repair safety.
B. Analyze vehicle damage in order to implement appropriate repair
techniques.
C. Develop collision repair skills in accordance with industry standards.
D. Demonstrate knowledge of environmental standards related to collision repair.

Program Requirements:
Program Core: (26.5-27 Units)
AUTO - 04 Automotive Mechanics ................................................. 3
AUTO - 32 Wheel Alignment and Suspension .................................. 4
AUTO - 50 Auto Body Repair and Painting .................................... 4
AUTO - 63 Basic Automotive Electronics for Technicians ................. 4
AUTO - 66 Automotive Parts and Service Advising .......................... 3
WELD - 07 Fundamentals of TIG and MIG Welding .......................... 3
Total: (26.5-27 Units)

Program Requirements:
Semester 1
AUTO - 04 Automotive Mechanics ................................................. 3
AUTO - 32 Wheel Alignment and Suspension .................................. 4
AUTO - 50 Auto Body Repair and Painting .................................... 4
AUTO - 63 Basic Automotive Electronics for Technicians ................. 4
Semester 2
AUTO - 51 Advanced Auto Body Repair and Refinishing ................. 4
WELD - 07 Fundamentals of TIG and MIG Welding .......................... 3
Semester 3
AUTO - 48F Special Problems in Auto Body Repair and Painting .... 1.5-2.0
AUTO - 66 Automotive Parts and Service Advising .......................... 3

Automotive Technology Level 1 Certificate (090010.CL)
The Automotive Technology Level 1 certificate will be awarded upon satisfactory completion of the option. The student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Develop safe work habits with the use of automotive service tools and equipment related to entry level systems.
B. Inspect automotive components and systems for proper operation at the entry level.
C. Collect automotive service and diagnostic information with the use of computerized tools and resources related to entry level automotive systems.

Program Requirements:
Program Core: (19 Units)
AUTO - 04 Automotive Mechanics ................................................. 3
AUTO - 32 Wheel Alignment and Suspension .................................. 4
AUTO - 33 Automotive Brake Systems .......................................... 4
AUTO - 42 Automotive Electrical Systems .................................... 4
AUTO - 63 Basic Automotive Electronics for Technicians ................. 4
Total: (19 Units)

Suggested Sequence:
Semester 1
AUTO - 04 Automotive Mechanics ................................................. 3
AUTO - 32 Wheel Alignment and Suspension .................................. 4
AUTO - 33 Automotive Brake Systems .......................................... 4
Semester 2
AUTO - 36 Automotive Manual Transmissions and Drive Trains .... 4
AUTO - 41 Automotive Engines .................................................. 4
AUTO - 43 Automotive Fuel Systems ........................................... 4
AUTO - 46 Automatic Transmissions ............................................ 4

Automotive Technology Level 2 Certificate (09002.CT)
For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes:
A. Develop safe work habits with the use of automotive service tools and equipment extending to the intermediate level systems.
B. Inspect automotive components and systems for proper operation extending to the intermediate level.
C. Collect automotive service and diagnostic information with the use of computerized tools and resources extending to intermediate level systems.

Program Requirements:
Program Core: (35 Units)
AUTO - 04 Automotive Mechanics ................................................. 3
AUTO - 32 Wheel Alignment and Suspension .................................. 4
AUTO - 33 Automotive Brake Systems .......................................... 4
AUTO - 36 Automotive Manual Transmissions and Drive Trains .... 4
AUTO - 41 Automotive Engines .................................................. 4
AUTO - 43 Automotive Fuel Systems ........................................... 4
AUTO - 46 Automatic Transmissions ............................................ 4

CAD Drafting, Architectural Design Certificate
(09104.CT)
The CAD Drafting - Architectural Design Certificate shows that a student is familiar with advanced 3D Architectural tools, CalGreen, and building techniques. A Certificate of Achievement in CAD Drafting - Architectural Design is available upon successful completion of the 27-unit core and 6-7 units from the electives list.

Program Student Learning Outcomes
A. Create all drawings and documentation needed to explain the design of a building.
B. Apply new building techniques as well as CalGreen codes to building design.
C. Choose the best software package to accomplish stated goals.

Program Requirements:
Program Core: (33-34 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting .................. 3
DRFT - 04B Introduction to 3D ..................................................... 3
DRFT - 10 Rendering and Animation ........................................... 3
DRFT - 35 Capstone Design Project ............................................ 3
DRFT - 41 Civil Drafting ............................................................. 3
DRFT - 42A Architectural Drafting - Auto Cad ............................ 3
DRFT - 42B Architectural Drafting -- 3D .................................... 3
DRFT - 43 Sustainable Architecture ........................................... 3
DRFT - 44 Print Reading and Sketching ...................................... 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications .......................... 3
CPSC - 01 Introduction to Computer Information Systems ............. 4
plus 3 units from the following courses:
INDT - 32 Building Construction Concepts ................................ 3
INDT - 49 Electrical Codes and Ordinances ............................... 3
Total: (33-34 Units)
CAD Drafting, Mechanical Design Certificate (09105.CT)
The CAD Drafting - Mechanical Design Certificate shows that a student is familiar with advanced 3D modeling tools, production methods, and product design concepts. A Certificate of Achievement in CAD Drafting - Mechanical Design is available upon successful completion of the 30-unit core and 3-4 units from the electives list.

Program Student Learning Outcomes
A. Design Mechanical Assemblies.
B. Choose the best software package to accomplish stated goals.
C. Create all the associated drawings, and documentation needed to manufacture the product.

Program Requirements:
Program Core: (33-34 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 04B Introduction to 3D 3
DRFT - 04C Introduction to Parametric Modeling 3
DRFT - 04D Advanced Parametric Modeling 3
DRFT - 05 Technical Graphics 3
DRFT - 06 Production Methods 3
DRFT - 10 Rendering and Animation 3
DRFT - 25 Descriptive Geometry 3
DRFT - 35 Capstone Design Project 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications 3
CPSC - 01 Introduction to Computer Information Systems 4
Total: (33-34 Units)

Suggested Sequence:
Fall 1
DRFT - 04C Introduction to Parametric Modeling 3
DRFT - 44 Print Reading and Sketching 3
Computers (CPSC 01 or AOM 30) 3 or 4
Spring 1
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 04B Introduction to 3D 3
Fall 2
DRFT - 06 Production Methods 3
DRFT - 25 Descriptive Geometry 3
Spring 2
DRFT - 04D Advanced Parametric Modeling 3
DRFT - 10 Rendering and Animation 3
DRFT - 35 Capstone Design Project 3

CAD Draftsman, Architectural Certificate (09101.CL)
The CAD Draftsman - Architectural Certificate shows that a student knows how to effectively use 2D and 3D drafting programs. Students also are familiar with ANSI standards, and know what is required to produce complete drawings. A Certificate of Achievement in CAD Draftsman - Architectural is available upon successful completion of the 18-unit core and 3-4 units from the electives list.

Program Student Learning Outcomes
A. Create a set of drawings using CAD programs.
B. Organize dimensions in a meaningful manner as required by standards.
C. Employ the newest technology related to Architectural drafting/design.

Program Requirements:
Program Core: (21-22 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 04B Introduction to 3D 3
DRFT - 04C Introduction to Parametric Modeling 3
DRFT - 05 Technical Graphics 3
DRFT - 25 Descriptive Geometry 3
DRFT - 44 Print Reading and Sketching 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications 3
CPSC - 01 Introduction to Computer Information Systems 4
Total: (21-22 Units)

Suggested Sequence:
Fall 1
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 44 Print Reading and Sketching 3
Computers (CPSC 01 or AOM 30) 3 or 4
Spring 1
DRFT - 04B Introduction to 3D 3
Fall 2
DRFT - 41 Civil Drafting 3
DRFT - 42B Architectural Drafting -- 3D 3
DRFT - 43 Sustainable Architecture 3
Spring 2
DRFT - 10 Rendering and Animation 3
DRFT - 35 Capstone Design Project 3

CAD Draftsman, Mechanical Certificate (09102.CL)
The CAD Draftsman - Mechanical Certificate shows that a student knows how to effectively use 2D and 3D drafting programs. Students also are familiar with ANSI standards, and know what is required to produce complete drawings. A Certificate of Achievement in CAD Draftsman - Mechanical is available upon successful completion of the 18-unit core and 3-4 units from the electives list.

Program Student Learning Outcomes
A. Create a set of drawings using CAD programs.
B. Organize dimensions in a meaningful manner as required by standards.
C. Employ the newest technology related to Mechanical drafting/design.

Program Requirements:
Program Core: (21-22 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 04B Introduction to 3D 3
DRFT - 04C Introduction to Parametric Modeling 3
DRFT - 05 Technical Graphics 3
DRFT - 25 Descriptive Geometry 3
DRFT - 44 Print Reading and Sketching 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications 3
CPSC - 01 Introduction to Computer Information Systems 4
Total: (21-22 Units)

Suggested Sequence:
Fall 1
DRFT - 04A Fundamentals of Computer-Aided Drafting 3
DRFT - 44 Print Reading and Sketching 3
Computers (CPSC 01 or AOM 30) 3 or 4
Spring 1
DRFT - 04B Introduction to 3D 3
Fall 2
DRFT - 41 Civil Drafting 3
DRFT - 42B Architectural Drafting -- 3D 3
DRFT - 43 Sustainable Architecture 3
Spring 2
DRFT - 10 Rendering and Animation 3
DRFT - 35 Capstone Design Project 3

CAD Operator Certificate (09103.CB)
The CAD Operator Certificate shows that a student is familiar with 2D, and basic 3D CAD programs. Students who complete this certificate are able
to use AutoCAD and SketchUp to create 2D drawings and 3D models, they are also familiar with ways to modify AutoCAD to suit their drawing style, and increase productivity. A Certificate of Achievement in CAD Operator is available upon successful completion of the 9-unit core and 3-4 units from the electives list.

Program Student Learning Outcomes
A. Plan and Implement changes to the AutoCAD Interface.
B. Create 3D models effectively using AutoCAD, and SketchUp.
C. Use of Computers effectively for industrial applications.

Program Requirements:
Program Core: (27-28 Units)
AOM-30 Introduction to Computer Applications .............................. 3
DRFT - 04A Fundamentals of Computer-Aided Drafting ................. 3
DRFT - 04B Introduction to 3D .................................................... 3
DRFT-48B course inactivated effective Summer 2016 ................... 3
plus 3 units from the following courses:
AOM-30 Introduction to Computer Applications ........................... 3
CPSC - 01 Introduction to Computer Information Systems .......... 4
Total: (27-28 Units)

Commercial Refrigeration Technician Certificate
(09401.CT)
A Certificate of Achievement will be awarded upon successful completion of the full certificate options listed below. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or HVAC/R system for the course instruction based on industry standards.
B. Analyze a scenario based upon an HVAC/R equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a HVAC/R system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of

Program Requirements:
Program Core: (34 Units)
ELCT - 41 Industrial Motor and Equipment Control (Applications of Electronics) .................................................. 3
ELCT - 42A Principles and Applications of Programmable Logic Controllers ...................................................... 2
ELCT - 47 Electrical Motors, Generators, Transformers, and AC Distribution ......................................................... 3
ELCT - 52 Introduction to Electricity and Electronics ....................... 3
INDT - 40 Commercial Refrigeration Systems ............................... 3
INDT - 49 Electrical Codes and Ordinances ................................ 3
INDT - 51 HVAC -- Ventilation and Air Conditioning Systems ... 6
MATH - B Applied Mathematics .................................................. 5
WELD - 06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .................................................. 3
WELD - 07 Fundamentals of TIG and MIG Welding ....................... 3
Total: (34 Units)

Computer and Networking Technology Certificate
(09040.CT)
A Certificate of Achievement in Computer and Networking Technology, may be earned by the successful completion of the options listed below. A student must complete the required program courses with a minimum grade of a C in each course and have a minimum grade point average of 2.0.

Program Student Learning Outcomes
A. Demonstrate the ability to communicate effectively in accomplishing job related tasks.
B. Demonstrate field related entry level theoretical and practical skills.
C. Employ the principles of job related safety requirements.

Program Requirements:
Program Core: (33-35 Units)
AOM-30 Introduction to Computer Applications ............................. 3
CPSC - 40A Networking for Home and Small Businesses .............. 3
or
ELCT - 40A Networking for Home and Small Businesses .............. 3
CPSC - 40B Working at a Small-To-Medium Business or ISP ........ 3
or
ELCT - 40B Working At A Small-To-Medium Business or ISP ....... 3
ELCT - 30 Exploring the World of Electricity and Electronics ....... 3
or
ELCT - 31 Foundations of Electronics - DC and AC Circuits ......... 5
ELCT - 34 Digital Logic, Circuits, and Systems (Foundations of Electronics) ......................................................... 3
ELCT - 36 Networking Topologies and Cabling .......................... 3
ELCT - 40C Routing and Switching in the Enterprise ................... 3
ELCT - 40D Designing and Supporting Computer Networks ......... 3
ELCT - 44 Electronics Project Design, Fabrication and Repair .... 3
ELCT - 51A Personal Computer Configuration, Assembly and Repair ................................................................. 3
ELCT - 51B A+ Certification Training ......................................... 3
Total: (33-35 Units)

Suggested Sequence: (33-35 Units)
Fall Semester
ELCT - 30 Exploring the World of Electricity and Electronics ....... 3
or
ELCT - 31 Foundations of Electronics - DC and AC Circuits ......... 5
ELCT - 40A Networking for Home and Small Businesses .............. 3
ELCT - 40B Working at a Small-To-Medium Business or ISP ....... 3
ELCT - 44 Electronics Project Design, Fabrication and Repair .... 3
ELCT - 51A Personal Computer Configuration, Assembly and Repair ................................................................. 3
ELCT - 51B A+ Certification Training ......................................... 3
Total: (33-35 Units)

Spring Semester
ELCT - 34 Digital Logic, Circuits, and Systems (Foundations of Electronics) ......................................................... 3
ELCT - 36 Networking Topologies and Cabling .......................... 3
ELCT - 40C Routing and Switching in the Enterprise ................... 3
ELCT - 40D Designing and Supporting Computer Networks ......... 3
ELCT - 51B A+ Certification Training ......................................... 3
Total: (33-35 Units)

Electronics Technician Certificate (09250.CT)
A Certificate of Achievement in Electronics Technician will be awarded upon the satisfactory completion of the required program courses. Student must complete the required program courses with a minimum grade of a C in each course and have a minimum grade point average of 2.0.

Program Student Learning Outcomes
A. Develop the lifelong learning skills necessary to think and to act competently in a complex, diverse, and constantly changing technologies.
B. Differentiate between “Active” and “Passive” electronics components and analyze a basic electronic circuit with DC and/or AC voltage source.
C. Demonstrate autonomous thinking, problem-solving strategies to facilitate working effectively both, in teams and individually, to accomplish an assigned project.
D. Develop practical skills in working with electronics test equipment to be able to troubleshoot electronic circuits.

Program Requirements:
Program Core: (30-32 Units)
DRFT - 04A Fundamentals of Computer-Aided Drafting ............... 3
ELCT - 30  Exploring the World of Electricity and Electronics ..... 3
or
ELCT - 31  Foundations of Electronics - DC and AC Circuits ..... 5
ELCT - 32  Fundamentals of Analog Electronics ....................... 5
ELCT - 34  Digital Logic, Circuits, and Systems (Foundations of Electronics) ...................................................... 3
ELCT - 35  Microcontrollers and Programming With Robotics Applications ........................................... 4
ELCT - 36  Networking Topologies and Cabling ......................... 3
ELCT - 43A  Industrial Instrumentation and Process Control ..... 3
ELCT - 44  Electronics Project Design, Fabrication and Repair . 3
ELCT - 51A  Personal Computer Configuration, Assembly and Repair ......................................................... 3
Total: (30-32 Units)

Entry Level Welding Certificate (09780.CE)
A Certificate of Proficiency will be awarded upon successful completion of the required courses listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Demonstrate competencies in job safety skills and awareness of workplace hazards.
B. Follow written and oral instructions in the interpretation of simple drawings and sketches, including welding symbols and the execution of the fabrication process.
C. Set up in order to maintain and adjust welding related equipment.
D. Acquire skills and knowledge to make a successful transition to an entry-level position in the workforce.
E. Demonstrate the ability to pass the workmanship tests using common welding processes.

Program Requirements:
Program Core: (16 Units)
DRFT - 44  Print Reading and Sketching .......................... 3
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................... 3
WELD - 07  Fundamentals of TIG and MIG Welding .......... 3
WELD - 40A  Introduction Welding Design and Construction ... 3
WELD - 40B  Advanced Welding Design and Construction ...... 3
WELD - 46  Advanced Arc Welding Procedures ...................... 1
Total: (16 Units)

Suggested Sequence:
Core:
DRFT - 44  Print Reading and Sketching .......................... 3
MATH - 85  Career Technical Education Math ................. 3
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................... 3
WELD - 07  Fundamentals of TIG and MIG Welding .......... 3
WELD - 40A  Introduction Welding Design and Construction ... 3
WELD - 40B  Advanced Welding Design and Construction ...... 3
WELD - 46  Advanced Arc Welding Procedures ...................... 1

HVAC Technician Certificate (09400.CT)
A Certificate of Achievement will be awarded upon successful completion of the full certificate options listed below. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Explain the basic theory of the subject matter or HVAC/R system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an HVAC/R equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting a HVAC/R system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of the component failure.
E. Verify if the path of repair was correct by testing and/or completing a work order/report.
F. Demonstrate the correct usage of tools/supplies required to diagnose/repair a malfunction.

Program Requirements:
Program Core: (37 Units)
DRFT - 44  Print Reading and Sketching .......................... 3
ELCT - 47  Electrical Motors, Generators, Transformers, and AC Distribution ................................................... 3
ELCT - 52  Introduction to Electricity and Electronics .......... 3
INDT - 49  Electrical Codes and Ordinances ..................... 3
INDT - 50  HVAC -- Heating and Control Systems ............ 6
INDT - 51  HVAC -- Ventilation and Air Conditioning Systems .. 6
INDT - 52  Refrigerant Usage Certification and R-410A Safety . 1
INDT - 71JJ  HVAC Sheet Metal I ................................ 1
MATH - B  Applied Mathematics ..................................... 5
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ........................................... 3
WELD - 07  Fundamentals of TIG and MIG Welding .......... 3
Total: (37 Units)

Industrial Electrical Technician Certificate (09510.CT)
A Certificate of Achievement in Industrial Electrical Technician will be awarded upon the satisfactory completion of the required 31 units of course work listed below. For successful completion, a student must complete the requirements with a minimum grade of a C in each course with a grade point average of 2.0 or higher.

Program Student Learning Outcomes
A. Communicate effectively in accomplishing job-related tasks.
B. Demonstrate field related entry level theoretical and practical skills.
C. Employ the principles of job-related safety requirements.

Program Requirements:
Program Core: (31 Units)
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) .................................................. 3
ELCT - 42A  Principles and Applications of Programmable Logic Controllers .................................................... 2
ELCT - 47  Electrical Motors, Generators, Transformers, and AC Distribution ................................................... 3
ELCT - 52  Introduction to Electricity and Electronics .......... 3
ELCT - 53A  Solar Installer Course 1 ................................. 3
ELCT - 55  Electrical Conduit Bending Theory and Techniques . 1
ELCT - 56  Introduction to Mechatronics ......................... 4
INDT - 25  Fluid Power ........................................... 3
INDT - 35  Electrical Wiring: Residential and Industrial ....... 3
INDT - 41  Industrial Power Transmission ......................... 3
INDT - 49  Electrical Codes and Ordinances ..................... 3
Total: (31 Units)

Suggested Sequence: (31 Units)
Fall Semester classes
INDT - 25  Fluid Power ........................................... 3
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) .................................................. 3
ELCT - 42A  Principles and Applications of Programmable Logic Controllers .................................................... 2
ELCT - 47  Electrical Motors, Generators, Transformers, and AC Distribution ................................................... 3
INDT - 49  Electrical Codes and Ordinances ..................... 3
ELCT - 52  Introduction to Electricity and Electronics .......... 3
ELCT - 55  Electrical Conduit Bending Theory and Techniques . 1
Spring Semester classes
ELCT - 53A  Solar Installer Course 1 ................................. 3
ELCT - 56  Introduction to Mechatronics ......................... 4
MERCED COLLEGE

INDT - 35  Electrical Wiring: Residential and Industrial .......... 3
INDT - 41  Industrial Power Transmission ............................ 3
Total: (31 Units)

Industrial Maintenance Technology Certificate
(09550.CT)
A Certificate of Achievement will be awarded upon successful completion of the full certificate listed below. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes:
A. Explain the basic theory of the subject matter or industrial system for the course of instruction based on industry standards.
B. Analyze a scenario based upon an industrial equipment system failure/problem/complaint.
C. Employ a systematic approach to troubleshooting an industrial system malfunction and prepare an effective repair solution.
D. Analyze component failures to determine the root cause of the component failure.
E. Verify if the path of repair was correct by testing and/or completing a work order/report.
F. Demonstrate the correct usage of tools/supplies required to diagnose/repair a malfunction

Program Requirements:
Program Core: (44 Units)
DRFT - 44  Print Reading and Sketching .......................... 3
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) ............................................. 3
ELCT - 47  Electrical Motors, Generators, Transformers, and AC Distribution .................................................... 3
ELCT - 52  Introduction to Electricity and Electronics ............. 3
INDT - 10  Agricultural and Industrial Technical Skills .............. 3
INDT - 25  Fluid Power ................................................. 3
INDT - 32  Building Construction Concepts .......................... 3
INDT - 35  Electrical Wiring .......................................... 3
INDT - 41  Industrial Power Transmission ............................ 3
INDT - 49  Electrical Codes and Ordinances ......................... 3
MATH - B  Applied Mathematics ..................................... 5
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .............................................. 3
WELD - 07  Fundamentals of TIG and MIG Welding ................. 3
WELD - 40A  Introduction Welding Design and Construction .... 3
Total: (44 Units)

Suggested Sequence:
Fall 1
DRFT - 44  Print Reading and Sketching .......................... 3
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) ............................................. 3
INDT - 10  Agricultural and Industrial Technical Skills .............. 3
INDT - 49  Electrical Codes and Ordinances ......................... 3
MATH - B  Applied Mathematics ..................................... 5
Spring 1
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) ............................................. 3
INDT - 25  Fluid Power ................................................. 3
INDT - 35  Electrical Wiring: Residential and Industrial .......... 3
INDT - 41  Industrial Power Transmission ............................ 3
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .............................................. 3
Fall 2
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) ............................................. 3
INDT - 32  Building Construction Concepts .......................... 3
WELD - 07  Fundamentals of TIG and MIG Welding ................. 3
WELD - 40A  Introduction Welding Design and Construction .... 3
Spring 2
DRFT - 44  Print Reading and Sketching .......................... 3

INDT - 10  Agricultural and Industrial Technical Skills .......... 3
INDT - 35  Electrical Wiring: Residential and Industrial ........ 3
MATH - B  Applied Mathematics ..................................... 5
WELD - 06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .............................................. 3

Instrumentation and Process Control Technology Certificate
(09650.CT)
A Certificate of Achievement in Instrumentation Process Control Technology will be awarded upon the satisfactory completion of the course work listed below. For successful completion, a student must complete the requirements with a minimum grade of C in each course required for the certificate.

Program Student Learning Outcomes:
A. Demonstrate the ability to communicate effectively in accomplishing job related tasks.
B. Analyze electrical circuits for required electrical operation and required electrical codes.
C. Develop safe electrical working practices in accordance with electrical codes and OSHA requirements.

Program Requirements:
Program Core: (29-31 Units)
ELCT - 31  Introduction to Electricity and Electronics .......... 3
ELCT - 34  Digital Logic, Circuits, and Systems (Foundations of Electronics) .................................................... 3
ELCT - 41  Industrial Motor and Equipment Control (Applications of Electronics) ............................................. 3
ELCT - 42A  Principles and Applications of Programmable Logic Controllers ..................................................... 2
ELCT - 42B  Advanced Topics in PLC Configuration and Programming .............................................................. 2
ELCT - 43A  Industrial Instrumentation and Process Control .... 3
ELCT - 47  Electrical Motors, Generators, Transformers, and AC Distribution .................................................... 3
ELCT - 55  Electrical Conduit Bending Theory and Techniques . 1
ELCT - 58  Electrical Printreading for Installation and Troubleshooting ............................................................. 3
INDT - 25  Fluid Power ................................................. 3
INDT - 49  Electrical Codes and Ordinances ......................... 3
Total: (29-31 Units)

Master Auto Technician Certificate
(09008.CT)
The Master in Automotive Technician Certificate of Achievement will be awarded upon satisfactory completion of the full program option. The student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

Program Student Learning Outcomes:
A. Develop safe work habits with the use of automotive service tools and equipment extending to the advanced level.
B. Inspect automotive components and systems for proper operation extending to the advanced level.
C. Collect automotive service and diagnostic information with the use of computerized tools and resources extending to advanced level systems.

Program Requirements:
Program Core: (51 Units)
AUTO - 04  Automotive Mechanics .................................. 3
AUTO - 32  Wheel Alignment and Suspension ...................... 4
AUTO - 33  Automotive Brake Systems .............................. 4
AUTO - 36  Automotive Manual Transmissions and Drive Trains 4
AUTO - 41  Automotive Engines ..................................... 4
Physical Fitness

Athletics

Associate of Arts for Transfer

Kinesiology, A.A.-T. (12400.AAT)

The Associate in Arts in Kinesiology for Transfer degree (AA-T) is designed for students who are planning on transferring to a California State University (CSU). Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the CSU system. Students will be given priority consideration when applying to a particular program that is similar to the student's community college area of emphasis.

Program Student Learning Outcomes:

A. Develop an integrated kinesiological approach to encourage the adoption of healthy and physically active lifestyles, across diverse populations.

B. Relate personal development, such as positive self-esteem, selfresponsibility, leadership, decision-making, cooperation, selfreflection and empowerment during physical activity.

C. Identify and analyze the fundamental concepts and scientific foundations of kinesiology.

Program Requirements:

Program Core: (20-23 Units)

- BIOL - 16 General Human Anatomy .......................... 4
- BIOL - 18 Principles of Physiology .......................... 4
- KINE - 01 Introduction to Kinesiology .......................... 3

Movement Based Courses: (minimum 3)

Select courses from any three (3) of the following areas for a minimum of three (3) units.

Area 1: Aquatics

- KINE - 20 Aqua Aerobics ........................................ 1
- KINE - 24A Beginning Swimming .......................... 1
- KINE - 24B Techniques and Stroke Development for Swimming 1
- KINE - 24C Swimming for Fitness .......................... 1

Area 4: Fitness:

- KINE - 31 Aerobic Training ........................................ 1
- KINE - 32 Circuit Weight Training .......................... 1
- KINE - 33 Weight Training ........................................ 1
- KINE - 35 Flexibility and Cardiovascular Fitness .............. 2

Area 5: Individual Sports

- KINE - 41 Tennis ........................................ 1
- KINE - 42 Golf ........................................ 1

Area 6: Team Sports

- KINE - 13 Beginning Basketball ................................ 1
- KINE - 14 Beginning Volleyball ................................ 1
- KINE - 16 Football-Offensive Development .................. 1
- KINE - 15 Softball ........................................ 1

List A: (minimum 6)

Select two courses (minimum 6 units) from the following courses

MATH - 10 Elementary Statistics .................................. 3

or

PSYC - 05 Introduction to Statistics in Psychology .............. 3

BIOL - 02 Human Biology ........................................ 4

Kinesiology, Health &
Associate of Arts

Physical Education, A.A. (08500.AA)

For an Associate in Arts Degree in Physical Education, students should meet the graduation requirements and complete the 20-unit curriculum listed below.

Program Requirements:
Program Core: (20 Units)

KINE - 02 First Aid and CPR for the Professional Rescuer .... 3
KINE - 03 Introduction to Athletic Training ......................... 3
KINE - 36 Walking for Fitness ...................................... 1
KINE - 41 Tennis .................................................... 1
KINE - 15 Softball .................................................. 1
PHED - 20 Introduction to Physical Education and Exercise Science .................................................. 3
RECR - 30 Introduction to Community Recreation .................... 3

Plus at least three units from the following:
ATHL - 03 Athletic Conditioning ........................................... 5-2
HLTH - 15 Drugs, Alcohol, and Tobacco .............................. 3

Total: (20 Units)

Associate of Science for Transfer

Administration of Justice, A.S.-T. (21075.AST)

The Associate in Science in Administration of Justice for Transfer degree is designed for students planning on transferring to a California State University. Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

For an Associate in Science in Administration of Justice for Transfer (AST), students must complete 60 semester units that are eligible for transfer to the California State University with a minimum grade point average of 2.0, including both of the following:
1. Certification of the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.
2. A minimum of 18 semester units from the list below with a 2.0 grade point in each class.

Important note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Career Opportunities in CRIMINOLOGY
This degree is designed for students who plan to transfer to a four year college or university, but also prepares students for careers in a variety of fields that require an understanding of criminal justice.

Advanced degree or professional certificate such as a baccalaureate degree will prepare students for careers in administration of justice such as police officers, sheriff’s deputies, communications specialists, crime scene specialists, private security, criminologist, and researcher.

Program Student Learning Outcomes
A. Demonstrate an understanding of the fundamental principles, laws, processes, and individual constitutional rights related to the judicial system in the United States and potential conflict between diverse communities that are created.
B. Identify and communicate criminal justice concepts and principals effectively verbally and in writing.
C. Compare and evaluate diverse and competing arguments currently and historically in the justice system and interfacing components.
D. Analyze critically the social, political, economic, and cultural context within the criminal justice system functions and the responsibilities of the agencies and individual practitioners with multicultural communities.

Program Requirements:
Program Core: (18 Units)
CRIM - 02 Introduction to Criminal Justice ............................ 3
CRIM - 04 Criminal Law ............................................. 3

LIST A (6 Units)
Select two courses from List A
CRIM - 03 Criminal Procedures ......................................... 3
CRIM - 05 Community and Human Relations .......................... 3
CRIM - 06 Introduction to Evidence ..................................... 3
CRIM - 08 Introduction to Investigation ................................. 3
CRIM - 11 Introduction to Corrections .................................. 3
CRIM - 30 Juvenile Procedures .......................................... 3

LIST B (6 Units)
Select two courses from List B
MATH - 10 Elementary Statistics ........................................ 3
PSYC - 01A Introduction to Psychology ............................... 3
SOC - 01 Introduction to Sociology .................................... 3

Additional courses toward CSU Breadth or IGETC certification and transferable electives (42 Units)

CSU-General Education Breadth Certification Requirements

Suggested Sequence:
Fall 1 and Fall 2
Core:
CRIM - 02 Introduction to Criminal Justice ............................ 3
or
CRIM - 02 Introduction to Criminal Justice ............................ 3 (Short term)
CRIM - 04 Criminal Law ............................................. 3 (Short term)

LIST A (6 Units)
Select two courses from List A
CRIM - 03 Criminal Procedures ......................................... 3
CRIM - 05 Community and Human Relations .......................... 3
CRIM - 06 Introduction to Evidence ..................................... 3
CRIM - 08 Introduction to Investigation ................................. 3
CRIM - 11 Introduction to Corrections .................................. 3
CRIM - 30 Juvenile Procedures .......................................... 3

LIST B (6 Units)
Select two courses from List B
MATH - 10 Elementary Statistics ........................................ 3
PSYC - 01A Introduction to Psychology ............................... 3
SOC - 01 Introduction to Sociology .................................... 3

Spring 1 and Spring 2
CRIM - 02 Introduction to Criminal Justice ............................ 3
CRIM - 04 Criminal Law ............................................. 3

LIST A (6 Units)
Select two courses from List A
CRIM - 03 Criminal Procedures ......................................... 3
CRIM - 05 Community and Human Relations .......................... 3
CRIM - 06 Introduction to Evidence ............................................ 3
CRIM - 08 Introduction to Investigation ........................................ 3
CRIM - 11 Introduction to Corrections .......................................... 3
CRIM - 30 Juvenile Procedures .................................................... 3

LIST B (6 Units)

Select two courses from List B

MATH - 10 Elementary Statistics .............................................. 3
PSYC - 01A Introduction to Psychology ...................................... 3
SOC - 01 Introduction to Sociology ............................................ 3

Associate of Arts

Criminal Justice, A.A. (21150.AA)

For an Associate in Arts Degree in Criminal Justice, students must complete the graduation requirements and the 24-unit curriculum listed below. These courses must be in addition to the basic graduation requirements, and a 2.0 GPA or higher must be earned in each class.

Program Student Learning Outcomes

A. Demonstrate at the entry level an understanding of the fundamental principles, laws, and processes related to the American judicial system and individual constitutional rights.
B. Demonstrate at the entry level effective written, verbal, and nonverbal communication skills.
C. Demonstrate at the entry level critical thinking skills, the ability methods using critical thinking skills, the ability to analyze and solve problems using logical and creative methods.
D. Recognize at the entry level the social, political, economic, and cultural context within the criminal justice system and responsibilities to the community.

Program Requirements:

Program Core: (24 Units)

CRIM - 02 Introduction to Criminal Justice ................................... 3
CRIM - 03 Criminal Procedures .................................................. 3
CRIM - 04 Criminal Law ............................................................ 3
CRIM - 05 Community and Human Relations .............................. 3
CRIM - 06 Introduction to Evidence ............................................ 3
CRIM - 10 Writing for Criminal Justice ....................................... 3
CRIM - 37 Communication and Ethics in Law Enforcement ............ 3

Plus three units from the following electives: (3 Units)

CRIM - 01 Criminology ............................................................. 3
CRIM - 08 Introduction to Investigation ....................................... 3
CRIM - 33 Violence in the Family ............................................... 3
CRIM - 35 Narcotics ................................................................. 3
CRIM - 42D Reserve Officer Module Level 2 ............................... 10
CRIM - 51 Probation and Parole .................................................. 3

Total: (24 Units)

Suggested Sequence:

Fall 1
FIRE - 30 Fire Protection Organization ........................................ 3
EMER - 50A Emergency Medical Technician 1, Module A ............ 2.5
EMER - 50B Emergency Medical Technician 1, Module B ............ 4.5

Fall 2
FIRE - 31 Fire Behavior and Combustion ................................... 3
FIRE - 32 Fire Prevention Technology ........................................ 3
FIRE - 33 Building Construction for Fire Protection ....................... 3
FIRE - 40 Principles of Fire and Emergency Services Safety and Survival .............................................. 3

Suggested Sequence:

Fall 1
FIRE - 30 Fire Protection Organization ........................................ 3
EMER - 50A Emergency Medical Technician 1, Module A ............ 2.5
EMER - 50B Emergency Medical Technician 1, Module B ............ 4.5

Fall 2
FIRE - 31 Fire Behavior and Combustion ................................... 3
FIRE - 32 Fire Prevention Technology ........................................ 3
FIRE - 33 Fire Protection Equipment and Systems ....................... 3

Associate of Science

Fire Technology, A.S. (21400.AS)

For an Associate in Science in Fire Technology, students must meet the graduation requirements and complete the following required courses with a 2.0 GPA or higher in each class. The core must be completed for this degree.

Program Student Learning Outcomes

A. Describe the principles of fire behavior, prevention, and emergency response.
B. Evaluate emergency response information in order to relate it to appropriate tasks.
C. Describe the proper medical, legal, and ethical treatment of patients and victims.

Program Requirements:

Program Core: (25 Units)

FIRE - 30 Fire Protection Organization ........................................ 3
FIRE - 31 Fire Behavior and Combustion ................................... 3
FIRE - 32 Fire Prevention Technology ........................................ 3
FIRE - 33 Fire Protection Equipment and Systems ....................... 3
FIRE - 34 Building Construction for Fire Protection ....................... 3
FIRE - 40 Principles of Fire and Emergency Services Safety and Survival .............................................. 3

Associate Degree Breadth Requirements

Electives (as needed) (CSU transferrable): (12 Units)
Double-Counted: (0 Units)

Total: (60 Units)

Suggested Sequence:

Fall 1
FIRE - 30 Fire Protection Organization ........................................ 3
EMER - 50A Emergency Medical Technician 1, Module A ............ 2.5
EMER - 50B Emergency Medical Technician 1, Module B ............ 4.5

Fall 2
FIRE - 31 Fire Behavior and Combustion ................................... 3
FIRE - 32 Fire Prevention Technology ........................................ 3
FIRE - 33 Fire Protection Equipment and Systems ....................... 3

• Programs by School • 103
California Fire Service Certificate
Students must complete the courses listed in the following categories in order to meet NFPA Professional Standards for California Fire Service Certification. Additionally, students must fulfill state-mandated employment time requirements for each classification.

Program Student Learning Outcomes
A. Demonstrate effective written communication skills.
B. Demonstrate effective verbal and nonverbal communication skills.
C. At a basic level apply the principles of fire technology.
D. Demonstrate an appreciation of lifelong learning.
E. Demonstrate the ability to evaluate and adhere to ethics and compassionate treatment of patients and victims.
F. At a basic level demonstrate the ability to evaluate information and incorporate it into appropriate tasks.
G. At a basic level demonstrate the ability to analyze and solve problems using logical and creative methods.

Program Requirements:
- Program Core:
  - FIRE - 63A Basic Firefighter I, Academy A
  - FIRE - 63B Basic Firefighter I, Academy B
- Suggested Electives:
  - CRIM - 01 Criminology
  - CRIM - 02 Introduction to Criminal Justice
  - CRIM - 03 Criminal Procedures
  - CRIM - 04 Criminal Law
  - CRIM - 05 Community and Human Relations
  - CRIM - 06 Introduction to Investigation
  - CRIM - 07 Writing for Criminal Justice
  - CRIM - 30 Juvenile Procedures
  - CRIM - 33 Violence in the Family
  - CRIM - 37 Communication and Ethics in Law Enforcement
  - CRIM - 42C Reserve Officer Module Level 3
  - CRIM - 42D Reserve Officer Module Level 2

Criminal Justice Certificate (21150.CT)
A Certificate of Achievement in Criminal Justice can be obtained by completion of the following classes with a 2.0 GPA or higher in each class taken.

Program Student Learning Outcomes
A. Demonstrate at the entry level an understanding of the fundamental principles, laws, and processes related to the American judicial system and individual constitutional rights.
B. Demonstrate at the entry level effective written, verbal, and nonverbal communication skills.
C. Demonstrate at the entry level critical thinking skills, the ability methods using critical thinking skills, the ability to analyze and solve problems using logical and creative methods.
D. Recognize at the entry level the social, political, economic, and cultural context within the criminal justice system and responsibilities to the community.

Program Requirements:
- Program Core:
  - FIRE - 63A Basic Firefighter I, Academy A
  - FIRE - 63B Basic Firefighter I, Academy B
- Program Requirements:
  - FIRE - 63A Basic Firefighter I, Academy A
  - FIRE - 63B Basic Firefighter I, Academy B
  - CRIM - 01 Criminology
  - CRIM - 02 Introduction to Criminal Justice
  - CRIM - 03 Criminal Procedures
  - CRIM - 04 Criminal Law
  - CRIM - 05 Community and Human Relations
  - CRIM - 06 Introduction to Investigation
  - CRIM - 07 Writing for Criminal Justice
  - CRIM - 30 Juvenile Procedures
  - CRIM - 33 Violence in the Family
  - CRIM - 37 Communication and Ethics in Law Enforcement
  - CRIM - 42C Reserve Officer Module Level 3
  - CRIM - 42D Reserve Officer Module Level 2

Total: (31 Units)

Suggested Sequence:
- Fall 1
  - CRIM - 01 Criminology
  - CRIM - 02 Introduction to Criminal Justice
- Spring
  - CRIM - 30 Juvenile Procedures
  - CRIM - 33 Violence in the Family
  - CRIM - 37 Communication and Ethics in Law Enforcement
- Spring
  - CRIM - 01 Criminology
  - CRIM - 02 Introduction to Criminal Justice

Emergency Medical Technician Certificate (12100.CE)
Emergency Medical Technology is designed to provide students with the skills and knowledge necessary for them to excel as they enter the emergency medical services workforce.

Program Student Learning Outcomes
A. Describe all facets of basic life support according to state and national standards, to include assessment, emergency treatment, and equipment operation.
B. Effectively relate patient details to base hospital emergency department personnel.
C. Successfully solve questions on the National Registry of Emergency Medical Technicians (NREMT) exam.

Program Requirements:
- Program Core:
  - EMER - 50A Emergency Medical Technician 1, Module A
  - EMER - 50B Emergency Medical Technician 1, Module B
- Program Requirements:
  - EMER - 50A Emergency Medical Technician 1, Module A
  - EMER - 50B Emergency Medical Technician 1, Module B
  - CRIM - 01 Criminology
  - CRIM - 02 Introduction to Criminal Justice
  - CRIM - 03 Criminal Procedures
  - CRIM - 04 Criminal Law
  - CRIM - 05 Community and Human Relations
  - CRIM - 06 Introduction to Investigation
  - CRIM - 07 Writing for Criminal Justice
  - CRIM - 30 Juvenile Procedures
  - CRIM - 33 Violence in the Family
  - CRIM - 37 Communication and Ethics in Law Enforcement
  - CRIM - 42C Reserve Officer Module Level 3
  - CRIM - 42D Reserve Officer Module Level 2

Note:
These courses meet the requirements of Title 22, Division 9, Chapter 2 of California Administrative Code.

Students successfully completing the courses are eligible to take the EMT-1 certifying exam from the National Registry of Emergency Medical Technicians.

Fire Technology Certificate (21400.CT)
A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study, which must include the first five courses listed for the A.S. Degree in Fire Technology.
A 2.0 GPA or higher must be earned in each class.

Program Student Learning Outcomes
A. Demonstrate effective written communication skills.
B. Demonstrate effective verbal and nonverbal communication skills.
C. At a basic level apply the principles of fire technology.
D. Demonstrate an appreciation of lifelong learning.
E. Demonstrate the ability to evaluate and adhere to ethics and compassionate treatment of patients and victims.
F. At a basic level demonstrate the ability to evaluate information and incorporate it into appropriate tasks.
G. At a basic level demonstrate the ability to analyze and solve problems using logical and creative methods.

Program Requirements:
Program Core: (30 Units)
FIRE - 30 Fire Protection Organization .............................................3
FIRE - 31 Fire Behavior and Combustion ............................................3
FIRE - 32 Fire Prevention Technology .................................................3
FIRE - 33 Fire Protection Equipment and Systems ...............................3
FIRE - 34 Building Construction for Fire Protection ............................3

Total: (30 Units)

Suggested electives:
FIRE - 40 Principles of Fire and Emergency Services Safety and Survival .................................................3
FIRE - 63A Basic Firefighter I, Academy A ...........................................8
FIRE - 63B Basic Firefighter I, Academy B ...........................................8

Science, Math and Engineering

Dean
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Associate of Science for Transfer Biology, A.S.-T. (04100.AST)
The Associate in Science in Biology for Transfer degree is designed to prepare students for seamless transfer to a university that offers a baccalaureate degree with a major in biological science or related discipline. The Associate in Science in Biology for Transfer degree provides the student with laboratory experience and introductory knowledge of fundamental principles in biology that include cell theory, genomics, taxonomy, comparative anatomy and physiology, ecology and evolution. This major provides a strong foundation in biology enabling them to succeed in upper division coursework in a baccalaureate degree program in biology.

Program Student Learning Outcomes
A. Analyze the natural world using the scientific method.
B. Describe biological structures and their functions.
C. Describe mechanisms of evolution.
D. Develop an awareness of the careers in the biological sciences.

To complete the degree, students must fulfill the following requirements:
1. 60 semester CSU-transferable units or 90 quarter units that are eligible for transfer to the California State University
2. the California State University-General Education-Breadth (CSU GE-Breadth) for STEM pattern; Intersegmental General Education Transfer Curriculum (IGETC) for STEM pattern.
3. a minimum of 18 semester units or 27 quarter units in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (34-36 Units)
BIOL - 04A Fundamentals of Biology: The Cell and Evolution ..........................4
BIOL - 04B Diversity of Life: Morphology and Physiology ........................5
List A: Restricted Electives: (22 Units)
CHEM - 04A General Chemistry I ..........................................................5
CHEM - 04B General Chemistry II .......................................................5
MATH - 04A Calculus I ............................................................................4
PHYS - 02A General Physics I .................................................................4 and
PHYS - 02B General Physics II ...............................................................4 or
PHYS - 04A Physics I ..............................................................................4 and
PHYS - 04B Physics II ............................................................................4
List B: Electives: (3-5 Units)
BIOL - 16 General Human Anatomy ......................................................4
BIOL - 18 Principles of Physiology ..........................................................4
CHEM - 12A Organic Chemistry I ............................................................5
CHEM - 12B Organic Chemistry II ..........................................................5
MATH - 04B Calculus II ..........................................................................4
MATH - 10 Elementary Statistics ..............................................................3

Total Units that may be double counted: (10-10 Units)
General Education Units: (33-31 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum for STEM*
Elective (CSU Transferable) Units: (1-3 Units)
Total: (60 Units)

Note:
* IGETC or CSU-GE Breadth for STEM, allows for completion of 6 units on non-STEM GE work after transfer.

Suggested Sequence:
Calculus-based Option 1: CHEM 02A is a prerequisite for CHEM 04A; if a student has done well in high school chemistry, they may take CHEM 04A without first taking CHEM 02A (a prerequisite challenge must be submitted). The following course sequence options assume that either CHEM 02A has already been taken or that the student will enroll directly in CHEM 04A. Additional units can be taken as breadth or elective courses.

Calculus-based Option
Fall 1
CHEM - 04A General Chemistry I ..........................................................5
MATH - 04A Calculus I ............................................................................4
Spring 1
BIOL - 04A Fundamentals of Biology: The Cell and Evolution .............4
CHEM - 04B General Chemistry II ..........................................................5
MATH - 04B Calculus II ..........................................................................4
Fall 2
Chemistry, A.S.-T. (19100.AST)
The Associate in Science in Chemistry for Transfer degree is designed for students looking to obtain a well-rounded education in Chemistry. Upon completion, students with an AS-T in Chemistry will be eligible to transfer with junior standing into an equivalent major within the CA State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis.

Program Requirements:
A. Successfully complete the following courses:
   1. 5 units of the Intersegmental General Education Transfer Curriculum (IGETC) for STEM pattern.
   2. Complete a minimum of 18 semester units as described in the major.
   3. Additional units required for major or area of emphasis.

Program Student Learning Outcomes:
A. Demonstrate an understanding of various chemical representations of elements, compounds, and chemical reactions.
B. Solve problems utilizing chemical concepts and equations.
C. Collect and analyze laboratory data.
D. Demonstrate scientific literacy.

Geology, A.S.-T. (19400.AST)
The Geology A.S.-T. program is designed for students interested in any branch of earth science. This curriculum is designed to meet the lower division requirements of most universities offering a major in the earth sciences. This curriculum, combined with the upper division curriculum required at a university, could lead to careers in fields such as paleontology, mineralogy, geophysics, hydrology, marine geology, and geochemistry, as well as general geology. People trained in these disciplines are employed in research companies as well as by companies associated with mining and petroleum industries.

Program Requirements:
A. Complete a minimum of 60 units.
B. Complete a minimum of 5 units of the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements, with a minimum grade point average of 2.0.
C. Complete a minimum of 5 units of general education courses.
D. Complete a minimum of 5 units of general education courses.

Note: Students are not required to complete any additional local graduation requirements for the AS-T (e.g., PE and Computer and Information Literacy courses).
Mathematics, A.S.-T. (17400.AST)
The Associate in Science in Mathematics for Transfer is designed around a core education. Upon completion, students with an Associate in Science in Mathematics for Transfer will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis. The Associate in Science in Mathematics for Transfer is designed to meet the lower division requirements of most universities offering a major in mathematics. This curriculum, combined with the upper division curriculum required at a university, could lead to careers in fields such as astronomer, engineer, geophysicist, mathematician, and research scientist, as well as a physicist. People trained in these disciplines are employed in research companies as well as with different governmental agencies.

Program Learning Outcomes
A. Use Calculus techniques to solve mathematical problems involving functions of one or more variables.
B. Demonstrate appropriate techniques to solve mathematical problems.
C. Apply mathematical models to real-world problems.
D. Use technology to support mathematical problem solving.

Program Requirements:
Program Core: (21-22 Units)
MATH - 04A Calculus I ..............................................4
MATH - 04B Calculus II .............................................4
MATH - 04C Multivariable Calculus .........................4
List A: (3 Units)
Select 3 units from the following
MATH - 06 Elementary Differential Equations ............3
MATH - 08 Linear Algebra .......................................3
List B: (6 Units)
Select 6 units from the following
Any course from List A not used (3)
CPSC - 06 Programming Concepts and Methodology I ....3
or
ENGR - 14 C++ Programming ..................................3
MATH - 07 Discrete Structures .................................3
MATH - 10 Elementary Statistics .............................3
PHYS - 04A Physics I ............................................4
Total units that may be double counted: (3-7 Units)
General Education Units: (37-39 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
Elective (CSU Transferable): (2-9 Units)
Total: (60 Units)

Suggested Sequence:
Fall 1
CHEM - 04A General Chemistry I ...........................5
Spring 1
CHEM - 04B General Chemistry II .........................5
Fall 2
GEOL - 01 Physical Geology .................................4
MATH - 04A Calculus I .............................................4
Spring 2
MATH - 04B Calculus II .........................................4
GEOL - 02 Historical Geology ................................4

Suggested Sequence:
Additional units can be taken as breadth and/or elective courses.
Fall 1
MATH - 04A Calculus I .............................................4
Recommended AS-T Degree Electives
CPSC - 14 C++ Programming ..................................3
or
ENGR - 14 C++ Programming ..................................3
MATH - 10 Elementary Statistics .............................3

Mathematics, A.S.-T. (19700.AST)
The Associate in Science in Physics for Transfer degree is designed for students planning on transferring to a California State University (CSU). Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the California State University system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis. The Physics curriculum is designed to meet the lower division requirements of most universities offering a major in physics. This curriculum, combined with the upper division curriculum required at a university, could lead to careers in fields such as astronomer, engineer, geophysicist, mathematician, research scientist, as well as a physicist. People trained in these disciplines are employed in research companies as well as with different governmental agencies.

Program Student Learning Outcomes
A. Solve using appropriate physics/physical/mathematical principles and express their answers in appropriate form.
B. Determine the nature of and the causal relationships to the situation and use appropriate tools and technology to analyze and measure the behavior.
C. Demonstrate the ability to communicate their knowledge of physics principles in oral and written form using the language of physics.
D. Deduce the properties, outcome, mathematical or physical result of a physical situation.
E. Identify applications to other scientific, technological, or society areas.

Program Requirements:
Program Core: (24 Units)
PHYS - 04A Physics I ............................................4
PHYS - 04B Physics II ..........................................4
PHYS - 04C Physics III .........................................4
MATH - 04A Calculus I .............................................4
MATH - 04B Calculus II ..........................................4
MATH - 04C Multivariable Calculus .........................4
Total Units that may be double counted: (-8 Units)
General Education Units: (39-42 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
Elective (CSU Transferable): (2-5 Units)
Total: (60 Units)

Suggested Sequence:
Fall 1
MATH - 04B Calculus II .............................................4
Recommended AS-T Degree Electives
PHYS - 04A Physics I ............................................4
MATH - 10 Elementary Statistics .............................3
Fall 2
MATH - 04C Multivariable Calculus .........................4
Recommended AS-T Degree Electives
MATH - 04B Linear Algebra ...................................3
MATH - 10 Elementary Statistics .............................3
Spring 2
MATH - 06 Elementary Differential Equations ............3
Additional units can be taken as breadth and/or elective courses.

Fall 1
Additional units can be taken as breadth and/or elective courses.
MATH - 04A Calculus I .............................................4
Spring 1
Additional units can be taken as breadth and/or elective courses.
MATH - 04B Calculus II ..........................................4
PHYS - 04A Physics I ............................................4
Fall 2
Additional units can be taken as breadth and/or elective courses.
MATH - 04C Multivariable Calculus .........................4
PHYS - 04B Physics II ..........................................4
Spring 2
PHYS - 04C Physics III .........................................4
**Associate of Arts**

**Health Sciences, A.A. (12300.AA)**

The Associate in Arts Degree in Health Sciences is intended for students planning to transfer into an Allied Health program. To earn the degree, a student must complete the basic graduation requirements (CHEM 02A is recommended for science breadth) and the courses listed below.

Program Student Learning Outcomes
A. Understand and describe the basic fundamental principles of body structure and function in health and disease and communicate this knowledge in both written and oral form.
B. Understand and implement the scientific method.
C. Research, comprehend and analyze etiologic factors; and then communicate the evaluation supported by a documented review of relevant literature.
D. Use critical thinking skills based on a chemical, structural, and functional foundation to gather and critically analyze, describe, and disseminate quantitative and qualitative information.

Program Requirements:
Program Core: (19 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOL - 01</td>
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<tr>
<td>BIOL - 02</td>
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<td>CHEM - 02B</td>
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<tr>
<td>NUTR - 10</td>
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And select eight units from the following:

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<tbody>
<tr>
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<tr>
<td>BIOL - 18</td>
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<tr>
<td>BIOL - 20</td>
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</table>

Total: (19 Units)

Suggested Sequence:
Additional units can be taken as breadth and/or elective courses.

Fall 1

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOL - 02</td>
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<td>CHEM - 02A</td>
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<td>NUTR - 10</td>
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Spring 1

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<tr>
<td>CHEM - 02B</td>
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Fall 2

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<td>CHEM - 02A</td>
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<td>NUTR - 10</td>
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Spring 2

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<th>Course</th>
<th>Units</th>
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<tr>
<td>CHEM - 02B</td>
<td>4</td>
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**Associate of Science**

**Biotechnology, Industry, A.S. (04135.AS)**

The student majoring in Biotechnology is generally preparing for employment in the biotechnology industry.

The Associate in Science degree in Biotechnology-Industry is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA. Students must complete both courses in the CHEM-02 sequence, with the first course in the sequence satisfying the physical science breadth requirements. BIOL 04A, BIOL 01, or BIOL 02 should be taken to satisfy the life science breadth requirement.

Program Student Learning Outcomes
A. Students will demonstrate the use and maintenance of equipment found in a standard biotechnology lab.
B. Students will demonstrate the application and comprehension of laboratory math skills where appropriate.
C. Students will demonstrate an understanding of the underlying theory of laboratory skills and work ethic through application, problem solving skills and teamwork.
D. Students will demonstrate the preparation, comprehension, evaluation, and maintenance of standard documents associated with the biotechnology workplace.
E. Students will demonstrate the comprehension and interpretation and application of federal, state, and local safety regulations within the biotechnology workplace with regards to the quality control of products generated in the laboratory.

Program Requirements:
Program Core: (27 Units)

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<tr>
<td>CHEM - 02B</td>
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10 units from the following courses: (10 Units)

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<tr>
<td>BIOL - 06</td>
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<tr>
<td>BIOL - 16</td>
<td>4</td>
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<tr>
<td>BIOL - 18</td>
<td>4</td>
</tr>
<tr>
<td>CPSC - 01</td>
<td>4</td>
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<tr>
<td>AOM - 30</td>
<td>3</td>
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</tbody>
</table>

Completion of MCCD-GE Breadth pattern: (23 Units)

Double Counting: (-3 Units)

Electives: (13 Units)

Total: (60 Units)

Suggested Sequence:
Fall 1

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
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<td>BIOL - 04A</td>
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<td>CHEM - 02A</td>
<td>4</td>
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<tr>
<td>CHEM - 04A</td>
<td>5</td>
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<tr>
<td>BIOL - 09</td>
<td>3</td>
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<tr>
<td>BIOL - 04B</td>
<td>5</td>
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<tr>
<td>CHEM - 02B</td>
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<td>CHEM - 04B</td>
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Fall 2

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>BIOL - 01</td>
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</tr>
<tr>
<td>BIOL - 04A</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 02A</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 04A</td>
<td>5</td>
</tr>
<tr>
<td>BIOL - 09</td>
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</tr>
<tr>
<td>BIOL - 04B</td>
<td>5</td>
</tr>
<tr>
<td>CHEM - 02B</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 04B</td>
<td>4</td>
</tr>
</tbody>
</table>

**Biotechnology, Pre-Professional, A.S. (04137.AS)**

The Associate in Science degree in Biotechnology Pre-Professional is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA.

Program Student Learning Outcomes:
A. Demonstrate the comprehension and application of laboratory math skills where appropriate.
B. Demonstrate a comprehension of biotechnology theory through the
application of basic biotechnology laboratory skills, problem solving
skills, work ethic and teamwork.
C. Demonstrate the ability to prepare, comprehend, evaluate, and
maintain standard documents associated with the biotechnology
workplace.
D. Demonstrate an understanding of federal, state, and local safety
regulations and through their application in the biotechnology
workplace.
E. Demonstrate an understanding of federal, state and local regulations
as they relate to quality control of products produced in the laboratory.

Program Requirements:
Program Core: (30 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL - 09</td>
<td>Introduction to Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL - 20</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL - 32</td>
<td>Introduction to Biotechnology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL - 32L</td>
<td>Introduction to Biotechnology Lab</td>
<td>2</td>
</tr>
<tr>
<td>BIOL - 33</td>
<td>Biotechnology II: Advanced Laboratory Techniques</td>
<td>4</td>
</tr>
<tr>
<td>BIOL - 09</td>
<td>Introduction to Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL - 18</td>
<td>Principles of Physiology</td>
<td>1</td>
</tr>
<tr>
<td>CPSC - 01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>PLSC - 10</td>
<td>Elements of Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM - 04B</td>
<td>General Chemistry II</td>
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<td>CHEM - 04A</td>
<td>General Chemistry I</td>
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</tr>
<tr>
<td>CHEM - 04B</td>
<td>General Chemistry II</td>
<td>5</td>
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</table>

Select from the following courses: (3 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BIOL - 04B</td>
<td>Diversity of Life: Morphology and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL - 06</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>BIOL - 16</td>
<td>General Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOL - 18</td>
<td>Principles of Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

Interssegmental General Education Transfer Curriculum

CSU-General Education Breadth Certification Requirements

Electives (as needed) (CSU transferrable): (0 Units)

Double-Counted: (7 Units)

Total: (60-62 Units)

Suggested Electives:
(Consult with counselor and/or Engineering Professional for guidance on
which courses to take.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRFT - 25</td>
<td>Descriptive Geometry</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 15</td>
<td>Elementary Mechanics (Statics)</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 30</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>MATH - 08</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional units can be taken as breadth and/or elective courses.

Fall 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM - 02A</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>MATH - 04A</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>MATH - 04B</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
<td>4</td>
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Fall 2

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC - 06</td>
<td>Programming Concepts and Methodology I</td>
<td>3</td>
</tr>
<tr>
<td>CPSC - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>MATH - 04C</td>
<td>MultiVariable Calculus</td>
<td>4</td>
</tr>
<tr>
<td>PHYS - 04B</td>
<td>Physics II</td>
<td>4</td>
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Spring 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATH - 04A</td>
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<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>MATH - 04B</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
<td>4</td>
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Spring 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR - 18</td>
<td>Electrical Circuits Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ENGR - 45</td>
<td>Engineering Materials</td>
<td>4</td>
</tr>
<tr>
<td>MATH - 06</td>
<td>Elementary Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>

Engineering, A.S. (09300.AS)
The Associate in Science degree in Engineering is available for students
who meet the graduation requirements and complete the following required
courses, with a minimum grade of a "C" in each course in the degree and
maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Demonstrate an understanding of the physical, mechanical, and
electrical principles required in engineering analyses.
B. Analyze data to make engineering problem decisions.
C. Identify candidate materials based on composition and structure.
D. Demonstrate proficiency in analytical problem solving skills.

Program Requirements:
Program Core: (39 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CPSC - 06</td>
<td>Programming Concepts and Methodology I</td>
<td>3</td>
</tr>
<tr>
<td>CPSC - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 45</td>
<td>Engineering Materials</td>
<td>4</td>
</tr>
<tr>
<td>MATH - 04A</td>
<td>Calculus I</td>
<td>4</td>
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<td>MATH - 04B</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td>MATH - 04C</td>
<td>MultiVariable Calculus</td>
<td>4</td>
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<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>MATH - 06</td>
<td>Elementary Differential Equations</td>
<td>3</td>
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</table>

Engineering Technology, A.S. (09350.AS)
The Associate in Science degree in Engineering Technology is available for
students who meet the graduation requirements and complete the following required
courses, with a minimum grade of a "C" in each course in the degree and
maintain a 2.0 GPA.

Program Student Learning Outcomes
A. Demonstrate an understanding of the physical, mechanical, and
electrical principles required in engineering analyses.
B. Analyze data to make engineering problem decisions.
C. Identify candidate materials based on composition and structure.
D. Demonstrate proficiency in analytical problem solving skills.

Program Requirements:
Program Core: (36 Units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CPSC - 06</td>
<td>Programming Concepts and Methodology I</td>
<td>3</td>
</tr>
<tr>
<td>CPSC - 14</td>
<td>C++ Programming</td>
<td>3</td>
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<td>ENGR - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENGR - 18</td>
<td>Electrical Circuits Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ENGR - 45</td>
<td>Engineering Materials</td>
<td>4</td>
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<tr>
<td>MATH - 04A</td>
<td>Calculus I</td>
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<tr>
<td>MATH - 04B</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td>MATH - 04C</td>
<td>MultiVariable Calculus</td>
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</tr>
<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
<td>4</td>
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</table>

Additional units can be taken as breadth and/or elective courses.

Fall 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>CHEM - 02A</td>
<td>Introductory Chemistry</td>
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</tr>
<tr>
<td>MATH - 04A</td>
<td>Calculus I</td>
<td>4</td>
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<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
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<tr>
<td>MATH - 04B</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
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Fall 2

<table>
<thead>
<tr>
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<th>Title</th>
<th>Units</th>
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<tr>
<td>CPSC - 06</td>
<td>Programming Concepts and Methodology I</td>
<td>3</td>
</tr>
<tr>
<td>CPSC - 14</td>
<td>C++ Programming</td>
<td>3</td>
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<tr>
<td>ENGR - 14</td>
<td>C++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>MATH - 04C</td>
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</tr>
<tr>
<td>PHYS - 04B</td>
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Spring 1

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tr>
<td>MATH - 04A</td>
<td>Calculus I</td>
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<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
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<tr>
<td>MATH - 04B</td>
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<tr>
<td>PHYS - 04A</td>
<td>Physics I</td>
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Spring 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH - 06</td>
<td>Elementary Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>
Suggested Electives:
(Please talk to a counselor and Engineering Professional for guidance on which courses to take.)
CPSC - 06 Programming Concepts and Methodology I .......................... 3
or
CPSC - 14 C++ Programming .................................................. 3
or
ENGR - 14 C++ Programming .................................................. 3
ENGR - 30 Introduction to Engineering ........................................ 2
MATH - 08 Linear Algebra ......................................................... 2
PHYS - 04C Physics III .............................................................. 4

Additional units can be taken as breadth and/or elective courses.
Fall 1
MATH - 04A Calculus I .............................................................. 4
CHEM - 02A Introductory Chemistry ........................................... 4
Spring 1
CHEM - 04A General Chemistry I .............................................. 5
MATH - 04B Calculus II ............................................................. 4
PHYS - 04A Physics I ................................................................. 4
Fall 2
ENGR - 15 Elementary Mechanics (Statics) .................................. 4
MATH - 04C MultiVariable Calculus ............................................ 3
PHYS - 04B Physics II ................................................................. 4
Spring 2
ENGR - 18 Electrical Circuits Analysis ........................................ 4
ENGR - 45 Engineering Materials ............................................... 4
MATH - 06 Elementary Differential Equations ............................... 3

BIOL - 33 Biotechnology II........................................... 4
CHEM - 02B Introductory Chemistry: Introduction to Organic and Biochemistry .................................................. 4

Total: (17 Units)

Suggested Sequence:
Fall 1
BIOL - 01 General Biology for Non-Majors .................................. 4
or
BIOL - 04A Fundamentals of Biology: The Cell and Evolution ........ 4
CHEM - 02A Introductory Chemistry ........................................... 4
or
CHEM - 04A General Chemistry I .............................................. 5
BIOL - 09 Introduction to Genetics .............................................. 3
Spring 2
BIOL - 04B Diversity of Life: Morphology and Physiology ......... 5
CHEM - 02B Introductory Chemistry: Introduction to Organic and Biochemistry .................................................. 4
or
CHEM - 04A General Chemistry II ............................................. 5
Fall 2
BIOL - 20 Microbiology ............................................................ 4
BIOL - 32 Introduction to Biotechnology ..................................... 4
Spring 2
BIOL - 33 Biotechnology II........................................... 4

Certificate

Biotechnology Certificate (04130.CB)
The Certificate of Achievement in Biotechnology will be awarded upon the satisfactory completion of the 17 units from the courses listed below, with a minimum grade of a "C" in each course in the certificate and maintain a 2.0 GPA. It is intended that the student complete both courses in the CHEM-02 sequence. BIOL 04A, BIOL 01, or BIOL 02 should be taken to satisfy the prerequisite requirement for BIOL 09.

Program Student Learning Outcomes:
A. Students will be able to use equipment found in a standard biotechnology lab.
B. Demonstrate the application and comprehension of laboratory math skills where appropriate.
C. Demonstrate the preparation, comprehension, evaluation, and maintenance of standard documents associated with the biotechnology workplace.
D. Students will demonstrate problem-solving skills in the biotechnology laboratory.
E. Students will demonstrate an appropriate work ethic and demonstrate teamwork skills.

Program Requirements:
Program Core: (17 Units)
BIOL - 09 Introduction to Genetics ........................................... 3
BIOL - 32 Introduction to Biotechnology .................................... 4
BIOL - 32L Introduction to Biotechnology Lab ............................ 2

Social Sciences

Associate of Arts for Transfer

Anthropology, A.A.-T. (22000.AAT)
The Anthropology program integrates concepts and information from various disciplines to provide a holistic understanding of mankind through the fields of Biological Anthropology, Socio-cultural Anthropology and Archaeology. Upon completion, students with an AA-T in Anthropology will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system.

Program Student Learning Outcomes:
A. Examine the goals of the discipline of anthropology.
B. Evaluate the methods used in the discipline of anthropology.
C. Demonstrate an understanding of cultural diversity.

For an Associate in Arts in Anthropology for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtaining a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (20-22 Units)
ANTH - 01 Introduction to Biological Anthropology ................... 4
ANTH - 02  Sociocultural Anthropology ........................................ 3
ARCH - 01  Introduction to Archaeology ........................................ 3
ARCH - 01L  Field Archaeology .................................................. 1

List A: (3 Units)

Select 3 units

GEOG - 01  Physical Geography ............................................... 3
GEOG - 02  World Geography .................................................. 3
MATH - 10  Elementary Statistics ............................................. 3
or

PSYC - 05  Introduction to Statistics in Psychology ....................... 3

SOIL - 10  Soil Science ......................................................... 3

List B: (3 Units)

Select 3-4 units

Any course from List A not used above ............................................. 3

BIOL - 16  General Human Anatomy .................................. 4

GEOL - 01  Physical Geology ................................................ 4
GEOL - 03  Earth Science .................................................... 4
PSYC - 01B  Introduction to Psychological Research Methods ....... 3

List C: (3 Units)

Select 3-4 units

Any course from List A or List B not used above .......................... 3-4

ANTH - 10  Southeast Asian Culture: Hmong ................................ 3

COMM - 30  Introduction to Intercultural Communication ............ 3
HIST - 09A  China: Introduction to East Asian Civilization .......... 3
HIST - 09B  Japan: Introduction to East Asian Civilization ........ 3

Total Units that may be double counted: (12-15 Units)

General Education Units: (37-39 Units)

CSU-General Education Breadth Certification Requirements
or

Intersegmental General Education Transfer Curriculum
Elective (CSU Transferable) Units: (12-18 Units)

Total: (60 Units)

Suggested Sequence:

Fall 1

ANTH - 02  Sociocultural Anthropology ........................................ 3

List A Elective
choose one from:

GEOG - 01  Physical Geography ............................................... 3
GEOG - 02  World Geography .................................................. 3

MATH - 10  Elementary Statistics ............................................. 3 *

or

PSYC - 05  Introduction to Statistics in Psychology ....................... 3 *

SOIL - 10  Soil Science ......................................................... 3 **

Spring 1

List B Elective
choose one from:

BIOL - 16  General Human Anatomy .................................. 4 ***

GEOL - 01  Physical Geology ................................................ 4 **
GEOL - 03  Earth Science .................................................... 4

PSYC - 01B  Introduction to Psychological Research Methods ....... 3 *

Fall 2

ARCH - 01  Introduction to Archaeology ........................................ 3

ARCH - 01L  Field Archaeology ................................................ 1

List C Elective
choose one from:

ANTH - 10  Southeast Asian Culture: Hmong ................................ 3

COMM - 30  Introduction to Intercultural Communication ............ 3 *
HIST - 09A  China: Introduction to East Asian Civilization ........ 3 *

Note:

^ Recommended elective for all
* Recommended elective for those with interest in Cultural Anthropology
** Recommended elective for those with interest in Archaeology
*** Recommended elective for those with interest in Biological Anthropology

Economics, A.A.-T. (22200.AAT)

The Associate in Arts in Economics for Transfer degree (AA-T) is designed to give students a foundation in both introductory Microeconomics and Macroeconomics, as well as develop the mathematical skills necessary to begin upper division study in Economics. Upon completion, students with an AA-T in Economics will be eligible to transfer with Junior standing into an equivalent major within the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student’s community college area of emphasis. The Associate in Arts in Economics for Transfer degree is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Economics or similar major.

Program Student Learning Outcomes:

A. Correlate the relationship of microeconomic models to macroeconomic models.
B. Analyze how monetary and fiscal policy impact various aspects of the economy including output and inflation.
C. Analyze decision making of firms in the four market structures and the impact of government policies on firms output based on cost curves.
D. Describe the four market structures and their relationship to allocative efficiency in the economy.

For an Associate in Arts in Economics for Transfer (AA-T), students must complete the following:

1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:

Program Core: (19-21 Units)

ECON - 01  Introduction to Microeconomics ............................... 3
ECON - 02  Introduction to Macroeconomics ............................... 3
MATH - 04A  Calculus I ............................................................... 4

MATH - 10  Elementary Statistics ............................................. 3

or

PSYC - 05  Introduction to Statistics in Psychology ....................... 3

List A:
Select 1 course (3-4 units) of the following.

ACTG - 04A  Financial Accounting ........................................... 4
ACTG - 04B  Managerial Accounting ........................................... 4
MATH - 04B  Calculus II ......................................................... 4
MATH - 15  Finite Mathematics .................................................. 3
SOC - 01  Introduction to Sociology ........................................... 3

• Programs by School •  111

Merced College

List B:
Select 1 course (3-4 units) of the following.
Any course in List A not already used.

MATH - 04C Multivariable Calculus 4
MATH - 08 Linear Algebra 3

Total Units that may be double counted (CSU-GE/IGETC): (9-12 Units)
General Education Units: (39/37 Units)
CSU-General Education Breadth Certification Requirements or
Intersegmental General Education Transfer Curriculum
E elective (CSU Transferable) Units: (9-16 Units)
Total: (60 Units)

Elementary Teacher Education, A.A.-T. (49810.AAT)
The Elementary Teacher Education program is committed to preparation of
pre-service elementary teachers who are competent in subject matter areas,
capable of integrating knowledge across discipline boundaries, culturally sensitive to diverse learners, effective communicators, sound critical thinkers, and skilled in educational technology.
The Associate in Arts in Elementary Teacher Education for Transfer degree at Merced College is designed to prepare students to successfully transfer to a CSU campus to complete a pre-professional program leading to a multiple subject or special education credentialing program. Upon completion of the associate for transfer degree, the student is eligible for transfer with junior standing in the California State University (CSU) system.

Program Student Learning Outcomes:
A. Make explicit connections between California K-8 Content Standards and subject matter knowledge in Liberal Studies coursework.
B. Demonstrate integrative thinking through the development of projects that connect and integrate discipline knowledge across subject matters, including effective oral, written, and interpersonal communication skills in a variety of communication contexts.
C. Develop sensitivity to the diverse cultural, linguistic, and learning abilities of elementary-age students.
D. Formulate an understanding of a variety of teaching strategies to teach all learners effectively.

For an Associate in Arts in Elementary Teacher Education for Transfer (AAT), students must complete the following:
1. 60 semester CSU transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. attainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (52 Units)
Required Core Courses (43 Units):
LBST - 10 Introduction to Education I ....................... 3
CLDV - 01 Child Growth and Development ................... 3
BIOL - 01 General Biology for Non-Majors .................. 4
PHSC - 02 Survey of Chemistry and Physics ................ 3
PHSC - 02L Survey of Chemistry and Physics Laboratory .... 1
GEO 01 Earth Science ........................................... 4
MATH - 20A Basic Structure of Mathematics I ................ 3

COMM - 01 Fundamentals of Speech ............................ 3
or
COMM - 01H Honors Fundamentals of Speech .................. 3

ENGL - 01A College Composition and Reading ................. 4
ENGL - 01B Introduction to Literature ........................ 3
GEOG - 02 World Geography .................................... 3
HIST - 17A United States History and United States Constitution 3
or
HIST - 17AH Honors United States History and United States Constitution 3

HIST - 04A World History Part 1 ............................... 3
POSC - 01 Essentials of American Political System ........... 3

List A: (3 Units)
Select 1 course from the following
ENGL - 13 Critical Reasoning and Writing ...................... 3
or
ENGL - 13H Honors Critical Reasoning and Writing ............ 3
or
PHIL - 13 Critical Reasoning and Writing ...................... 3
or
PHIL - 13H Honors Critical Reasoning and Writing ............ 3

List B: (3 Units)
Select 1 course from the following
ART - 01 Art History: Ancient Through Gothic ................. 3
ART - 02 Art History: Renaissance Through 20th Century .... 3

DRAM - 01 Introduction to Theater ................................ 3
MUSG - 10 Music Fundamentals .................................. 3
MUSG - 12 Classical Music History II ......................... 3
MUSG - 14 American Popular Music History .................. 3

List C: (3 Units)
Up to 3 additional units*:
Any course(s) not selected above, and/or any courses that are lower preparation for the targeted major at a university.
AOM - 30 Introduction to Computer Applications ............... 3
HUM - 01 Studies in Humanities—Ancient Through Renaissance .............................. 3
or
HUM - 01H Honors Studies in Humanities—Ancient Through Renaissance ......................... 3

HUM - 15 Comparative Cultures .................................. 3
LBST - 20 Introduction to Education II .......................... 3
LBST - 30 Children's Literature ................................... 3

MATH - 20B Basic Structure of Mathematics II ................ 3

PSYC - 09 Human Development .................................... 3
or
CLDV - 09 Human Development .................................... 3

Total Units that may be double counted: (28-34 Units)
General Education Units: (37-39 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
E elective (CSU Transferable) Units: (0-3 Units)
Total: (60 Units)

Note:
*Additional requirements for the Elementary Teacher Education major may vary at each CSU campus. It is highly recommended that students speak to a counselor to discuss other possible courses that are part of major preparation at a local CSU campus.

Suggested Sequence:
With the exception of LBST 30, all core courses in the Elementary Education AA-T and Liberal Studies AA are offered each semester. LBST 30 is offered in the fall semester only. Because many of the required program courses also fulfill GE Breadth, it is recommended that students meet with an academic counselor to develop a course of study.
Geography, A.A.-T. (22250.AAT)
The Associate in Arts in Geography for Transfer degree is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Geography within the California State University system. The Geography Department at Merced College is a program that facilitates the success of general education students and geography majors by offering lower-division education geography courses.

The Geography Program offers students a variety of courses in physical, cultural, regional and applied geography. Students gain the ability to analyze geographical issues, read and interpret maps, and develop the skills to communicate local, national, and international geographic phenomena to others.

The Associate in Arts in Geography for Transfer degree is designed to prepare students for a seamless transfer into the CSU system to complete a baccalaureate degree in Geography or similar major.

Program Student Learning Outcomes:
A. Analyze core geographic principles, concepts, models and phenomena.
B. Demonstrate understanding of the global natural and cultural environments and the geographic methods by which they are studied.
C. Examine the diversity of people, places and events globally as well as within specific geographic regions.
D. Interpret maps and mapped data utilizing basic map elements.

For an Associate in Arts in Geography for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (19-22 Units)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG - 01</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG - 01L</td>
<td>Physical Geography Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOG - 02</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG - 12</td>
<td>Introduction to Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG - 15</td>
<td>Introduction to Weather and Climate</td>
<td>3</td>
</tr>
</tbody>
</table>

List B: (6 Units)
Select 2 courses (6 units) of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH - 02</td>
<td>Sociocultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL - 01</td>
<td>General Biology for Non-Majors</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 02A</td>
<td>Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM - 04A</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>CPSC - 01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>GEOL - 01</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>MATH - 10</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS - 02A</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>POSC - 01</td>
<td>Essentials of American Political System</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units that may be double counted: (-7-13 Units)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Units: (37-39 Units)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSU-General Education Breadth Certification Requirements or Intersessional General Education Transfer Curriculum Elective (CSU Transferable) Units: (6-17 Units)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total: (60 Units)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Suggested Sequence:
Fall 1
- GEOG - 01 Physical Geography ...........................................3
- GEOG - 01L Physical Geography Laboratory .........................1 *

Spring 1
- GEOG - 01L Physical Geography Laboratory ........................1
- GEOG - 02 World Geography .............................................3

Fall 2
- GEOG - 15 Introduction to Weather and Climate ...................3
- CPSC - 01 Introduction to Computer Information Systems ....4 **

Spring 2
- GEOG - 12 Introduction to Human Geography ........................3
- GEOL - 01 Physical Geology ..............................................4 **

Note:
* Only offered during the spring semester.
** Choose a 3-4 unit course from List B.

History, A.A.-T. (22300.AAT)
The Associate in Arts in History for Transfer combines two critical and interrelated focuses: 1) students will acquire an increasingly sophisticated reservoir of historical data, such as, issues, eras, chronology, and thought systems without which historical analysis is not possible, and, 2) armed with this knowledge, students will develop historical thinking skills, and their articulation, that enable one to critically assess and respond to the past and present. Students will comprehend the forces that have shaped both the United States and other nations around the world within a larger global perspective. They will gain skills in historical research and analysis, historiography, critical thinking, factual knowledge of specific historical periods, and a chronological understanding of the past. As a discipline, history helps to nurture an informed public and is, therefore, of vital importance to a democratic society. Further, it complements the mission of the college by having students develop a respect and awareness of and respect for all cultures and the dignity and worth of all individuals. Upon completion, students with an AA-T in History will be eligible to transfer with junior standing into an equivalent major within the California State University (CSU) system.

Career Opportunities
As part of a career path, historical study excels in developing career skills in research, writing, argumentation (interpersonal communication), and documentation. Such skills and knowledge prepare students for careers in the field of history, education, law, government, business, management, public relations, writing, and research.

Program Student Learning Outcomes
A. Analyze historical processes that shape individuals and communities, drawing on detailed knowledge about the history of the United States and other parts of the world.
B. Analyze research involving varieties of experience found in the historical record by exploring diversity as a critical component of history.
C. Construct historical arguments by understanding the philosophical assumptions of historical interpretation.
D. Articulate their understanding of the past clearly and convincingly.
E. Combine new digital and multimedia formats in the practice and presentation of history.
F. Apply historical analysis as a framework to further lifelong learning and civic engagement.

For an Associate in Arts in History for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area
of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (18-20 Units)
Required Core: (12 Units)
HIST - 04A World History Part 1 .................................. 3
HIST - 04B History of Civilization: Part II ...................... 3
or
HIST - 17A United States History and United States Constitution .................................................. 3
or
HIST - 17AH Honors United States History and United States Constitution ........................................ 3
HIST - 17B United States History and California State and Local Government .............................................. 3
or
HIST - 17BH Honors United States History and California State and Local Government .................................. 3

Diversity: (3-5 Units)
HIST - 09A China: Introduction to East Asian Civilization .......... 3
HIST - 09B Japan: Introduction to East Asian Civilization .......... 3
HIST - 22 History of Minorities -- Black Emphasis .................. 3
HIST - 23 The History of Hispanic-Americans in the Southwest U.S. .................................................. 3
ANTH - 10 Southeast Asian Culture: Hmong .................................. 3
ENGL - 18 African and African American Literature .................. 3
HUM - 01 Studies in Humanities--Ancient Through Renaissance .................................................. 3
HUM - 01H Honors Studies in Humanities--Ancient Through Renaissance .................................................. 3
HUM - 02 Studies in Humanities--Renaissance to Present ........ 3
or
HUM - 02H Honors Studies in Humanities--Renaissance to Present .................................................. 3
HUM - 15 Comparative Cultures ............................................. 3
FREN - 01 Elementary French I .............................................. 5
FREN - 02 Elementary French II ............................................. 5
FREN - 03 Intermediate French I ............................................. 5
FREN - 04 Intermediate French II .......................................... 5
GERN - 01 Elementary German I ............................................ 5
GERN - 02 Elementary German II .......................................... 5
GERN - 03 Intermediate German I .......................................... 5
GERN - 04 Intermediate German II ........................................... 5
HMNG - 01 Elementary Hmong I ............................................. 5
HMNG - 02 Elementary Hmong II .......................................... 5
JPNS - 01A Elementary Japanese .......................................... 2.5
JPNS - 01B Elementary Japanese .......................................... 2.5
JPNS - 02 Elementary Japanese .......................................... 2.5
SPAN - 01 Elementary Spanish I .......................................... 5
SPAN - 02 Elementary Spanish II .......................................... 5
SPAN - 03 Intermediate Spanish I ......................................... 5
SPAN - 04 Intermediate Spanish ........................................... 5
SPAN - 10 Spanish for Spanish Speakers I ............................ 5
SPAN - 11 Spanish for Spanish Speakers II ............................ 5
Elective: (3 Units)
Any HIST or HUM course from the Diversity list not used above (3)
HIST - 29 History of California ............................................. 3
POSC - 01 Essentials of American Political System ............... 3
POSC - 02 An Introduction to World Political Systems ............ 3
Total Units that may be double counted: (6-12 Units)
General Education Units: (37-39 Units)
CSU-General Education Breadth Certification Requirements

Psychology, A.A.-T.
(20500.AAT)
The Associate in Arts in Psychology for Transfer degree is designed for students planning on transferring to a California State University. Upon completion of the transfer associate degree, the student is eligible for transfer with junior standing into the California State University (CSU) system. Students will be given priority consideration when applying to a particular program that is similar to the student's community college area of emphasis.

For an Associate in Arts in Psychology for Transfer (AA-T), students must complete 60 semester units that are eligible for transfer to the California State University with a minimum grade point average of 2.0, including both of the following:
1. Certification of the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.
2. A minimum of 19 semester units from the list below.
Important note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Student Learning Outcomes
A. Analyze the major theoretical explanations of behavior in the field of psychology.
B. Appraise the applications of psychology.
C. Critically evaluate statistical analyses, and the claims supported by them.
D. Display effective writing skills using APA format.

Program Requirements:
Program Core: (19 Units)
PSYC - 01A Introduction to Psychology ........................................... 3
or
PSYC - 01AH Honors Introduction to Psychology ........................... 3
PSYC - 01B Introduction to Psychological Research Methods ........ 3
PSYC - 05 Introduction to Statistics in Psychology .................... 3
or
MATH - 10 Elementary Statistics ............................................. 3
List A
Select one of the following courses:
BIOI - 01 General Biology for Non-Majors ................................. 4
BIOI - 02 Human Biology ....................................................... 4
List B
Select one of the following courses:
ANTH - 02 Sociocultural Anthropology .................................. 3
PSYC - 09 Human Development .............................................. 3
SOC - 01 Introduction to Sociology ........................................ 3
List C
Select one of the following courses:
PSYC - 15 Biological Psychology ........................................... 3
PSYC - 22 Human Sexuality .................................................. 3
PSYC - 23 Personal and Social Adjustment ............................. 3
PSYC - 25 Introduction to Abnormal Psychology .................... 3
PSYC - 36 Developmental Psychology: Adolescence .......... 3
PSYC - 49A-ZZ Special Topics in Psychology .......................... 3
Additional courses toward CSU Breadth or IGETC certification and transferable electives: (41 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
Total: (60 Units)

Sociology, A.A.-T. (22650.AAT)
The Sociology Department at Merced College offers students a strong and challenging curriculum. It is designed to provide students with an understanding of how sociological research and theory can be applied to daily experiences and to the issues current to our social milieu. Students also gain insight into the structure, function, and interaction of groups and social institutions, and of the social forces that impinge on the behavior of individuals and of the cultures in which they live. The primary goals of the Sociology Department are: 1) To enable students to achieve their educational goals; 2) To teach students about the various approaches to the scientific study of society and its components; 3) To help students develop critical thinking skills when examining questions and issues; and 4) To help students better serve their communities through greater awareness of the roles played by such factors as social stratification, gender, ethnicity, and cultural values. Upon completion, students with an AA-T in Sociology will pursue careers in the early care and education workforce.

Program Student Learning Outcomes:
A. Compare and contrast the functionalist, conflict, and symbolic interactionist models of sociological thought.
B. Describe the essence of “culture” and the myriad forms this essence may take in terms of the institutions of family, education, medicine, religion, government, and economic systems.

For an Associate in Arts in Sociology for Transfer (AA-T), students must complete the following:
1. 60 semester CSU-transferable units.
2. the California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
3. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
4. obtainment of a minimum grade point average (GPA) of 2.0.
5. earn a grade of C or better in all courses required for the major or area of emphasis.

Note: Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Program Requirements:
Program Core: (18 Units)
SOC - 01 Introduction to Sociology ........................................... 3
SOC - 02 Contemporary Social Problems ................................ 3
SOC - 03 Marriage and the Family ........................................... 3
CRIM - 01 Criminology ............................................................ 3
MATH - 10 Elementary Statistics ............................................. 3
List B: (3 Units)
Select 3 units
ANTH - 02 Sociocultural Anthropology .................................. 3
ANTH - 10 Southeast Asian Culture: Hmong .............................. 3
HIST - 09A China: Introduction to East Asian Civilization .......... 3
HIST - 09B Japan: Introduction to East Asian Civilization .......... 3
HIST - 22 History of Minorities -- Black Emphasis ................... 3
HIST - 23 The History of Hispanic-Americans in the Southwest U.S. ....... 3
PSYC - 01A Introduction to Psychology ........................................ 3
or
PSYC - 01AH Honors Introduction to Psychology .......................... 3
PSYC - 22 Human Sexuality .................................................. 3
PSYC - 23 Personal and Social Adjustment ............................. 3
PSYC - 36 Developmental Psychology: Adolescence .......... 3
Total Units that may be double counted: (-9-12 Units)
General Education Units: (37-39 Units)
CSU-General Education Breadth Certification Requirements
or
Intersegmental General Education Transfer Curriculum
Elective (CSU Transferable) Units: (14-18 Units)
Total: (60 Units)

Associate of Science for Transfer
Early Childhood Education, A.S.-T. (13010.AST)
The Associate in Science in Early Childhood Education for Transfer (AS-T in ECE) at Merced College is based on the approved Transfer Model in accordance to SB1440 and California Education Code sections 66746-66749. The AS-T in ECE is consistent with and supports the colleges’ mission of commitment to continuously improve methods of providing an accessible, affordable, and relevant education that improves the quality of life for all students and their communities. The AS-T in ECE is designed to prepare students for transfer into the CSU system with guarantee admission with junior status to complete a baccalaureate degree in ECE or similar major. Students who obtain advanced degrees and/or professional certificates, such as a baccalaureate degree, will have the foundation to pursue careers in the early care and education workforce.
AS-T in ECE students will:
A. Distinguish and display professional behavior as a teacher of young children.
B. Create appropriate classroom Early Childhood Education environments.
C. Distinguish appropriate health, safety and nutrition practices in the field of child development.
D. Relate effectively with families and communities in the role of an Early Childhood Educator.
E. Examine the basics of administration and be able to apply management skills needed for a teacher in child development.

Program Requirements:
Program Core: (24 Units)
- CLDV - 01 Child Growth and Development ......................... 3
- CLDV - 02 Child, Family and Community ........................... 3
- CLDV - 03 Principles and Practices of Teaching Young Children ................................................................. 3
- CLDV - 04 Observation and Assessment .............................. 3
- CLDV - 05 Health, Safety and Nutrition ............................. 3
- CLDV - 06 Teaching in a Diverse Society ........................... 3
- CLDV - 07 Introduction to Curriculum for the Young Child ...... 3
- CLDV - 07L Practicum ...................................................... 3

Total: (24 Units)

Associate of Arts
Child Development, A.A. (13010.AA)
For an Associate in Arts in Child Development, students must meet the graduation requirements and complete the following courses.

Program Student Learning Outcomes
A. Develop knowledge of high quality developmentally appropriate practices.
B. Analyze the various theoretical frameworks and domains associated with typical and atypical development.
C. Formulate effective strategies that empower families and community.
D. Construct personal philosophy regarding professionalism and best practices in child development.

Program Requirements:
Program Core: (24 Units)
- CLDV - 01 Child Growth and Development ......................... 3
- CLDV - 02 Child, Family and Community ........................... 3
- CLDV - 03 Principles and Practices of Teaching Young Children ................................................................. 3
- CLDV - 04 Observation and Assessment .............................. 3
- CLDV - 05 Health, Safety and Nutrition ............................. 3
- CLDV - 06 Teaching in a Diverse Society ........................... 3
- CLDV - 07 Introduction to Curriculum for the Young Child ...... 3
- CLDV - 07L Practicum ...................................................... 3

Total: (24 Units)

Human Services, A.A. (21500.AA)
The Associate in Arts Degree in Human Services is available for students who meet the graduation requirements and complete the following required courses.

Program Student Learning Outcomes
A. Describe the historical development of social work, social welfare, and human services systems.
B. Explain and analyze contemporary policies and social problems and services available to meet the needs of various disadvantaged populations.
C. Identify and discuss the values and ethics of the profession.
D. Identify models of service delivery, including community resources, with specific emphasis on the Human Services model.
E. Understand and identify the roles of a human services professional, emphasizing the Helping Process, basic helping skills, identifying behaviors of challenging clients, and the application of crisis intervention strategies.

Program Requirements:
Program Core: (25 Units)
- HMSV - 20 Social Welfare & Social Work ......................... 3
- HMSV - 21 Human Behavior and the Helping Process ......... 3
- HMSV - 22 Survey and Utilization of Community Resources .. 3

Take 6 units from the following courses: (6 Units)
- HMSV - 41 Case Management ........................................... 3
- HMSV - 42 Introduction to Counseling Skills ................. 3
- HMSV - 43 Ethics in Counseling ...................................... 3
- HMSV - 44 Leadership and Counseling in Groups .......... 3

Take 6 units from the following electives: (6 Units)
- ANTH - 02 Sociocultural Anthropology ......................... 3
- ANTH - 10 Southeast Asian Culture: Hmong ................. 3
- CRIM - 33 Violence in the Family ................................... 3
- HIST - 22 History of Minorities -- Black Emphasis ....... 3
- HIST - 23 The History of Hispanic-Americans in the Southwest U.S. ................................................................. 3
- HLTH - 15 Drugs, Alcohol, and Tobacco ....................... 3
- HUM - 15 Comparative Cultures .................................... 3

Electives (as needed to reach 60 units): 1 (2 Units)

Total: (60 Units)

Suggested Sequence:
Semester 1:
- HMSV - 20 Social Welfare & Social Work ......................... 3
- Degree elective

Semester 2:
- HMSV - 21 Human Behavior and the Helping Process ......... 3
- Degree elective

Semester 3:
- HMSV - 22 Survey and Utilization of Community Resources .. 3
- Degree Elective
- COOP - 41A Cooperative Education in (Subject) ......... 1-4 (2 Units)
- Degree Elective
- COOP - 41B Cooperative Education in (Subject) ......... 1-4 (2 Units)

Liberal Arts Studies, Teaching Preparation, A.A. (49501.AA)
For an Associate in Arts Degree in Liberal Studies, students should meet the graduation requirements and complete the 35-unit curriculum listed below, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA. The courses listed below must be in addition to the basic graduation requirements.

Program Student Learning Outcomes
A. Draw connections between California K-8 Content Standards and Subject matter knowledge in Liberal Studies major coursework, including educational technologies relevant to teaching and learning.
B. Examine volunteer service activities in K-8 classrooms.
Program Core: (35 Units)

**COMM - 01** Fundamentals of Speech .................................3 *

or

**COMM - 01H** Honors Fundamentals of Speech ............................3 *

**AOM-30** Introduction to Computer Applications .............................3

**ENGL - 13** Critical Reasoning and Writing .................................3 *

or

**PHIL - 13** Critical Reasoning and Writing .................................3 *

or

**ENGL - 13H** Honors Critical Reasoning and Writing .............................3 *

or

**PHIL - 13H** Honors Critical Reasoning and Writing .............................3 *

**GEOL - 03** Earth Science .....................................................4

**HIST - 17A** United States History and United States Consttution .................................3

or

**HIST - 17AH** Honors United States History and United States Constitution .................................3

**LBST - 10** Introduction to Education I ........................................3

**LBST - 20** Introduction to Education II ........................................3

**MATH - 20A** Basic Structure of Mathematics I ...............................3

**PHSC - 02** Survey of Chemistry and Physics .................................3

**PHSC - 02L** Survey of Chemistry and Physics Laboratory ..................1

Note:

*COM 01 and ENGL 13/PHIL 13 may count for the major and for general breadth lower division requirements.

Plus six units from the following: (6 Units)

**ART - 12A** Sculpture: 3-D Foundations .......................................3

or

**ART - 15** Design: 2-D Foundations .........................................3

or

**ART - 24A** Drawing I .........................................................3

**BIOL - 01** General Biology for Non-Majors ..................................4

**CLDV - 09** Human Development ..............................................3

or

**PSYC - 09** Human Development ..........................................3

**COMM - 30** Introduction to Intercultural Communication ..................3

**ENGL - 08** Introduction to Shakespeare ....................................3

**HIST - 29** History of California ..............................................3

**HUM - 15** Comparative Cultures .............................................3

or

**PHIL - 15** Comparative Religions ............................................3

**LBST - 30** Children’s Literature ..............................................3

**MATH - 20B** Basic Structure of Mathematics II .............................3

**MUSG - 14** American Popular Music History ................................3

Total: (35 Units)

Suggested Sequence:

With the exception of LBST 30, all core courses in the Elementary Education AA-T and Liberal Studies AA are offered each semester. LBST 30 is offered in the fall semester only. Because many of the required program courses also fulfill GE Breadth, it is recommended that students meet with an academic counselor to develop a course of study.

**Psychology, A.A. (20500.AA)**

The Associate in Arts Degree in Psychology is designed for students who are interested in learning more about psychology, but not planning on transferring. Students who are planning on transferring to a California State University should consider the Associate in Arts in Psychology for Transfer degree (AA-T). Students should discuss these options with their counselors.

For this degree, students must complete the 18-unit curriculum listed below. These courses must be in addition to the basic graduation requirements (see catalog for information about the requirements including PE).

Important note: Students who complete this degree will not be granted priority admission to a CSU at junior status. Students who are planning on transferring should complete the AA-T (Associate in Arts in Psychology for Transfer).

Program Student Learning Outcomes

A. Analyze the major theoretical explanations of behavior in the field of psychology.

B. Appraise the applications of psychology.

C. Evaluate the credibility of a claim based on empirical evidence.

Program Requirements:

Program Core: (18 Units)

**PSYC - 01A** Introduction to Psychology .......................................3

or

**PSYC - 01AH** Honors Introduction to Psychology ............................3

Plus 15 units from the following electives:

**ANTH - 02** Sociocultural Anthropology .....................................3

**BIOL - 01** General Biology for Non-Majors ..................................4

**PSYC - 01B** Introduction to Psychological Research Methods .............3

**PSYC - 15** Biological Psychology ............................................3

**PSYC - 22** Human Sexuality ..................................................3

**PSYC - 23** Personal and Social Adjustment ..................................3

**PSYC - 25** Introduction to Abnormal Psychology ...........................3

**PSYC - 36** Developmental Psychology: Adolescence .......................3

**PSYC - 37** Sport Psychology ..................................................3

**PSYC - 40** Drugs and Behavior ................................................3

**PSYC - 49A-ZZ** Special Topics in Psychology ...............................3

**SOC - 01** Introduction to Sociology ...........................................3

**MATH - 10** Elementary Statistics ............................................3

or

**PSYC - 05** Introduction to Statistics in Psychology .......................3

**PSYC - 09** Human Development .............................................3

or

**CLDV - 09** Human Development .............................................3

Total: (18 Units)

**Social and Behavioral Sciences, A.A. (22600.AA)**

The Associate in Arts degree with an area of emphasis in Social and Behavioral Sciences is available for students who meet the graduation requirements and complete the following required courses, with a minimum grade of a “C” in each course in the degree and maintain a 2.0 GPA. Select 12 units from Category 1 and 6 units from Category 2 below. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Program Student Learning Outcomes

A. Evaluate various aspects of human nature and behavior in order to understand the impact on social behavior and relationships.

B. Develop a broader understanding of diverse cultures and historical perspectives to better understand human behavior in contemporary society.
C. Appraise individual motivation and behaviors within various social constructs, including cultural, economic, political, psychological, and sociological.

Program Requirements:
Program Core: (18 Units)
Category 1: (12 Units)
Select 12 units

ANTH - 02 Sociocultural Anthropology .............................. 3
CRIM - 02 Introduction to Criminal Justice .......................... 3
CRIM - 04 Criminal Law ................................................. 3
ECON - 01 Introduction to Microeconomics ................................ 3
ECON - 02 Introduction to Macroeconomics .............................. 3
HIST - 04A World History Part 1 ......................................... 3
HIST - 04B History of Civilization: Part II ............................... 3
HIST - 22 History of Minorities -- Black Emphasis ....................... 3
HIST - 23 The History of Hispanic-Americans in the Southwest U.S. ........................................ 3

Category 2: (6 Units)

SOC - 01 Introduction to Sociology .................................... 3
SOC - 03 Marriage and the Family .................................. 3

Program Student Learning Outcomes
A. Assess programs that support full participation and inclusive practices of children with disabilities, or other special needs, and their families.
B. Evaluate legal requirements related to the care, education and program policies of young children with disabilities or other special needs that meet IDEA, ADA, and state law requirements including parent's rights and confidentiality matters.
C. Evaluate and construct safe and effective use of adaptive equipment based on the recommendations set by specialist service providers, families, and/or the IFSP/IEP team.

Certificate
Child Development, Early Intervention Assistant Specialization Certificate (13015.CT)
Students must take the following classes designated below to complete a 32 unit certificate of Achievement.

Program Requirements:
Program Core: (32 Units)

AGBS - 11 Agricultural Economics .................................. 3
AGRI - 10 Agriculture, Environment, and Society ................. 3
ANTH - 10 Southeast Asian Culture: Hmong ............................... 3
CLDV - 01 Introduction to Curriculum & Strategies in Early Care and Education ........................................ 3
CLDV - 02 Child, Family and Community .............................. 3
CLDV - 03 Principles and Practices of Teaching Young Children ........................................ 3
CLDV - 07 Introduction to Curriculum for the Young Child ......... 3
CLDV - 09 Human Development ....................................... 3
COMM - 30 Introduction to Intercultural Communication .............. 3
CRIM - 01 Criminology ................................................. 3
CRIM - 02 Introduction to Microeconomics .............................. 3
ECON - 01 Introduction to Microeconomics .............................. 3
HIST - 09A China: Introduction to East Asian Civilization ............. 3
HIST - 09B Japan: Introduction to East Asian Civilization .......... 3
HIST - 17A United States History and United States Constitution ........................................ 3
HIST - 17B United States History and California State and Local Government ........................................ 3
HIST - 17AH Honors United States History and United States Constitution ........................................ 3
HIST - 17BH Honors United States History and California State and Local Government ........................................ 3
HUM - 15 Comparative Cultures ....................................... 3
PSYC - 15 Biological Psychology ...................................... 3
PSYC - 22 Human Sexuality ............................................ 3
PSYC - 23 Personal and Social Adjustment ............................... 3
PSYC - 25 Introduction to Abnormal Psychology ...................... 3
PSYC - 36 Developmental Psychology: Adolescence .................. 3
SOC - 02 Contemporary Social Problems ............................... 3
SOC - 03 Marriage and the Family .................................. 3

Total: (32 Units)

Suggested Sequence:
Fall 1
CLDV - 01 Child Growth and Development .................................. 3
CLDV - 02 Child, Family and Community .................................. 3
CLDV - 03 Principles and Practices of Teaching Young Children ................. 3
CLDV - 07 Introduction to Curriculum for the Young Child ......... 3
CLDV - 09 Human Development ....................................... 3
CLDV - 11 Introduction to Curriculum & Strategies in Early Intervention ........................................ 3
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ........................................ 2
CLDV - 38 Children With Special Needs .................................. 3

Total: (32 Units)

Suggested Sequence:
Fall 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ........................................ 2
Spring 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ........................................ 2
CLDV - 33 Working Effectively With Families ............................. 1
CLDV - 54 Sexual Development of Young Children .................... 1
CLDV - 56 School-Age Development ...................................... 2
CLDV - 56L School-Age Development Lab ................................ 2
CLDV - 57 Child Abuse and Neglect ................................... 1

Fall 2
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ........................................ 2
CLDV - 38 Children With Special Needs .................................. 3
CLDV - 30D School-Age Curriculum .................................... 2

Spring 2
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ........................................ 2

Certificate
Child Development, Families in Crisis Specialization
Certificate (13020.CT)

Students must take the following classes designated below to complete a 32 unit certificate of Achievement.

Program Student Learning Outcomes
A. Assess family strengths, needs and risk factors related to child and family health, mental health and development.
B. Evaluate procedures for referrals to community resources with consideration for the diverse linguistic and cultural experiences of families.
C. Advocate in the family and in the community for awareness of risk, resiliency and preventive factors.

Program Requirements:
Program Core: (32 Units)
CLDV - 01 Child Growth and Development ........................................... 3
CLDV - 02 Child, Family and Community ............................................. 3
CLDV - 03 Principles and Practices of Teaching Young Children .................. 3
CLDV - 04 Observation and Assessment .................................................. 3
CLDV - 05 Health, Safety and Nutrition .................................................. 3
CLDV - 06 Teaching in a Diverse Society .................................................. 3
CLDV - 07 Introduction to Curriculum for the Young Child ....................... 3
CLDV - 07L Practicum ........................................................................... 3
CLDV - 33 Working Effectively With Families ......................................... 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2
CLDV - 54 Sexual Development of Young Children ................................... 1
CLDV - 57 Child Abuse and Neglect ....................................................... 1
CRIM - 33 Violence in the Family ............................................................ 3

Total: (32 Units)

Suggested Sequence:
All core classes will be offered every fall and spring semesters. In addition, certificate-specific courses will be offered in the following semesters.

Fall 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2

Spring 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2
CLDV - 33 Working Effectively With Families ......................................... 1
CLDV - 54 Sexual Development of Young Children ................................... 1
CLDV - 56 School-Age Development ..................................................... 2
CLDV - 56L School-Age Development Lab .............................................. 2
CLDV - 57 Child Abuse and Neglect ....................................................... 1

Fall 2
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2

Spring 2
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2
CLDV - 38 Children With Special Needs .................................................. 3
CLDV - 30D School-Age Curriculum ....................................................... 2

Child Development, School-Age Care Specialization Certificate (13030.CT)

Students must take the following classes designated below to complete a 32 unit certificate of Achievement.

Program Student Learning Outcomes
A. Design and analyze theme based activities for children in grades K-8, recognize the curriculum implications for behavior management, including the indoor and outdoor environment, and apply guidance techniques for school-age children.
B. Distinguish characteristics of the school-age care profession and professional.
C. Self-assess strengths and weaknesses of a school-age care provider, and understand the role in partnerships with the community and families of school-age children.
D. Determine current issues facing school-age children and apply school-age theories to school-age development, including physical, cognitive, and psychosocial development, and observe children in three age groups, 5-7, 8-10, and 11-13 years old.

Program Requirements:
Program Core: (32 Units)
CLDV - 01 Child Growth and Development ........................................... 3
CLDV - 02 Child, Family and Community ............................................. 3
CLDV - 03 Principles and Practices of Teaching Young Children .................. 3
CLDV - 04 Observation and Assessment .................................................. 3
CLDV - 05 Health, Safety and Nutrition .................................................. 3
CLDV - 06 Teaching in a Diverse Society .................................................. 3
CLDV - 07 Introduction to Curriculum for the Young Child ....................... 3
CLDV - 07L Practicum ........................................................................... 3
CLDV - 33 Working Effectively With Families ......................................... 1
CLDV - 37 Adult Supervision and Mentoring in Early Care and Education ...... 2
CLDV - 54 Sexual Development of Young Children ................................... 1
CLDV - 56 School-Age Development ..................................................... 2
CLDV - 56L School-Age Development Lab .............................................. 2
CLDV - 57 Child Abuse and Neglect ....................................................... 1

CSU General Education (CSU-GE-Breadth) Certificate (49100.CT)
A minimum of 39 units from the following:
Students must complete a minimum of 39 units used to satisfy the CSU Transfer Breadth Requirements. Students must receive full certification of the CSU General Education Breadth lower division pattern, which requires a grade of "C" or better in Area A and Area B-4. See the CSU Transfer Breadth requirements patterns listed in the Merced College catalog or consult with a Merced College counselor.

Human Services Certificate (21500.CT)
A Certificate of Achievement will be awarded upon the satisfactory completion of the curriculum listed below.

Program Student Learning Outcomes
A. Recognize community resources that facilitate the helping process, including the importance of advocating for community empowerment, participation, and change.
B. Explain the historical development and philosophical paradigms of the social work, social welfare, and human services systems.
C. Understand and identify the roles of a human services professional, emphasizing the Helping Process, basic helping skills, identifying behaviors of challenging clients, and the application of crisis intervention strategies.
Program Requirements:

Program Core: (31 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COOP - 41AHS</td>
<td>Cooperative Education</td>
<td>2-4</td>
</tr>
<tr>
<td>HMSV - 20</td>
<td>Social Welfare &amp; Social Work</td>
<td>3</td>
</tr>
<tr>
<td>HMSV - 21</td>
<td>Human Behavior and the Helping Process</td>
<td>3</td>
</tr>
<tr>
<td>HMSV - 22</td>
<td>Survey and Utilization of Community Resources</td>
<td>3</td>
</tr>
<tr>
<td>HMSV - 41</td>
<td>Case Management</td>
<td>3</td>
</tr>
<tr>
<td>HMSV - 42</td>
<td>Introduction to Counseling Skills</td>
<td>3</td>
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<tr>
<td>HMSV - 43</td>
<td>Ethics in Counseling</td>
<td>3</td>
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<tr>
<td>HMSV - 44</td>
<td>Leadership and Counseling in Groups</td>
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Take 2 courses from the following: (6 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ANTH - 02</td>
<td>Sociocultural Anthropology</td>
<td>3</td>
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<tr>
<td>ANTH - 10</td>
<td>Southeast Asian Culture: Hmong</td>
<td>3</td>
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<td>CRIM - 33</td>
<td>Violence in the Family</td>
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<td>HIST - 23</td>
<td>The History of Hispanic-Americans in the Southwest</td>
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<td>HLTH - 15</td>
<td>Drugs, Alcohol, and Tobacco</td>
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<td>HUM - 15</td>
<td>Comparative Cultures</td>
<td>3</td>
</tr>
</tbody>
</table>

CLDV - 09  | Human Development                                  | 3     |

or

PSYC - 09  | Human Development                                  | 3     |

or

CLDV - 01A | Introduction to Psychology                         | 3     |

or

PSYC - 01AH | Honors Introduction to Psychology                   | 3     |

Suggested Sequence:

Total: (31 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Units</th>
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<tbody>
<tr>
<td>CLDV - 30D</td>
<td>School-Age Curriculum</td>
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<td>CLDV - 56L</td>
<td>School-Age Development Lab</td>
<td>2</td>
</tr>
<tr>
<td>CLDV - 07L</td>
<td>Practicum</td>
<td>3</td>
</tr>
<tr>
<td>CLDV - 30</td>
<td>Infant and Toddler Development</td>
<td>3</td>
</tr>
<tr>
<td>CLDV - 30L</td>
<td>Infant/Toddler Care and Education Practice</td>
<td>3</td>
</tr>
<tr>
<td>CLDV - 37</td>
<td>Adult Supervision and Mentoring in Early Care and</td>
<td>2</td>
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<td>Education</td>
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Total: (32 Units)

Suggested Sequence:

Fall 1

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Spring 1

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Fall 2

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Spring 2

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</tr>
<tr>
<td></td>
<td>Education</td>
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</tbody>
</table>

Intersegmental General Education Transfer Curriculum (IGETC) Certificate (49200.CT)

Program Student Learning Outcomes

A. Distinguish infant/toddler care giving principles and infant/toddler education practices.
B. Design environments and curriculum for infant/toddler care giving settings (including inclusive care) which supports learning and building strong, positive, respectful and culturally responsive relationships with children and families.
C. Distinguish the professional practices of adults and staff in infant/toddler care giving settings.

Program Requirements:

Infant/Toddler Care Certificate (13026.CT)

For successful completion, a student must complete the required 32 units outlined in the Certificate of Achievement with a GPA of 2.0 or better. A student must have earned a grade of C or better in each course to qualify for a Child Development permit through the Commission on Teacher Credentialing.

Program Student Learning Outcomes

A. Distinguish infant/toddler care giving principles and infant/toddler education practices.
B. Design environments and curriculum for infant/toddler care giving settings (including inclusive care) which supports learning and building strong, positive, respectful and culturally responsive relationships with children and families.
C. Distinguish the professional practices of adults and staff in infant/toddler care giving settings.

Program Requirements:

Certificate of Competency

Court Interpreter Certificate of Competency (21078.NC)

This is a short-term vocational program with high employment potential within the state of California. The program consists of a sequence of courses leading to a vocational/career technical objective and certificate that is directly related to employment.

Program Student Learning Outcomes

Upon completion of the Court Interpreter program students will be better prepared to pass state and federal examinations for certification as Spanish to English interpreters.

Program Requirements:

Continuing Education (Noncredit)
Mathematics College Preparatory Basic Skills Certificate (49166.NC)
This noncredit program is designed to serve students who have not met the minimum Mathematics placement test scores to enter college level coursework. Students will benefit from elementary and secondary basic skills instruction in Mathematics and prepare them for credit Mathematics coursework.

Program Student Learning Outcomes
A. Evaluate arithmetic expressions involving whole numbers without the use of a calculator.
B. Solve problems including geometry concepts without the use of a calculator.
C. Solve application problems whole numbers and geometry concepts without the use of a calculator.

Program Requirements:
Program Core:
MAT - 101 College Prep Math I: Operation of whole Numbers ...
45-63 Total, Open Entry
MAT - 102 College Prep Math II: Applications of Whole Numbers
45-63 Total Open Entry

Medical Assistant Certificate of Competency (10100.NC)
This is a Short-term vocational program with high employment potential. The program consists of a sequence of courses leading to a vocational/ career technical objective and certificate that is directly related to employment.

Program Student Learning Outcomes
Upon completion of the Medical Assistant program the student will be prepared to seek employment directly related to the Medical Assisting career pathway.

Program Requirements:
Program Core:
BUSN - 752 Introduction to Microcomputers
24 Total, Open Entry
EDU - 112C Skills Acquisition for Student Success - Allied Health
27-36 Total, Open Entry
MED - 717 Medical Assisting
960 Total, Open Entry

ESL Beginning Skills Program Certificate of Completion (49196.NC)
The Beginning ESL program is for preliterate and non literate ESL students who have minimal English language skills. Emphasis in this program is on aural and oral skills with visual reinforcement. The student will be introduced to reading, writing and math skills.

Program Requirements:
Program Core:
ENG - 801 Beginning ESL Skills ........... 204-255 Total, Open Entry
ENG - 802 Advanced-Beginning ESL Skills 204-255 Total, Open Entry

ESL Intermediate Skills Program Certificate of Completion (49198.NC)
The Intermediate ESL program is designed for intermediate level students who have learned basic survival skills, but who need instruction that will lead to a relatively sophisticated level of discourse of issues, and ideas that reach beyond basic survival. The program will prepare students to take credit courses at Merced College. This program includes practice in listening, speaking, reading, and writing.

Program Requirements:
Program Core:
ENG - 813 Low-Intermediate ESL Skills .............. 204 - 255 Total
ENG - 815 Intermediate ESL Skills .................. 204 - 255 Total

Reading and Writing College Preparatory Basic Skills Certificate of Completion (49199.NC)
This noncredit program is designed to serve students who have not met the minimum reading and writing placement test scores to enter college level coursework. Students will benefit from elementary and secondary basic skills instruction in reading and writing and prepare them for credit English coursework.

Program Student Learning Outcomes
A. Demonstrate comprehension of textbooks at a reading Lexile score of 690 or above.

B. Compose several sentences in response to level-appropriate critical thinking questions.

Program Requirements:
Program Core:

ENG - 121 College Prep English 1: Reading
45-63 Total, Open Entry

ENG - 122 College Prep English 2: Writing
45-63 Total, Open Entry
ACCOUNTING

ACTG-04A: Financial Accounting
Designations: (C-ID ACCT 110)

Unit(s): 4
Lecture Hours: 4
Lab Hours: 0

Advisories: ACTG 51; ENGL 85A or ENGL 85AC or ENGL 85E.

This course provides the student with the knowledge of corporate financial statement reporting and the ability to analyze the reports of a corporation. Basic topics include analysis of transactions and preparation of financial statements related to developing an understanding of the financial condition of a corporation. This accounting course is recommended for students who have knowledge of or equivalent experience in the basics of bookkeeping. (2/11)

ACTG-04B: Managerial Accounting
Designations: (C-ID ACCT 120)

Unit(s): 4
Lecture Hours: 4
Lab Hours: 0

One-way Corequisite: ACTG 04A or ACTG 51.

Advisories: MATH 81.

This course provides students with instruction in managerial accounting. Topics include job-order and process costing, cost-volume-profit relationships, the contribution approach to costing, budgeting, standard costing, capital budgeting and investment decisions, and relevant costs for decision making. (10/13)

ACTG-31: Computerized Accounting

Unit(s): 2
Lecture Hours: 1
Lab Hours: 3

Prerequisites: ACTG 04A or ACTG 51.

Advisories: AOM 30; ENGL 85A or ENGL 85AC or ENGL 85E.

This course provides instruction in computer-assisted accounting. Topics include general ledger setup, accounts receivable setup, accounts payable setup, transactions and reports, financial statement analysis, depreciation, and payroll. (2/11)

ACTG-51: Applied Accounting

Unit(s): 4
Lecture Hours: 4
Lab Hours: 0

Prerequisites: MATH 80.

Advisories: MATH 81.

This course is an entry-level accounting course emphasizing a preparer approach using manual accounting methods, and comparing them to current computerized accounting. Basic course work during the first half of the semester relates to the sole proprietorship type organization. During the second half of the course the emphasis changes to cover the basics of partnership and corporate accounting. Students will become acquainted with both the theory and terminology associated with the accounting cycle and within an accounting system. Other topics in accounting may also be covered including payroll, cash, inventory, bad debts, and depreciation. (9/13)

ACTG-52: Payroll Records and Accounting

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

One-way Corequisite: ACTG 04A or ACTG 51.

Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.

This course covers payroll tax laws, computation of payroll taxes, completion of payroll tax forms, and the recording of payroll transactions in the journal. Emphasis is placed on computing gross wages, calculating withholding amounts (such as Social Security, Medicare, income taxes (federal & state), and unemployment taxes); determining net pay; preparing appropriate tax forms with reporting requirements; and journalizing/posting payroll transactions. Upon completion, students should be able to analyze data, make appropriate calculations, complete payroll tax forms, and prepare accounting entries. (4/17)

ACTG-53: Fundamentals of Income Tax Accounting

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

Advisories: ACTG 51 or ACTG 04A; ENGL 85A or ENGL 85AC or ENGL 85E.

This course provides the student with the knowledge of tax laws, accounting procedures, and preparation of required returns for federal income taxes. An introduction to partnership and corporate taxation, as well as a brief overview of tax administration, will supplement the course material. (2/11)

AGRICULTURE BUSINESS

AGBS-10: Introduction to Agriculture Business
Designations: (C-ID AG 104)

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

Advisories: ENGL-85: MATH 80.

This course is a survey of the broad scope of agriculture business. It serves as and introduction to economic, accounting, management, sales, leadership, and marketing aspects of agriculture and their impact on producers and consumers. The management principles encountered in the day-to-day operation of a agricultural enterprise are stressed as they relate to the decision-making process. (11/13)

AGBS-11: Agricultural Economics
Designations: (CSU breadth area D) (IGETC area 4)

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

Advisories: ENGL-85: MATH 81.

This course includes the analysis of the microeconomic principles of supply and demand and the affects on producers and consumers. This class will explore the contemporary and historical place of agriculture and farmers in our economic, social, and political systems and their relationship to the consuming public. (10/13)

AGBS-12: Agricultural Accounting
Designations: (C-ID AG 128)

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

Advisories: ENGL-85: MATH 81.

This course will focus on the principles of agricultural accounting systems, types of records, their use, and how to compute and use measures of earnings and costs of production to improve agribusiness efficiency. (11/13)

AGBS-13: Agricultural Marketing

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0

Advisories: ENGL-85: MATH 80.

This course includes a survey of the marketing aspects of the agriculture industry and an overview of the structure and institutional aspects of the marketing system. Emphasis will be on the marketing functions and how consumer trends affect agribusiness. (1/14)

AGBS-14: Farm Management
This course will focus on the organization and operation of a farm or ranch businesses, identification of factors affecting profitability, evaluation of the business for increased efficiency and profit, and the application of budgeting to the laboratory school farm. (1/14)

AGBS-17: Agricultural Sales and Communication
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL-85; MATH 81.
This course involves the study of principles and practices of the selling process: selling strategies and approaches, why and how people buy, prospecting, territory management, and customer service. Additional topics for exploration include self-management, communication, interpersonal skills necessary to developing managerial abilities, leadership qualities, and facilitation of teamwork within the agribusiness sector. (1/14)

AGBS-18: Agricultural Computer Applications
Designations: C-ID AG 108
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL-85; MATH 81.
This course explores computer use in the workplace with emphasis on agribusiness situations. Computer applications including word-processing, spreadsheets, databases, and presentation managers will be covered. Also included will be accessing information through the Internet and World Wide Web, telecommunications, an introduction to web page design, and other software appropriate to agribusiness. (11/13)

AGBS-30A: Elements of Agricultural Leadership
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 84A.
The purpose of this course is to increase the effectiveness of agricultural student leaders. Leadership theories and models will be explored along with opportunities to apply specific leadership skills. The curriculum is designed to develop students for leadership positions in local, state, regional, and national organizations and agencies involved in the agriculture industry. (2/15)

AGBS-30B: Agriculture Leadership-Personal Development
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 84A.
This course focuses on the knowledge, skills and attitudes that enhance personal effectiveness and professional success. Students will gain self-awareness and study leadership traits. Goal attainment, personal organization and critical thinking strategies are emphasized. (2/15)

AGBS-30C: Agriculture Leadership-Team Leadership
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 84A.
Principles and practices in planning, developing, conducting, and evaluating leadership programs for agricultural groups. The course focuses on helping students better understand themselves and others; improving group communication; becoming effective leaders and members of groups; improving leadership and personal development skills; assessing leadership situations, determining and administering appropriate leadership strategies, and evaluating results. (2/15)

AGBS-31A: Agricultural Ambassadors-Introduction
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 84A.
The purpose of this course is to introduce students to the Agricultural Ambassador program. Ambassadors promote agricultural awareness and educational opportunities in agriculture at Merced College and beyond. Students will learn the role of Ambassadors, develop their communication and leadership skills, plan leadership events, prepare recruitment materials, and deliver recruitment presentations to prospective students and members of the community. (2/14)

AGBS-31B: Agricultural Ambassadors-Recruitment
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 84A.
The purpose of this course is to focus the recruitment role of the Agricultural Ambassadors as they promote agricultural awareness and educational opportunities in agriculture at Merced College and beyond. Students will learn the fundamentals of effective presentations, conduct tours, plan leadership events, prepare recruitment materials, and deliver recruitment presentations for prospective students and members of the community while serving in the role of Agricultural Ambassador. (2/14)

AGBS-31C: Agricultural Ambassadors-Public Relations
Unit(s): 2
Lecture Hours: 2
Advisories: ENGL 84A.
The purpose of this course is to focus on the public relations role of the Agricultural Ambassadors as they promote agricultural awareness and educational opportunities in agriculture at Merced College and beyond. Students will learn the fundamentals of public relations, communication and leadership skills, plan leadership events, prepare recruitment materials, and deliver recruitment presentations for prospective students and members of the community while serving in the role of Agricultural Ambassador. (2/14)

AGBS-70A-Z: Special Topics in Agriculture Business
Unit(s): 0.5 - 4
Lecture Hours: 0-4
Lab Hours: 0-12
Advisories: ENGL-85; MATH 81 or MATH B.
This course is the study of basic principles, processes, and theories of the special topic being presented during the semester. (12/06)

AGRICULTURE

AGRI-10: Agriculture, Environment, and Society
Designations: (CSU breadth area D)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: AGBS 18; ENGL 85A or ENGL 85AC or ENGL 85E; LRNR 30.
This course involves an international view of the sociology of agriculture presented through an examination of relationships between societies and their environments, economics, and agriculture. Emphasis will be placed on the analysis of agriculture’s use of technology and the corresponding impact on the environment, economy, and society on a global scale. (10/17)

ALLIED HEALTH

ALLH - 24: Work Experience in Allied Health
Unit(s): 1-8
Lecture Hours: 0
Lab: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational
Artificial insemination, embryo manipulation, and current innovations in gametogenesis, conception, gestation, parturition, and maternal behaviors. Aspects to include endocrinology, estrous cycles, mating behaviors, systems, heterosis, and performance evaluation. The reproductive aspects to be emphasized include basic inheritance, selection techniques, mating relate to animal species significant to agriculture. The genetic principles of the anatomical and physiological aspects of reproduction as they relate to offspring quality and productivity. Therefore, the study of animal genetics is fundamental to improving animal species. The objective of this course is to introduce students to the basic principles of animal genetics as they apply to animal improvement. The course will emphasize the application of these principles to the livestock and poultry industries. The course will cover the following topics: basic genetics, linkage and mapping, quantitative inheritance, and animal breeding. The course includes lectures, laboratory exercises, and a field trip. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action.

ANSC-10: Elements of Animal Science
Designations: (C-ID AG 104)
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of the evolutionary and role of the equine species throughout history, breed selection and development, nutrition, diseases, preventive medicine, embryology, anatomy, and reproduction. This course will cover the anatomy and physiology of the equine species as they relate to health and the formulation of livestock rations will be emphasized. This course is designed to provide students with the basic knowledge and skills necessary for entry into the animal science field. The course includes lectures, laboratory exercises, and a field trip. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action. The course includes lectures, laboratory exercises, and a field trip. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action. The course includes lectures, laboratory exercises, and a field trip. The laboratory exercises will include genetic analysis of pedigrees and selection of breeding stock. The field trip will provide an opportunity to see animal genetics in action.

ANSC-11: Elements of Animal Nutrition
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
The science of animal nutrition is the basis for "Livestock Feeding and Nutrition." The fundamentals of digestion and absorption in both ruminants and non-ruminants are discussed in this course. The nutritive value of feeds as they relate to the formulation of livestock rations will be emphasized, including by-product feeding.

ANSC-12: Livestock Breeding and Selection
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course combines the study of basic genetic principles with the study of the anatomical and physiological aspects of reproduction as they relate to animal species significant to agriculture. The genetic principles to be emphasized include basic inheritance, selection techniques, mating systems, heterosis, and performance evaluation. The reproductive aspects to include endocrinology, estrous cycles, mating behaviors, gametogenesis, conception, gestation, parturition, and maternal behaviors. Artificial insemination, embryo manipulation, and current innovations in reproductive biotechnology will also be examined. This course of animal health and sanitation will provide instruction to the student on common livestock diseases and fundamentals of immunity. It will also include coverage of the livestock worker's role in promoting animal health and the foundation of disease control programs.

ANSC-13: Animal Disease and Parasite Control
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work per semester. Sixty (60) hours of documented volunteer experience equals 1 unit of credit.
experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

**ANSC-30: Fitting, Showing, and Merchandising Livestock**
- **Unit(s):** 1.5
- **Lecture Hours:** 1
- **Lab Hours:** 1.5
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E.

This course is designed for students to develop skills in preparing and marketing beef cattle, sheep, swine, dairy cattle, and goats for competition at intercollegiate livestock competitions. Lessons in exhibiting the animals are given. The course may be repeated three times. (4/13)

**ANSC-40: Beginning Horsemanship (Western)**
- **Unit(s):** 2
- **Lecture Hours:** 1
- **Lab Hours:** 3
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E.

This is a course that deals with the handling and schooling of a horse from the ground, in addition to basic fundamentals of riding. Safety factors for both horse and rider will be emphasized. Other areas of the course will include the proper use of equipment and aids. (2/14) (Note: Check with instructor for supplies needed.)

**ANSC-41: Intermediate Horsemanship (Western)**
- **Unit(s):** 2
- **Lecture Hours:** 1
- **Lab Hours:** 3
- **Prerequisites:** ANSC 40
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E.

This is a class in intermediate western riding which will enable a person to school a horse, teach beginning riding, or train another rider in schooling. The student will obtain a working knowledge of the judging of horse shows and obligations involved in the judging of different events. A rider in this class is expected to be able to give a creditable performance in a standard AHSA or AQHA horse show. (2/14) (Note: Check with instructor for supplies needed.)

**ANSC-70AA-ZZ: Special Topics in Animal Science**
- **Unit(s):** 0.5 - 4
- **Lecture Hours:** 0-4
- **Lab Hours:** 0-12
- **Advisories:** ENGL 84A.

This course is the study of basic principles, processes, and theories of the special topic being presented during the semester. (1/07)

**ANTHROPOLOGY**

**ANTH-01: Introduction to Biological Anthropology**
- **Designations:** (CSU breadth area B2/B3) (IGETC area 5B/5C) (C-ID ANTH 110)
- **Unit(s):** 4
- **Lecture Hours:** 3
- **Lab Hours:** 3
- **Advisories:** ENGL 01A

This survey course deals with the study of human biological heritage and physical variability. Genetics, the fossil evidence and theories of human evolution, forensic anthropology, primatology and current bioethical issues will be discussed. The laboratory portion of the course will include exercises in: genetics, human variation, skeletal analysis, forensic anthropology, evolution and the fossil record, and primate anatomy and behavior. The philosophy of science and the scientific method serve as the foundation for this course. (9/16)

**ANTH-02: Sociocultural Anthropology**
- **Designations:** (C-ID ANTH 120) (CSU breadth area D) (IGETC area 4)
- **Unit(s):** 3
- **Lecture Hours:** 3
- **Lab Hours:** 0
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an introduction to the study of human culture and the concepts, theories, and methods used in the comparative study of sociocultural systems. Subjects include subsistence patterns, social and political organization, language and communication, family and kinship, religion, the arts, social inequality, ethnicity, gender, and culture change. The course applies anthropological perspectives to contemporary issues. (10/12)

**ANTH-10: Southeast Asian Culture: Hmong**
- **Designations:** (CSU breadth area D) (IGETC area 4)
- **Unit(s):** 3
- **Lecture Hours:** 3
- **Lab Hours:** 0
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E.

This course surveys the basic ideas and social constructs of Southeast Asian Cultures, especially the cultures of the new Southeast Asian groups of people in California: Hmong, Mien, Lue, Lao, Cambodian, and Vietnamese. Emphasis will be placed on issues of cultural ethnicity, family life style, educational background, and socio-political organization of each group in the past and in the United States. (11/13)

**ADMINISTRATIVE OFFICE MANAGEMENT**

**AOM-30: Introduction To Computer Applications**
- **Unit(s):** 3
- **Lecture Hours:** 2
- **Lab Hours:** 3
- **Advisories:** ENGL 84A; MATH 80.

This course is intended for students seeking an introduction to application software used in the workplace with emphasis on business situations. Computer applications including word processing, spreadsheets, databases, and presentation managers will be covered. (11/17)

**AOM-43: Essentials of Business Communication**
- **Unit(s):** 3
- **Lecture Hours:** 3
- **Lab Hours:** 0
- **Advisories:** AOM 30, AOM 50B.

This course covers the business writing patterns of routine, persuasive, and negative messages. Students learn the basic training in listening, speaking, and non-verbal communication in order to develop the skills needed in everyday communication in business. Given a scenario, students create e-mail, memos, letters, proposals, reports and an ePortfolio. Students learn about doing business with other cultures and giving oral business presentations. (11/17)

**AOM-50B: Document Formatting**
- **Unit(s):** 3
- **Lecture Hours:** 2
- **Lab Hours:** 3
- **Students:** 0

Students will learn the (1) development of basic computerized keyboarding techniques and (2) fundamental knowledge of word processing software to properly format memorandums, letters, envelopes, tables, and reports. (11/17)

**AOM-50C: Learn to Type**
- **Unit(s):** 1
- **Lecture Hours:** 1
- **Lab Hours:** 0

This course teaches an introduction to the keyboard for non-typists. (11/17)

**AOM-52C: Keyboarding Speed and Accuracy**
- **Unit(s):** 1
- **Lecture Hours:** 1
- **Lab Hours:** 0
- **Advisories:** Upon entering the course it is recommended that the student be able to: Know the qwerty enhanced keyboard and be able to key at least 22 wpm with 85% accuracy.

This course is designed to increase keyboarding speed and accuracy through the use of individualized evaluation. The course helps bridge the speed gap between each level of keyboarding instruction. It is designed for
the student who wishes to gain keyboarding speed and accuracy. (11/17)

**AOM-53: Advanced Computer Applications**
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: AOM 30.

The student will learn the advanced features of the word processor, spreadsheet, database, and presentations applications. Typically the most current version of Microsoft Office is taught, students are advised to check with the discipline faculty for software version information. A prerequisite challenge is encouraged from students who can provide evidence of competency of current introductory software skills in Word, Excel, Access, and PowerPoint. (11/15)

**AOM-56: Office Procedures**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Advisories: ENGL 84A

Students will learn the skills, strategies, and techniques needed to perform the common office procedures employed in any business. (11/08)

**AOM-58A: Web Site Development**
- Unit(s): 2
- Lecture Hours: 2
- Lab Hours: 0
- Advisories: AOM 30.

This is an introductory course in the planning, design and creation of a website. (11/17)

**AOM-58A: Web Site Development**
- Unit(s): 4
- Lecture Hours: 4
- Lab Hours: 0

This course will enable the student to develop a basic knowledge of the national diagnostic and procedural coding systems and to simplify the process of filing claim forms. The student will be introduced to the major medical insurance programs, reimbursement, privacy rules, HIPAA, basic understanding of legal and regulatory considerations. The student will be able to identify and define medical terminology and abbreviations used in the outpatient setting. (11/17)

**AOM-60A: Business English**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Advisories: ENGL 84A; AOM 50B or type 25 wpm.

This course covers the mechanics of English as specifically applied to the field of business. It covers sentence structure, spelling, punctuation, grammar, business vocabulary, and the application of appropriate writing techniques for business communication. (11/15)

**ARCHAEOLOGY**

**ARCH-01L: Field Archaeology**
- Unit(s): 1
- Lecture Hours: 0
- Lab Hours: 3
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course provides the student with an opportunity to gain practical experience in archaeological field reconnaissance, archaeological site excavation, laboratory analysis of archaeological data and in the preparation of archaeological reports. Students will take part in surveys and excavations on local historic and prehistoric sites. (5/14)

**ART**

**ART-01: Art History: Ancient Through Gothic**
- Designations: (CSU breadth area C1) (IGETC area 3A)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
- Advisories: ENGL 01A

This course is a survey that examines the historical contexts of humanity through the development of art, architecture, painting, sculpture, and the minor arts, from pre-history through the Gothic period. (5/10)

**ART-02: Art History: Renaissance Through 20Th Century**
- Designations: (CSU breadth area C1) (IGETC area 3A)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
- Advisories: ENGL 01A

This course is a survey that examines the historical contexts of humanity through the development of art, architecture, sculpture, painting and the applied arts from the Renaissance to the 20th Century. (5/10)

**ART-06: Survey of Modern Art**
- Designations: (CSU breadth area C1) (IGETC area 3A) (C-ID ARTH 150)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
- Advisories: ENGL 01A

This course is a survey of the prominent artists and art movements from the 19th and 20th centuries to today. Major works in painting, sculpture, architecture and the applied arts are covered. The historical context of science, invention, world events, politics, philosophy, religion, and music are examined as influences reflected in each generation’s contribution to the history of the visual arts. (12/15)

**ART-12A: Sculpture: 3-D Foundations**
- Designations: (C-ID ARTS 101)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an introduction to the fundamentals of the sculpting process and the study of a variety of materials related to sculpture. Projects explore the elements and principles of 3-D design and the conceptual styles of realism to abstraction, both in the round and as bas-relief. Important sculptors and their significant works from various historical periods and various cultures are examined. A small materials fee covers the cost of the works created. (5/12)

**ART-12B: Intermediate Sculpture**
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: ART 12A

Students will explore sculpture materials, methods, techniques, and create three-dimensional design projects related to intermediate-level course
work. Students will research important sculptors and their significant works from various historical periods and cultures. A materials fee will cover the cost of the art works created. (1/14)

ART-15: Design: 2-D Foundations
Designations: (C-ID ARTS 100) (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 01A
This studio survey class is a required foundation course for the study of the Visual Arts. Lectures and studio projects explore and analyze concepts related to the elements and principles of current and historical design theories. Philosophical, social, and cultural implications are examined. Subject matter is directly linked to topics in 2-D, fine art, graphic design, commercial art, and photography, with broader applications to professional fields of 3-D, applied arts, environmental design, architecture, interior design and fashion. Required for Art Majors. (12/15)

ART-17A: Introduction to Ceramics
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to ceramic materials, concepts, and processes including basic design elements and principles, creative development, hand-building, throwing, glaze techniques, firing and ceramic terminology. The course covers aesthetics and creative development of clay objects examining historical, contemporary and personal modes of expression across multiple cultures. (5/14)

ART-17B: Intermediate Ceramics
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART 17A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is an intermediate course in ceramic pottery and sculpture design and construction, non-technical glaze composition, and kiln firing. Stress is placed upon the attainment of skill on the potter's wheel and organization of construction problems. Students pursue projects of individual interest. (5/14)

ART-20A: Introduction to Printmaking
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ART-24A; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the basic materials, equipment and fundamental printmaking processes including relief (linocut and woodcut), intaglio (drypoint, etching and collagraph) and stencil (screenprint) methods. Students will produce limited editions of black and white prints, be introduced to color techniques and survey the history of printmaking. (2/14)

ART-20B: Intermediate Printmaking
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART 20A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course deals with color printmaking techniques, as well as black and white, with an emphasis on intaglio processes and the lithographic technique in which images are printed from limestone slabs. (2/14)

ART-23A: Introduction to Painting
Designations: (C-ID ARTS 210)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the principles, elements, and practices of painting in oil and acrylic medium. Students will focus on exploration of painting materials, perceptual skills and color theory, paint mixing and technique, as well as creative responses to materials and subject matter. (2/14)

ART-23B: Intermediate Painting
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART 23A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an exploration of artistic concepts, styles, and creative expression related to intermediate-level painting, focusing on complex subject matter and concepts using a variety of subjects, techniques, and methodologies. Students in this course will build on fundamental painting skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to painting. (2/14)

ART-24A: Drawing I
Designations: (C-ID ARTS 205)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART-24A.
This studio survey course introduces the principles, elements, and practices of drawing, employing a wide range of subject matter and drawing media. Students will focus on perceptually based drawing, observational skills, technical abilities, conceptual thinking and critical analysis. Historical and contemporary developments, critical trends, materials, and approaches in drawing will be examined for their philosophical and cultural implications. Required for Art Majors. (1/17)

ART-24B: Intermediate Drawing
Designations: (C-ID ARTS 205)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART-24A.
This course is an exploration of artistic concepts, styles, and creative expression related to intermediate-level drawing, focusing on complex subject matter and concepts using a variety of drawing mediums, techniques, and methodologies. Students in this course will build on fundamental drawing skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to drawing. (2/14)

ART-26A: Introduction to Figure Drawing
Designations: (C-ID ARTS 200)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to drawing the human figure from observation using a wide variety of drawing media and techniques. Topics include an introduction to human anatomy and the historical and contemporary roles of figure drawing in the visual arts. Students in this course will learn both descriptive and interpretive approaches to drawing the figure, in both rapid and extended studies. (2/14)

ART-26B: Intermediate Figure Drawing
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ART 26A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Exploration of artistic concepts, styles, and creative expression related to intermediate-level figure drawing, focusing on complex composition and concepts using a variety of color drawing mediums, techniques, and
methodologies. Students in this course will build on fundamental figure
drawing skills to develop personalized approaches to content and materials in
exercises covering multiple historical and contemporary approaches to
figure drawing. (2/14)

**ART-29A: Introduction to Watercolor Painting**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites:ART 29A
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an exploration of artistic concepts, styles, and creative
expression related to intermediate-level watercolor painting, focusing on
complex subject matter and concepts using a variety of subjects,
techniques, and methodologies. Students in this course will build on
fundamental watercolor painting skills to develop personalized approaches
to content and materials in exercises covering multiple historical and
contemporary approaches to painting. (2/14)

**ART-29B: Intermediate Watercolor Painting**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites:ART 29A

This course is an exploration of artistic concepts, styles, and creative
expression related to intermediate-level watercolor painting, focusing on
complex subject matter and concepts using a variety of subjects,
techniques, and methodologies. Students in this course will build on
fundamental watercolor painting skills to develop personalized approaches
to content and materials in exercises covering multiple historical and
contemporary approaches to painting. (2/14)

**ART-48A-ZZ: Advanced Special Problems in Art**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3

Limitations on Enrollment: Before enrolling, the student must complete
a contract detailing proposed area of study.

Completed contract requires signatures: a) the instructor of the course
section the student will be attending; b) the Arts Division Chairperson.

This course is designed to provide students with the opportunity to do
advanced, specialized work, under the supervision of an instructor in
areas not offered in regular classes. Students must develop an advanced
problem in the area of art that they wish to explore. (1/08)

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**DIGITAL ART**

**ARTD-07: History of Graphic Design**

- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This survey course encompasses graphic art forms from the development of
written language to contemporary digital media across a range of cultural
perspectives. The class explores formative printed media and
Gutenberg press book design from illuminated manuscripts through the
Renaissance, Victorian era and Art Nouveau graphics and critical theory
from the modernist era through postmodernism and the digital revolution.

(12/17)

**ARTD-40A: Introduction to Digital Art**

- Designations: (CSU breadth area C1) (IGETC area 3A)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

The studio course introduces fundamental raster and vector
artwork concepts and manipulation processes. Students will learn basic
design elements, compositional principles, current digital art theories,
philosophical and cultural implications, and software techniques to create,
edit, and output digital visuals. The course emphasizes creative thinking
skills, design aesthetics, and still and motion media competence. (10/14)

**ARTD-40B: Intermediate Digital Art**

- Designations: (CSU breadth area C1) (IGETC area 3A)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Advisories: ART 15, ARTD 40A; ENGL 85A or ENGL 85AC or ENGL 85E.

This studio course continues to inculcate creative thinking ability, the
exploration of design elements & composition, and imaginative technical
ability through the use of bitmap and vector software programs. Students' perceptual capability will expand when producing innovative artworks for print, web, and multimedia outputs. Digital art history, contemporary trends, and emerging media underscore the course's broadminded structure. (9/15)

**ARTD-41A: Introduction to Graphic Design**

- Designations: (C-ID GDES 120)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Advisories: ART 15; ENGL 85A or ENGL 85AC or ENGL 85E.

This studio survey course introduces fundamental concepts and
manipulation processes in graphic design and the visual communication
arts. Students will learn foundational design principles, conceptual
thinking, and typographic layout while also exploring philosophical and
cultural implications. Students utilize software and traditional drawing-board design practices that visually enlighten and effectively communicate to a mass audience. (1/17)

**ARTD-41B: Intermediate Graphic Design**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: ARTD 41A
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This studio survey course continues to explore concepts and manipulation
processes in graphic design and the visual communication arts. Students will learn intermediate design principles, conceptual thinking, and typographic layout while also exploring philosophical and cultural implications. Students utilize software and traditional drawing-board design practices that visually enlighten and effectively communicate to a mass audience. (1/17)

**ARTD-42A: Introduction to Motion Graphics**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: ARTD 42A
- Advisories: ART-24A; ENGL-85A or ENGL-85AC or ENGL-85E.

This course involves innovative thinking in introductory graphics on a
timeline. Students will create characters, design movement paths, learn
pose manipulation and cycles, frame movement based on sound, animate
text and produce dynamic compositions and scene storytelling with
drawing and software such as After Effects and Maya. (9/15)

**ARTD-42B: Intermediate Motion Graphics**

- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: ARTD 42A
- Advisories: ENGL 85AC or ENGL 85AC or ENGL 85E.

This studio course involves more in-depth innovative concepts in
intermediate-level visual effects on a timeline. Students will create characters with pose manipulation, design fluid movement paths within
environments, control simulations with scripting, frame movement based
on sound, and produce more complex compositions and scene storytelling with
particles and deformers while utilizing software such as After Effects,
ZBrush, Nuke, ToonBoom and Maya. (11/15)

**ARTD-45A: Animation I: Introduction to Web Design and 2D Animation**

- Unit(s): 3
- Lecture Hours: 2
ARTD-45B: Multimedia II Intermediate Web Design and Animation  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: ARTD 45A.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This studio course further imparts a thorough intermediate-level approach to creative Adobe Flash digital media production for the web. Indispensable intermediate typographic, color, illustration, animation, interactivity, layout, and sound design concepts feature strongly in the class. The course's interactive Flash and new HTML 5 web technology techniques prepare students for producing imaginative web sites and multimedia projects. (11/15)

ARTD-47: Typography I: Introduction to Type Design  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: Previous or concurrent enrollment in ART 15.  
This course provides an introduction to the fundamental aspects of creative letterform design for effective visual communication. Students develop initial prototypes on the drawing board and further computer refinements using software such as Illustrator and FontForge to produce professional typefaces in the OpenType format. The class underscores a broad cross-section of typefaces and Gutenberg historical precedents of typographic style to generate original visual solutions. (11/17)

ARTS-507B: Music Therapy for Adults-Intermediate  
Unit(s): 54 Total, Open Entry  
Limitations on Enrollment: Students must demonstrate ability to sight-read music for their instrument.  
This 54 hour course provides experience in performing concert and symphonic band literature. Public performance and exchange concerts are scheduled in addition to class instruction and rehearsals. (11/14)

ARTS-512: Choral Dynamics  
Unit(s): 54 Total, Open Entry  
Limitations on Enrollment: Ability to accurately match pitch and correctly follow verbal instructions.  
This 54 hour course is a study of standard choral literature. It emphasizes part-singing, intonation, breath control, vocal development, style, eras, musical devices, etc. The ensemble makes several public concert appearances each year. (11/14)

ARTS-520: Theatre Production in the Community for Older Adults  
Unit(s): 54 Total, Open Entry  
Limitations on Enrollment: Enrollment by audition or interview, instructor signature required.  
This class offers the older adult community member the opportunity to perform theatrical roles and or learn the basics of technical positions in theatrical rehearsal and public performance. (12/15)

American Sign Language  
ASLG-01: Beginning American Sign Language  
Unit(s): 3  
Lecture Hours: 3  
This course is an introduction to understanding and signing American Sign Language and appreciating the basic elements of the deaf culture. Emphasis is on obtaining a practical command of the language, including major grammatical components, basic ASL sentence structures, non-manual gestures, expression of spatial relationships in a visual-gestural language, and beginning conversational skills. (9/07)

ASLG-02: Intermediate American Sign Language  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: ASLG 01.  
This course provides intermediate practice understanding and signing American Sign Language and appreciating the basic elements of the deaf culture. Emphasis is on obtaining a practical command of the language including major grammatical components, basic ASL sentence structures, non-manual gestures, expression of spatial relationships in a visual-gestural language, and intermediate conversational skills. (9/12)

Astronomy  
ASTR-01L: Introductory Astronomy Laboratory  
Designations: (CSU breadth area B1) (IGETC area 5A)  
Unit(s): 1  
Lecture Hours: 0  
Lab Hours: 3  
One-way Corequisite: ASTR 01.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This is a basic course studying the principles of astronomy beginning with the solar system and continuing through the Milky Way Galaxy and the galaxies beyond. Throughout the course topics relating to the philosophy of science, history of astronomy, tools of the astronomer, and supporting topics of physics are introduced. The course is designed for students satisfying breadth requirements in science and having a general interest in astronomy. (12/06)

ASTR-01L: Introductory Astronomy Laboratory  
Designations: (CSU breadth area B1/B3) (IGETC area 5C)  
Unit(s): 1  
Lecture Hours: 0  
Lab Hours: 3  
One-way Corequisite: ASTR 01.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 81.  
This is a basic course in astronomy providing laboratory experience and opportunity for observation of the night sky. Specific topics include observations of the solar system and deep sky objects, time studies, planetary motions, telescopes and their applications, spectroscopy, and basic calculations of the astronomer. (11/13)

Athletics  
ATHL-01A: Intercollegiate Baseball  
Unit(s): 3  
Lecture Hours: 0  
Lab Hours: 10  
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.  
This is a course teaching theory, practice and game performance of
ATHL-01B: Intercollegiate Basketball
Unit(s): 1.5-3
Lecture Hours: 0
Lab Hours: 43230
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
Advisories: KINE 13
This course teaches theory, practice and game performance of competitive basketball. This course may be repeated three times. (2/11)

ATHL-01D: Intercollegiate Football
Unit(s): 3
Lecture Hours: 0
Lab Hours: 10
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
This course offers the student the opportunity to develop and improve the fundamental skills involved in football, such as passing, receiving, kicking, blocking (with the aid of blocking dummies), team play and strategy. Rules and class competition will also be included. This class may be repeated three times. (2/14)

ATHL-01G: Intercollegiate Swimming
Unit(s): 3
Lecture Hours: 0
Lab Hours: 10
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
This course teaches theory, practice and game performance of the competitive sport. This course may be repeated three times. (8/10)

ATHL-01I: Intercollegiate Track and Field
Unit(s): 3
Lecture Hours: 0
Lab Hours: 10
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
This is a course teaching theory, practice, and game performance of the designated competitive sport. This course may be repeated three times. (2/14)

ATHL-01J: Intercollegiate Water Polo
Unit(s): 3
Lecture Hours: 0
Lab Hours: 10
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
This is a course teaching theory, practice, and game performance of the competitive sport. May be repeated three times. (4/11)

ATHL-01K: Intercollegiate Softball
Unit(s): 3
Lecture Hours: 0
Lab Hours: 180 TBA
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
Advisories: KINE 13
This course teaches theory, practice and game performance of the competitive softball. This course may be repeated three times. (2/13)

ATHL-01L: Intercollegiate Volleyball
Unit(s): 3
Lecture Hours: 0
Lab Hours: 10
Limitations on Enrollment: This is a varsity team sport requiring coach's or academic athletic advisor's approval.
This course teaches theory, practice and game performance of the competitive sport. This course may be repeated three times. (8/10)
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ATHL-02K: Off-Season Conditioning for Softball
Designations: (CSU breadth area E)
Unit(s): 1-3
Lecture Hours: 0
Lab Hours: 3-9
Limitations on Enrollment: This is a varsity team off-season conditioning course that requires coach's or academic athletic adviser's signature.
This course is designed to optimize athletes for athletic competition. Different training techniques will be used including: functional training, core training, plyometrics, and strength training. Emphasis will be placed on injury prevention and to improve athletic performance. Multiple workouts are required per week. This course may be repeated three times. (2/13)

ATHL-03: Athletic Conditioning
Unit(s): .5-2
Lecture Hours: 0
Lab Hours: 1.5-6
Limitations on Enrollment: This is varsity athletic team conditioning course that requires coach's or academic athletic adviser's signature.
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This class is designed to prepare athletes for athletic competition. Different training techniques will be used including: functional training, core training, plyometrics, and strength training. Emphasis will be placed on injury prevention and to improve athletic performance. Multiple workouts are required per week. This course may be repeated three times. (2/13)

ATHL-13: Advanced Basketball
Unit(s): .5-1
Lecture Hours: 0
Lab Hours: 1.5-3
Limitations on Enrollment: This is a varsity team off-season conditioning course that requires coach's or academic athletic adviser's signature.
This course offers the more advanced student the opportunity to develop and improve fundamental skills involved in basketball, such as, ball handling, shooting, defensive and offensive tactics, and physical endurance. It also covers team strategy and play. Rules, strategy, and sportsmanship are also stressed. This course may be repeated three times. (2/13)

ATHL-36A: Theory and Analysis of Football
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course presents the fundamental knowledge of football through lecture and discussions. This course is recommended for varsity football players. (2/14)

ATHL-36B: Theory and Analysis of Basketball
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 84A or ENGL 85AC or ENGL 85E ; KINE 13.
This course presents the fundamental knowledge of basketball through techniques of lecture, discussions, and video analysis. This course is recommended for physical education, recreation, and recreation-aide majors and varsity basketball players. (2/14)

ATHL-36C: Theory and Analysis of Baseball
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course presents the fundamental knowledge of baseball through techniques of lecture, discussions, and video analysis. This course is recommended for kinesiology, physical education, recreation, and recreation-aide majors and varsity baseball players. (9/15)

ATHL-36D: Theory and Analysis of Track and Field
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course presents the fundamental knowledge of track and field through techniques of lecture, discussions, and video DVD analysis. (11/15)

AUTOMOTIVE TECHNOLOGY

AUTO-04: Automotive Mechanics
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This class is designed for students without prior experience in automotive mechanics. It is a study of fundamental theory and operation of the components that make up the major automotive systems with the purpose of giving the student general knowledge of the automobile. Major emphasis is given to operational principles of the automobile and related terminology. (2/13)

AUTO-24: Work Experience in Automotive Technology
Unit(s): 1-8
Lecture Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student's major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

AUTO-32: Wheel Alignment and Suspension
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: AUTO 04, AUTO 63; ENGL 85A or ENGL 85AC or ENGL 85E ; MATH 80, MATH 85.
This course is designed to provide the technical knowledge and experience required for aligning and servicing suspension systems on modern automobiles. Laboratory exercises will provide the student an opportunity to develop entry-level skills in the use of machines and equipment commonly used in wheel alignment, tire service, and front-end repairs. (1/13)

AUTO-33: Automotive Brake Systems
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: AUTO 04, AUTO 63; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course is designed for students without prior experience in automotive brake repair. The course will cover theory, service and repair of conventional, AntiLock Brake Systems (ABS) and related brake systems. Laboratory exercises will provide the student the opportunity to develop skills and knowledge in the use of tools and equipment necessary in the repair and service of automotive brake systems. (2/13)
AUTO-36: Automotive Manual Transmissions and Drive Trains
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: AUTO 04; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80, MATH 85.

This course is designed for the student without any prior experience in standard transmissions or drive axles. The class will provide technical information required for understanding and repairing of manual transmissions and drive trains. Laboratory exercise will provide the student with proper repair procedures and use of related tools and equipment. Standard transmissions, transaxles, differentials, drivelines, and related components will be covered. (1/13)

AUTO-41: Automotive Engines
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
One-way Corequisite: AUTO 04.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This is a class in the principles and theory of engine repair and rebuilding including the disassembly and assembly of engines. There will be emphasis on inspection, measuring, and comparing worn and rebuilt parts. Testing equipment will be used during in-car engine condition diagnosis. Also included will be minor machining operations that are used in engine rebuilding and repairing. (2/13)

AUTO-42: Automotive Electrical Systems
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: AUTO 63
Advisories: AUTO 04; ENGL 85A or ENGL 85AC or ENGL 85E, MATH 80 or MATH 85.

This course covers automotive electrical systems and includes a review of electron theory, magnetism, and semiconductors. The student will acquire technical and working knowledge of starting, charging and ignition systems and components. The student will acquire working and technical knowledge of electrical accessories and accessory circuits. The use of special service tools and electronic diagnostic equipment will be included. (2/13)

AUTO-43: Automotive Fuel Systems
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: AUTO 63
Advisories: AUTO 04; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This course covers automotive fuel systems and includes fuel injection systems, electronic engine controls, and emission controls. (2/13)

AUTO-44: Automotive Air Conditioning, Heating System, Cooling System
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: AUTO 04; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80, MATH 85.

This is a basic course in the principles of operation of automotive air conditioning, heating system, and cooling system. The course covers theory, system controls, troubleshooting, service, and repairs. Lab emphasis consists of system diagnosis servicing, repairs, and preventive maintenance on live vehicles. (1/13)

AUTO-46: Automatic Transmissions
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Advisories: AUTO 04, AUTO 63; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80, MATH 85.

This course will cover domestic and import automatic transmissions and transaxles. Rebuilding will include diagnosis, inspection, repair, and testing. Theory will cover power flow, apply devices, hydraulics, torque converters, and computer controls. (1/13)

AUTO-47: Engine Performance
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: AUTO 42, AUTO 43.
Advisories: ENGL 85A ENGL 85AC ENGL 85E; MATH 80 or MATH 85.

This course is a study in the diagnosis of automotive electrical and computer controlled fuel and ignition systems. The course will cover charging and starting circuits, computer controlled fuel injection and ignition systems and emissions control devices. All integrated systems will be included as they relate to live maintenance and diagnostic procedures. Advanced systems diagnosis and maintenance of these circuits will receive special attention. (2/13)

AUTO-48F: Special Problems in Auto Body Repair and Painting
Unit(s): 1.5-2.0
Lecture Hours: 0
Lab Hours: 4.5-6
Prerequisites: AUTO 50
Advisories: WELD/MECH-06; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

The course will provide the student additional time to develop and complete techniques, concepts and skills learned in AUTO 50 (Auto Body Repair and Painting). The student will be provided with sufficient time to complete projects started in the other classes. (2/13)

AUTO-50: Auto Body Repair and Painting
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E, MATH 80 or MATH 85; WELD 06 /MECH 06.

This course is an introduction to auto body repair and painting. Methods of metal repair will include shrinking, stretching, contouring, and plastic filling. Proper use of specialized hand tools and power tools will be emphasized. Various automotive primers and paints and their application will be covered. Application of paint, spraying techniques, and spray equipment maintenance will receive special attention. (2/13)

AUTO-51: Advanced Auto Body Repair and Refinishing
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Prerequisites: AUTO 50
Advisories: ENGL 85A ENGL 85AC ENGL 85E; MATH 80 or MATH 85.

This course involves repairing and refinishing of vehicles with body and finish damage. Vehicle panel repair or replacement through proper tools and equipment will be covered. Students will receive instruction in the proper choice of paints, repairing techniques, cost estimating, and customer relations. Training in advanced painting techniques will be included to meet industry standards. (2/13)

AUTO-55: Automotive Emissions Level 1 and 2 Training
Unit(s): 5
Lecture Hours: 45
Lab Hours: 1.5
Prerequisites: AUTO 47
Advisories: ENGL 85A ENGL 85AC ENGL 85E; MATH 80 or MATH 85.

This course is designed to provide students with knowledge and skills necessary to perform Smog Check Inspections. Level 1 training is intended to provide students with fundamental knowledge of engine and emission control theory, design and operation. Level 2 training is intended
to provide students the knowledge, skills, and abilities needed to perform Smog Check inspections. Students who successfully complete this training will have met the California Bureau of Automotive Repair requirements for Level 1 and 2 training to qualify to take the Smog Check Inspector state licensing examination. (2/13)

AUTO-56: Advanced Diagnosis and Repair in Automotive Technology
Unit(s): 2
Lecture Hours: 0
Lab Hours: 6
Prerequisites: AUTO 36, AUTO 41, AUTO 43 and AUTO 46.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to permit the student to gain additional diagnostic and hands on experience in automotive power trains, drive trains, and chassis systems. This course will help prepare the student for employment in the automotive repair industry with entry level skills. (5/16)

AUTO-63: Basic Automotive Electronics for Technicians
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: MATH 80 or MATH 85; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to provide the automotive students with a strong background in basic electrical concepts. This will help the student to troubleshoot electrical system problems with the aid of technical information and test equipment. The class will also provide the necessary electrical theory for the more advanced automotive classes. (2/13)

AUTO-66: Automotive Parts and Service Advising
Unit(s): 3
Lecture Hours: 25
Lab Hours: 1.5
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course will cover the duties and responsibilities of automotive parts and service advisors working at independent and dealership-based stores. Course content will include service and parts merchandising and communication skills, integrated computer management software, cost estimation, enhancing customer satisfaction, scheduling, inventory control, hazardous materials, warranties, lemon laws and documentation requirements. (11/15)

BIOLOGY

BIOI-01: General Biology for Non-Majors
Designations: (CSU breadth area B2/B3) (IGETC area 5B/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Limitations on Enrollment: This course is not open to students having a C or better in BIOI-04A.
This is an introductory-level course designed for non-majors. Areas stressed include the origin of life, structure and function of cells, basic processes of life, reproduction, ecology, microbiology, evolution, classification, genetics, and metabolic processes. (11/10)

BIOI-02: Human Biology
Designations: (CSU breadth area B2/B3) (IGETC area 5B/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Limitations on Enrollment: This course is not open to students having a C or better in BIOI-04A.
This course is an introduction to the principles of biology with an emphasis on humans. Topics covered include scientific method, cell structure and function, biochemistry, metabolism, cell division, heredity, biotechnology, evolution, anatomy and physiology of the human body, development and aging, disease, and ecology. This course is recommended for allied health students. (11/08)

BIOI-04A: Fundamentals of Biology: The Cell and Evolution
Designations: (C-ID BIOL 190) (CSU breadth area B2/B3) (IGETC area 5B/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: CHEM 04A; MATH C or MATH 61 or MATH 62.
Advisories: BIOI 01 or BIOI 02; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of the principles of biology. Areas of study will include aspects of the philosophy of science, the chemistry of life, the cell and cellular organization, biological membranes, energy transfer including photosynthesis and cellular metabolism, mitosis/meiosis, and molecular biology. Genetics will include Mendelian genetics, human genetics and Biotechnology. This course is intended for science majors for pre-medical, pre-veterinarian, pre-dental, pre-optometry, and pre-pharmacy majors. (2/18)

BIOI-04B: Diversity of Life: Morphology and Physiology
Designations: (C-ID BIOL 140) (CSU breadth area B2/B3) (IGETC area 5B/5C)
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Prerequisites: BIOI 04A
This course is the second semester of a two-semester sequence of general biology for biology majors. This course will cover the origins of life, evolutionary history, biological diversity, plant form and function, animal form and function, and ecology. This course is intended for science majors and for pre-medical, pre-veterinarian, pre-dental, pre-optometry, and pre-pharmacy majors. (11/15)

BIOI-06: Environmental Science
Designations: (CSU breadth area B2) (IGETC area 5B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This introductory course examines Earth as an ecosystem composed of biological, chemical, and physical processes with emphasis on man's impact on the planet. Topics include the structure and function of ecosystems, bio-diversity, the impact of industrialization and urbanization, energy, populations, resources, pollution, pesticides, and risk/benefit assessment. (10/04)

BIOI-09: Introduction to Genetics
Designations: (CSU breadth area B2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: None.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introductory study of genetic principles, inheritance, variation, and evolution in plants and animals. This course includes the study of Mendelian genetics, molecular genetics, and population genetics. Recent research innovations explore include genetic engineering. (9/17)

BIOI-16: General Human Anatomy
Designations: (C-ID BIOL 110) (CSU breadth area B2/B3) (IGETC area 5B/5C)
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Prerequisites: BIOI 01 or BIOI 02 or BIOI 04A; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an intensive study of the structure of the human body. Consideration is given to the skeletal, muscular, circulatory, respiratory, digestive, excretory, reproductive, and nervous systems. Special emphasis
is placed on the needs of students majoring in biology, nursing, physical education, and medical sciences. (9/13)

**BIOL-18: Principles of Physiology**

Designations: (C-ID BIOL 120) (CSU breadth area B2/B3) (IGETC area 5B/5C)

Unit(s): 4  
Lecture Hours: 3  
Lab Hours: 1

Prerequisites: BIOL 01 or BIOL 02 or BIOL 04A or BIOL 16; CHEM 02A; ENGL 85A or ENGL 85AC or ENGL 85E ; MATH C or MATH 61 or MATH 62.

This course is a general lecture and laboratory course in human physiology, including a study of blood and circulation, respiration, muscle activity, endocrine glands, digestion, excretion, and the functions and activities of the brain, nerves, and sense organs. (2/18)

**BIOL-20: Microbiology**

Designations: (CSU breadth area B2/B3) (IGETC area 5B/5C)

Unit(s): 4  
Lecture Hours: 2  
Lab Hours: 6

Prerequisites: BIOL 01 or BIOL 02 or BIOL 04A; CHEM 02A; ENGL 85A or ENGL 85AC or ENGL 85E.

This is an introductory course familiarizing students with basic laboratory techniques and fundamental topics of microbiology. Laboratory work includes aseptic techniques, staining procedures, biochemical characterization, serology, and DNA technology used in the identification of microorganisms. Lecture topics consist of a historical overview, genetics, metabolism, cell physiology, growth requirements, immunology, and host-parasite interactions between humans and bacteria, viruses, protozoa, and helminthes. The course is designed for students in any of the allied health professions. (11/15)

**BIOL-32: Introduction to Biotechnology**

Designations: (IGETC area 5B) (CSU breadth area B2/B3)

Unit(s): 4  
Lecture Hours: 4  
Lab Hours: 0

Advisories: ENGL 01A; MATH C or MATH 61 or MATH 62 or MATH 88

This is an introductory course in the theory and principles of biotechnology and how the field applies to meeting the needs of today’s world. Topics covered within the lectures include the application of Biotechnology in medicine, microbial engineering, biomanufacturing, bioremediation, agriculture and biofuels. In addition, the specialized fields of stem cells, personalized therapies in medicine, forensics and agricultural biotechnology are covered. The discussion section of the course will incorporate active student involvement in genetic database searches, patent applications, market analysis and will focus on how biological research can be translated into solutions for current world problems. (2/18)

**BIOL-32L: Introduction to Biotechnology Lab**

Designations: (IGETC area 5C)

Unit(s): 2  
Lecture Hours: 0  
Lab Hours: 6

One-way Corequisite: BIOL 32. 2+2 students require a grade C.

Advisories: ENGL 01A; MATH C or MATH 61 or MATH 62 or MATH 88

This lab is the required partner to BIOL 32 for students pursuing the Biotechnology A.S. or certificate degrees. (2/18)

**BIOL-33: Biotechnology II: Advanced Laboratory Techniques and Theory**

Unit(s): 4  
Lecture Hours: 2  
Lab Hours: 6

Prerequisites: BIOL 09, BIOL 32, and BIOL 32L.  
Advisories: BIOL 20; ENGL 85A or ENGL 85AC or ENGL 85E.

An advanced course on techniques in biotechnology. This course is designed to build upon the skills developed in Biology 31. The course will cover PCR, restriction enzyme digest, subcloning, gene expression, genomic library construction, primary cell culture, mammalian cell expression systems, Southern and Western blotting, and protein quantization. Field trips may be required (2/18)

**BIOL-50: Survey of Anatomy and Physiology**

Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0

Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.  
This is a course in basic anatomy and physiology of the human body. It is designed as an elementary course for students with limited background in science or biology. (3/12)

### BUSINESS

**BUS-10: Introduction to Business**

Designations: (C-ID BUS 110)

Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0

Advisories: AOM 30; ENGL 85A or ENGL 85AC or ENGL 85E

This survey course is an overview of all aspects involved in business. It covers economic foundations, types of business organizations, marketing, money and banking, and finance. This information will be integrated and related to social, political, legal, and international matters affecting the United States. (2/11)

**BUS-18A: Business Law**

Designations: (C-ID BUS 125)

Unit(s): 4  
Lecture Hours: 4  
Lab Hours: 0

Advisories: ENGL 85A or ENGL 85AC or ENGL 85E

This course is a study of legal principles that govern the conduct of business. Included are surveys of the essential elements of legal history and jurisprudence; judicial, administrative, and alternative dispute resolution; ethics; business crime; torts; contracts and the UCC; bankruptcy; agency relationships; property; administrative law; labor and employment law; international law. Introduction to legal research and brief-writing are also included. (12/15)

**BUS-35: Money Management**

Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0

Advisories: ENGL 85A or ENGL 85AC or ENGL 85E

This course offers instruction in basic financial, career and life planning. Areas of study include income distribution; occupational earnings; wise buying; credit and borrowing; insurance; housing; savings and investments; taxes; and retirement and planning. (12/15)

**BUS-49A-ZZ: Special Topics in Business**

Unit(s): .5-3  
Lecture Hours: .5 -3  
Lab Hours: 0

Advisories: ENGL 85A or ENGL 85AC or ENGL 85E

This is a course designed to address special topics in business to meet the current needs of students. It will provide the students with access to instruction that will assist them in acquiring the most up-to-date information possible in order to cope with the rapidly changing business and economic environment. (2/07)

**BUS-56A: CEO Leadership-A**

Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0

Advisories: BUS 10; MGMT 37

This course is a hands-on class designed to increase students’ skills in business leadership and management through real-life examples and
experiential activities. Students in BUS 56A will focus on improving their team building and communication skills. (12/14)

BUS-56B: CEO Leadership-B
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: BUS 56A.
BUS-56B is a hands-on class designed to integrate the Merced College chapter of the national CEO Club with administrative and managerial activities designed to increase students' skills in business leadership as it relates to marketing management. Students in BUS 56B will focus on improving their marketing and public relations skills. (2/17)

BUSINESS (NONCREDIT)

BUSN-749: Microcomputers and Business
Unit(s): 720 Total, Open Entry
Advisories: None.
This program is a project-based course designed to develop student entry-level skill proficiency in using stat-of-the-art technology to solve problems. Various simulations reflective of real life experiences will be a major part of the instructional units. (5/07)

BUSN-752: Introduction to Microcomputers
Unit(s): 24 Total, Open Entry
This course will introduce students to microcomputers and the Windows software environment. Students will learn to identify the components of desktop systems, learn to execute basic computer commands. The class may also cover internet browsing, e-mail, website navigation, and downloading files. This course is 24 hours in duration. (11/12)

CHEMISTRY

CHEM-02A: Introductory Chemistry
Designations: (CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID CHEM 101)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: MATH C or MATH 61 or MATH 62.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is an introduction to the general principles of inorganic chemistry, atomic and molecular structure, states of matter, solutions, and radioactivity. The class is designed for students majoring in liberal studies; nursing or agriculture. (2/18)

CHEM-02B: Introductory Chemistry: Introduction to Organic and Biochemistry
Designations: (CSU breadth area B1/B3) (IGETC area 5A/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: CHEM 02A; MATH C or MATH 61 or MATH 62.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E ; LRNR 30.
This is a continuation of CHEM 02A with emphasis on organic and biochemistry. The structure, nomenclature, and properties of organic compounds such as: alkanes, alkenes, arenes, alcohols, thiols, amines, aldehydes, ketones, carboxylic acids and their derivatives are covered. Structure, properties and reactions of biochemical compounds such as carbohydrates, proteins, and lipids are covered and followed through major and minor metabolic pathways. This course is intended for students in liberal studies, agriculture, and health-related fields. It is not for chemistry or science majors. (3/18)

CHEM-04A: General Chemistry I
Designations: (CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID CHEM 110/120)
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Prerequisites: CHEM 02A; MATH C or MATH 61 or MATH 62.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to teach general principles of chemistry emphasizing nomenclature, chemical equations, stoichiometry, concentration, gas laws, atomic structure, bonding, intermolecular forces, and crystalline solids. It is designed for the student majoring in chemistry, physics, biology, engineering, pre-med, or related fields. A student who has not successfully completed the prerequisite of CHEM 02A but has completed a high school chemistry course with a grade of "B" or higher may consider submitting a prerequisite challenge. (2/18)

CHEM-04B: General Chemistry II
Designations: (CSU breadth areas B1/B3) (IGETC area 5A/5C) (C-ID CHEM 120)
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Prerequisites: CHEM 04A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is a continuation of the general principles of chemistry, with emphasis on kinetics, chemical equilibria, thermodynamics, electrochemistry, nuclear chemistry and transition metal complexes. An introduction to the principles of organic chemistry is included. The lab provides the student with experience in qualitative and quantitative analysis. (2/14)

CHEM-12A: Organic Chemistry I
Designations: (C-ID CHEM 150/160)
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Prerequisites: E CHEM 04B.
Advisories: ENGL 01A.
This course is a study of the theory and practice of organic chemistry examining the bonding, structure, stereochemistry, nomenclature, properties, and reactions of hydrocarbons and organic halides. Addition, substitution, elimination, and rearrangement reactions are examined. Corresponding mechanisms and energy diagrams are included in the study. Nuclear magnetic resonance, infrared, ultra-violet and mass spectroscopy are introduced as structural elucidation techniques. The laboratory includes the study of organic laboratory techniques including the synthesis of organic compounds, separation, characterization, identification, purification, and the use of related instrumentation. This course is directed toward students in science and pre-professional preparation. (5/17)

CHEM-12B: Organic Chemistry II
Designations: (C-ID CHEM 160)
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Prerequisites: CHEM 12A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a continuation of CHEM 12A expanding the study of organic chemistry to include aromatic hydrocarbons, alcohols, ethers, thiols, sulfides, aldehydes, ketones, carboxylic acid and derivatives, amines and an introduction to the biochemistry of carbohydrates, proteins, and lipids. Included is a further examination of the use of IR, NMR, GC, and Mass Spectroscopy in the identification of organic substances. In the laboratory portion of the course emphasis is placed on the reactions, synthesis, purification, characterization, spectroscopy, and qualitative tests of organic substances. This course is directed toward students in science and preprofessional preparation. (5/09)

CHILD DEVELOPMENT

CLDV-01: Child Growth and Development
Designations: (C-ID CDEV 100) (CSU breadth area D/E) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This introductory 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. (11/11)

CLDV-02: Child, Family and Community
Designations: (C-ID CDEV 110) (CSU breadth area D/E) (IGETC area 4)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course studies the importance of the socialization of children and how society supports and empowers families. Emphasis will include the role of family, peers, school/child care, media, community and culture and the influence these socializing agents have on children from diverse backgrounds. (3/15)

CLDV-03: Principles and Practices of Teaching Young Children
Designations: (C-ID ECE 120)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
One-way Corequisite: CLDV 01
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 young 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. (3/12)

CLDV-04: Observation and Assessment
Designations: (C-ID ECE 200)  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: CLDV 01  
One-way Corequisite: CLDV 03
Limitations on Enrollment: students must provide immunization documentation as required by California State law to work or volunteer in a child care facility.  
Advisories: ENGL 01A
This course focuses on the appropriate use of a variety of assessment and observation strategies to document child development and behavior. Child observations will be conducted and analyzed. (9/16)

CLDV-05: Health, Safety and Nutrition
Designations: (C-ID ECE 220)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.  
Advisories: ENGL 01A
This course is an introduction to laws, regulations, standards, policies and procedures as related to early childhood curriculum. The key components that ensure physical and mental health and safety for both children and staff will be identified; Specifically examining the importance of collaboration with families and health professionals. A focus of integrating the concepts of health, safety and nutrition applicable to daily planning and program development is explored. (12/16)

CLDV-06: Teaching in a Diverse Society
Designations: (C-ID ECE 230)  
Unit(s): 3
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course examines societal and personal attitudes, beliefs, values, assumptions and biases about culture, language, identity, family structures, ability, and socioeconomic status. Students will demonstrate strategies for helping children negotiate and resolve conflicts with a focus on using an anti-bias approach in the classroom. (2/17)

CLDV-07: Introduction to Curriculum for the Young Child
Designations: (C-ID ECE 130)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
One-way Corequisite: CLDV 03
Advisories: ENGL 01A
This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children. 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: 1) academic content areas; 2) play, art, and creativity; and 3) development of social-emotional, communication, and cognitive skills. (9/15)

CLDV-07L: Practicum
Designations: (C-ID ECE 210)  
Unit(s): 3  
Lecture Hours: 1  
Lab Hours: 6  
Prerequisites: CLDV 01, CLDV 02, CLDV 03, CLDV 04, CLDV 07.  
Limitations on Enrollment: students must provide immunization documentation as required by California State law to work or volunteer in a child care facility.  
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. (9/16)

CLDV-09: Human Development
Also: (PSYC 09)  
Designations: (C-ID PSY 180) (CSU breadth area E)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the scientific study of human development from conception through death. It examines interplay of biological, psychological, social, and cultural forces on the developing human being. (4/12)

CLDV-10: Strategies for Working with Challenging Behaviors
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Appropriate for classroom teachers in various settings, students will identify developmentally appropriate behaviors, challenging behaviors and the various influences that effect children's behavior. Students will analyze children's behaviors and select strategies to make positive changes. Emphasizes the connection between children's social and emotional development and their success in the classroom, and how the teachers' perceptions, experiences, and behavior influence child behaviors. (10/17)

CLDV-11: Introduction to Curriculum & Strategies in Early...
CLDV-30: Infant and Toddler Development
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: CLDV 01.
A study of infants and toddlers from pre-conception to age three including physical, cognitive, language, social, and emotional growth and development. Applies theoretical frameworks to interpret behavior and interactions between heredity and environment. Emphasizes the role of family and relationships in development.

CLDV-30C: Infant/Toddler Curriculum
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to help students guide children's learning by providing developmentally appropriate environment for infants and toddlers that invites play and active exploration. (11/12)

CLDV-30D: School-Age Curriculum
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: CLDV-01; ENGL-85A or ENGL-85AC or ENGL-85E.
This course is designed to help Early Childhood Education students and practicing child care professionals create developmentally appropriate curriculum ideas for children in school-age programs, ages 5-12 years old. Students will do hands-on work with materials. (9/12)

CLDV-30L: Infant/Toddler Care and Education Practicum
Unit(s): 3
Lecture Hours: 1
Lab Hours: 6
Prerequisites: CLDV 30.
Limitations on Enrollment: Students must provide immunization documentation as required by California State Law to work or volunteer in a child care facility.
This laboratory experience offers students the opportunity to work in a supervised early childhood program with children from birth up to three years. Students will apply current theory and research to the care and education of infants and toddlers in group settings. Coursework examines essential policies, principles and practices that lead to quality care and developmentally appropriate curriculum for children birth to 36 months. (9/16)

CLDV-33: Working Effectively With Families
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is a course designed for students who are interested in working with families in child care, early childhood and other school settings. Students will examine the diversity of families, effective home-school-community relationships and effective teacher-family communication. (9/15)

CLDV-34A: Administration I: Programs in Early Childhood Education
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A
This course is an introduction to the administration of early childhood programs. It covers program types, budget management, regulations, laws, development and implementation of policies and procedures. It examines administrative tools, philosophies, and techniques needed to organize, open, and operate an early care and education program. (9/16)

CLDV-34B: Administration and Supervision of ECE Programs: Part B
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: CLDV 34A
Advisories: ENGL 01A
This advanced administration course is designed to give students an in-depth look at more complex administrative practices in Early Childhood settings. Emphasis of this course will be placed on fiscal management, policy-making, operational maintenance, health and safety, food/nutrition services and maintaining quality. (11/15)

CLDV-37: Adult Supervision and Mentoring in Early Care and Education
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of the methods and principles of supervising student teachers, volunteers, staff, and other adults in early care and education settings. Emphasis is on the roles and development of early childhood professionals as mentors and leaders. (3/15)

CLDV-38: Children With Special Needs
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: CLDV 01.
Introduces the variations in development of children with special needs ages birth through eight and the resulting impact on families. Includes an overview of typical and atypical development, historical and societal influences, laws relating to children with special needs, and the identification and referral process. (10/17)

CLDV-41: Infant and Toddler Feeding
Also: (NUTR 41)
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course focuses on feeding typical and atypical developing infants beginning at birth with breast milk, formulas, first foods and progresses to textures and foods appropriate for the toddler. Course focuses on how to feed a baby, prevent baby bottle tooth decay and choking prevention. Students will learn about appropriate snacks, food safety aspects and food preparation for children with varying needs. Finally students will have
the opportunity to design an age appropriate menu meeting the Child Care Food Program Guidelines. This course is recommended for child development and foods and nutrition students (11/15)

CLDV-54: Sexual Development of Young Children
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Prerequisites: CLDV 01
Addressing healthy sexual development of young children may be awkward and uncomfortable for most adults. This course identifies stages of sexual development from infancy to adolescence. Students will learn techniques in how to address children’s sexual development by utilizing accurate, age appropriate information to children to develop healthy, safe and secure attitudes of their bodies. (9/15)

CLDV-56: School-Age Development
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Prerequisites: CLDV 03
This introductory course on school-age development covers an overview of school-age care; the school-age professional; school-age theory and development ages 5-13; current issues facing school-age children; guidance of school-age children; regulations and program quality; and developing partnerships with communities and families. Students will participate in observations of school-age children and programs. (12/04)

CLDV-56L: School-Age Development Lab
Unit(s): 2
Lecture Hours: 0
Lab Hours: 6
One-way Corequisite: CLDV 56.
Limitations on Enrollment: Students must have a negative result on a TB test within the past four years.
School-age programs will be studied for purposes of planning experiences which encourage physical, mental, social and emotional growth. The laboratory will consist of supervised work in a selected school-age care program and is designed to offer students continued and increased opportunities in working with children ages 5-12 years old. This course is required for the School-Age Certificate. (9/12)

CLDV-57: Child Abuse and Neglect
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: CLDV 01; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to assist students and practicing professionals working with children and families understand the identification, treatment, and prevention of child abuse and neglect. (11/13)

CLDV-65A: Language and Literacy for Young Children
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to introduce and apply California Preschool Learning Foundation and Frameworks in the area of Language and Literacy. This course will guide teachers to visualize and consider how research and best practices can be appropriately implemented in classrooms for transitional kindergarten and other preschool classes. Students will learn developmentally appropriate strategies providing children with the basic skills of mathematics: e.g. number sense, algebra and functions (classification and patterning), measurement, geometry, and mathematical reasoning. (5/16)

CLDV-65B: Math for Young Children
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to introduce and apply the California Preschool Learning Foundation and Frameworks for Mathematics. This course will guide teachers to consider how research and best practices can be appropriately implemented in classrooms for Transitional Kindergarten (TK) and other preschool classes. Students will learn developmentally appropriate strategies providing children with the basic skills of mathematics: e.g. number sense, algebra and functions (classification and patterning), measurement, geometry, and mathematical reasoning. (5/16)

CLDV-65C: Everyday Science for Young Children
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is a course designed to introduce and apply California Preschool Learning Foundation and Frameworks of Science. This course will guide teachers to visualize and consider how the research and practices can be appropriately implemented in classrooms for transitional kindergarten and other preschool classes. Participants will learn strategies about providing children with the basic skills of scientific inquiry, such as observing and describing, comparing and contrasting, classifying, experimenting and recording and using the scientific vocabulary associated with these skills. (5/16)

CLDV-65D: CA Preschool Foundations & Framework: History and Social Science
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Introduction to the history and social science domain of the California Preschool Learning Foundations and Frameworks including strands of self and society, civics, history, geography, ecology, and economics. Provides practical strategies for implementing the curriculum frameworks developed for this domain. Applicable to required or professional development units for Child Development Permit holders, pre-school, transitional kindergarten, and early-primary teachers. (12/17)

Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Introduction to the social and emotional development domain of the California Preschool Learning Foundations and Frameworks including the strands of self, social interaction, and relationships. Provides practical strategies for implementing the curriculum frameworks developed for this domain. Applicable to required or professional development units for Child Development Permit holders, pre-school, transitional required or professional development units for Child Development Permit holders, pre-school, transitional kindergarten, and early-primary teachers. (12/17)

CLDV-65F: CA Preschool Foundations & Framework: English Language Development
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Introduction to the English language learners domain of the California Preschool Learning Foundations and Frameworks including strands of listening, speaking, reading and writing. Provides practical strategies for implementing the curriculum frameworks developed for this domain. Applicable to required or professional development units for Child Development Permit holders, pre-school, transitional or professional development units for Child Development Permit holders, pre-school, transitional kindergarten, and early-primary teachers. (12/17)

CLDV-65G: CA Preschool Foundations & Frameworks: Performing Arts
Unit(s): 1
Lecture Hours: 1
COMMUNICATION STUDIES

COMM-01: Fundamentals of Speech
Designations: (C-ID COMM 110) (CSU breadth area A1) (IGETC area 1C-CSU only)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to instruct students in the fundamentals of composing, preparing and presenting speeches in front of audiences. The focus will be on researched speeches to inform and persuade. By the end of the course, students should be speaking confidently and skillfully and should be able to transfer their understanding and skills from the classroom to "real world" situations. (9/13)

COMM-01H: Honors Fundamentals of Speech
Designations: (C-ID COMM 110) (CSU breadth area A1) (IGETC area 1C - CSU only)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Limitations on Enrollment: Enrollment in the Honors Program. See the college catalog for a description of admission requirements.
This course is designed to instruct students in the fundamentals of composing, preparing and presenting speeches in front of audiences. The focus will be on researched speeches to inform and persuade. By the end of the course, students should be speaking confidently and skillfully and should be able to transfer their understanding and skills from the classroom to "real world" situations. (9/13)

COMM-02: Oral Interpretation
Also: (ENGL-02)
Designations: (C-ID COMM 170)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to introduce students to performance studies through analysis, appreciation, and application of interpretive performance of the various forms of literature: poetry, prose and drama. (10/12)

COMM-04: Small Group Discussion and Problem Solving
Designations: (C-ID COMM 140) (CSU breadth area A1) (IGETC area 1C - CSU only)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to help students develop critical thinking and oral presentation skills for communicating and working together on small group tasks. Emphasis is placed on problem-solving, reasoning, conflict resolution, and leadership. (5/12)

COMM-05: Interpersonal Communication
Designations: (C-ID COMM 130) (CSU breadth area A1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
The focus of this course is to examine successful verbal and nonverbal communication in interpersonal relationships. Communication theory and skills will be investigated in order to help students interact more effectively in personal and professional relationships. (4/12)

COMM-30: Introduction to Intercultural Communication
Designations: (C-ID COMM 150) (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3

COLLEGE

COLL-10: First Year Seminar
Designations: (CSU breadth area E)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 84A or ENGL 84E.
This multidisciplinary course provides first time college students with the habits of mind necessary to develop lifelong problem-solving abilities in their academic, social, and personal lives. This course introduces critical thinking, information literacy, higher education resources, and motivating factors for college success. (5/17)
COOPERATIVE EDUCATION

COOP-41A: Cooperative Education in (Subject)
Unit(s): 1-4
Lecture Hours: 1-4 hours weekly
Lab Hours: 0
Prerequisites: COOP 41A
Advisories: ENGL-85.
Cooperative work experience education is a process of education that combines work experience with regular college instruction as an integral part of the community college curriculum. Cooperative Education allows students the opportunity to benefit from practical application in a job setting within their major area, or will allow students to sample an experience in a career field the student may be considering. A student may enroll in Cooperative Education for a maximum of four semesters, and no more than 16 units may be earned at Merced College. Seventy-five hours of work experience (or 60 hours volunteer work) equal one unit of college credit. Cooperative education units are offered in many areas. The number of units (1, 2, 3, or 4) the student will be enrolled in will be determined by the number of hours the student will work during the semester. In order to participate in the Cooperative Education Program, a student must (a) have on-the-job experience that contributes to occupational or educational goals; (b) be enrolled in Cooperative Education; (c) have the approval of the Cooperative Education Coordinator; and (d) have the cooperation of the employer in including new or expanded responsibilities or learning opportunities on the job for which the student is enrolled in Cooperative Education. (11/13)

COOP-41B: Cooperative Education in (Subject)
Unit(s): 1-4
Lecture Hours: 1-4 hours weekly
Lab Hours: 0
Prerequisites: COOP 41A
Advisories: ENGL-85.
See COOP 41A above. (11/13)

COOP-41C: Cooperative Education in (Subject)
Unit(s): 1-4
Lecture Hours: 1-4 hours weekly
Lab Hours: 0
Prerequisites: COOP 41B
Advisories: ENGL-85.
See COOP 41A above. (11/13)

COOP-41D: Cooperative Education in (Subject)
Unit(s): 1-4
Lecture Hours: 1-4 hours weekly
Lab Hours: 0
Prerequisites: COOP 41C
Advisories: ENGL-85.
See COOP 41A above. (11/13)

COMPUTER SCIENCE

CPSC-01: Introduction to Computer Information Systems
Designations: (C-ID ITIS 120)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH C.
An introduction to the basics of computing systems, impact of computers on our society, and the future of computing. Focus on using applications, algorithm design, programming basics, database management systems, networking, ethics and security, information systems, internet and web technologies, and computer systems hardware and software components. Application of these concepts and methods through hands-on projects developing computer-based solutions to problems. (11/14)

CPSC-05A: Application Development and Programming
Units: 3
Lecture Hours: 2
Lab Hours: 3
Advisories: Advisory ENGL 85A or ENGL 85AC or ENGL 85E.
An introduction to the fundamental concepts and models of application development including the basic concepts of program design, data structures, programming, problem solving, programming logic, and fundamental design techniques for event-driven programs. Hands-on experience with a modern application programming language and development platform. (11/14)

CPSC-06: Programming Concepts and Methodology I
Designations: (C-ID COMP 122)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: MATH C or MATH 61.
Advisories: CPSC 01; ENGL 85A or ENGL 85AC or ENGL 85E.
This course introduces the discipline of computer science using a high level language; provides an overview of computer organization and an introduction to software engineering. Topics include methodologies for program design, development, style, testing, and documentation; algorithms, control structures, methods, and elementary data structures. These skills will be used to solve a variety of application problems. (2/18)

CPSC-07: Discrete Structures
Also: (MATH 07)
Designations: (IGETC area 2) (CSU breadth area B4) (C-ID COMP 152)
Unit(s): 3
Lecture Hours: 25
Lab Hours: 1.5
Prerequisites: CPSC 06 or ENGR 14 or CPSC 14; MATH 04A.
This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: functions, relations and sets; basic logic; proof techniques; basics of counting; graphs and trees; and discrete probability. (12/15)

CPSC-14: C++ Programming
Also: (ENGR 14)
Designations: (C-ID COMP 122)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: MATH C or MATH 61.
Advisories: CPSC 01; ENGL 01A.
This is the entry-level comprehensive concepts course for computer science majors and recommended for science and math majors. Algorithm design, logic diagrams, problem solving, coding and debugging are emphasized using a structured language such as C++. (2/18)

CPSC-17: Drone Technology I
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This class is a basic introduction to drone technology. Lab involves construction and repair of a drone including the software used to manage data and fly. This course will also prepare students to successfully pass the FAA aeronautical knowledge test and receive Remote Pilot Certification. (12/17)

CPSC-18: Drone Technology II
This page contains information about various courses offered at Merced College, including their prerequisites, units, and descriptions. The courses are divided into categories such as Programming Concepts and Methodology, Computer Architecture and Organization, Networking for Home and Small Businesses, and more. Each course includes its title, unit hours, designations, and specific details about the course content and prerequisites. The text is structured in a clear, readable format, allowing students to easily understand the information provided. This type of detailed course information is essential for students to make informed decisions about their academic paths at the college.
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
One-way Corequisite: CRIM 02.
This course is a study of the origin, development, philosophy, and constitutional basis of evidence; constitutional and procedural considerations affecting arrest; search and seizure; kinds and degrees of evidence and rules governing admissibility and exclusion of criminal evidence; judicial decisions interpreting individual rights, and case studies viewed from a conceptual level. (10/15)

CRIM-08: Introduction to Investigation
Designations: (C-ID AJ 140)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: CRIM 02, CRIM 04.
This course covers the fundamentals of investigation; techniques procedures, and ethical issues of investigation of crime, including organization of the investigative process, crime scene searches, recording, collection, and preservation of physical evidence, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence and the role of the investigator in the trial process. (12/17)

CRIM-10: Writing for Criminal Justice
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: CRIM 02, CRIM 04.
This course covers the techniques of communicating facts, information, and ideas effectively in a simple, clear, and logical manner in the various types of criminal justice system reports: letters, memoranda, directives, and administrative reports. Emphasis is placed on criminal justice terminology, the use of English, and the organization of information. The student will also receive practical experience in note taking and report writing; and the preparation for the presentation of testimony in court. (11/14)

CRIM-11: Introduction to Corrections
Designations: (C-ID AJ 200)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides a critical analysis of punishment, the various types of punishment, alternatives to punishment, and the impact of punishment on the Criminal Justice System. A Critical examination of the types of Correctional Institutions and the clients housed in each institution are addressed. (12/14)

CRIM-30: Juvenile Procedures
Designations: (C-ID AJ 220)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
One-way Corequisite: CRIM 01 or CRIM 02 or CRIM 11.
This course is an examination of the origin, development, and organization of the Juvenile Justice System as it evolved in the American Justice System. The course explores the theories that focus on Juvenile Law, courts and processes, and the constitutional protections extended to juveniles administered in the American Justice System. (10/15)

CRIM-33: Violence in the Family
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: CRIM 02; ENGL 85A or ENGL 85AC or ENGL 85E.
This course examines criminal law and the psycho-socio dynamics of child abuse, elder abuse, spousal abuse, and sexual assault. (12/09)

CRIM-35: Narcotics
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: CRIM 02; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a review of the laws restricting and governing the use of narcotics and dangerous drugs, the psychological and physiological effects of the use and addiction to narcotics and dangerous drugs, and the procedures used to combat the problems facing law enforcement and society in relation to narcotics and dangerous drugs. (11/14)

CRIM-37: Communication and Ethics in Law Enforcement
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: CRIM 02; ENGL 85A or ENGL 85AC or ENGL 85E.
This course covers the ethical issues created by the congruent and incongruent match of criminal justice philosophy and law enforcement practice. Effective communication styles for courtroom, testimony, interrogation, and verbal judo will be examined, evaluated, and practiced. (11/14)

CRIM-42C: Reserve Officer Module Level 2
Unit(s): 10
Lecture Hours: 162 Total
Lab Hours: 54 Total
Limitations on Enrollment: Students must be cleared by the California Department of Justice (DOJ) to participate. DOJ clearance is evaluated through the LiveScan fingerprint process. This clearance will reveal a qualifying/disqualifying criminal history background. In addition, there must be an absence of medical conditions that would prevent strenuous physical training during arrest and control methods training, use of force, and crimes in progress. A physician’s clearance indicating good physical health must be presented to the instructor at the first class meeting. Students must possess a California Driver’s License. 
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course meets the requirements of the State of California, Commission on Peace Officers Standards and Training (POST). It covers topics such as: ethics, professionalism, the criminal justice system, criminal law, property crimes, crime against persons, laws of arrest, laws of search and seizure, Investigative report writing, vehicle operations, use of force, crimes in progress, traffic enforcement, preliminary investigation, custodial issues, arrest and control methods including baton, first aid, CPR, chemical agents, information systems, and cultural diversity. In accordance with POST regulations, students missing more than 5% of class time will not be certified in this course. (1/13)

CRIM-42D: Reserve Officer Module Level 3
Unit(s): 7
Lecture Hours: 108 Total
Lab Hours: 54 Total
Limitations on Enrollment: Students must be cleared by the California Department of Justice (DOJ) to participate. DOJ clearance is evaluated through the LiveScan fingerprint process. This clearance will reveal a qualifying/disqualifying criminal history background. 2The absence of medical conditions that would prevent strenuous physical training during arrest and control methods training, use of force, and crimes in progress. Physicians’ clearance indicating good physical health must be presented to instructor at first class meeting. 3 Student must possess a valid California Drivers’ License. 
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course satisfies the Level 2 Modular Format Basic Course training requirements of the Commission on Peace Officer Standards and Training (POST). It covers community relations, victimology, crisis intervention, property crimes, crimes against persons, general criminal statutes, laws of arrest, laws of search and seizure, presentation of evidence, investigative report writing, use of force, patrol techniques, vehicle pullovers, crimes in progress, traffic enforcement, unusual occurrences, preliminary investigation, arrest and control methods-including baton, firearms, chemical agents, persons with disabilities, crimes against the justice system, weapons violations, hazardous materials, cultural diversity and
This is a study of history, development, and projections of the dairy industry. General information on the economics of dairying, facts, trends, selection, culling, fitting, showing, judging, pedigrees, feeding, and basic management skills will be learned and also information on employment opportunities and requirements. (12/06)

**DAIRY HUSBANDRY**

**DAIR-10: Elements of Dairy**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This is a study of history, development, and projections of the dairy industry. General information on the economics of dairying, facts, trends, selection, culling, fitting, showing, judging, pedigrees, feeding, and basic management skills will be learned and also information on employment opportunities and requirements. (12/06)
performance techniques begun in Actor's Workshop. Due to different styles and genres being examined each semester, this class may be repeatable once. (5/16)

**DRAM-08: Theatre History: Ancient to Romanticism**
Designations: (C-ID THTR 113) (CSU breadth area C1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.

A study of theatre history, from its origins through to the mid 19th Century, including the influence of staging, acting styles, socio-political movements and culture upon the playwright and his/her work. Eastern and Western Theatre traditions are examined. (5/16)

**DRAM-12: Acting I**
Designations: (C-ID THTR 151)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 01A

This course is designed to serve the needs of the beginning student in acting. Emphasis will be on stage techniques and character development for stage performance. The development of scene repertoire is also studied by choosing scenes to be memorized from various periods of dramatic literature. Critical evaluation, demonstration, and written reviews are required. (2/13)

**DRAM-13: Acting II**
Designations: (C-ID THTR 152)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: DRAM 12
Advisories: ENGL 01A

This course follows Acting I and continues the exploration of theories and techniques used in preparation for the interpretation of drama through acting. The emphasis will be placed on deepening the understanding of the acting process through character analysis, monologues, and scenes. (2/13)

**DRAM-14: Acting III: Advanced Scene Study**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: DRAM 13

This course is a continuation of Acting II and offers the advanced student of acting additional material, and additional artistic challenges and opportunities to improve their acting flexibility. (5/13)

**DRAM-15: Stagecraft**
Designations: (C-ID THTR 171)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 01A

This course is a study of the physical aspects of stagecraft, including makeup, set construction, scenic artistry, lighting, costuming, and sound production. Laboratory experience is gained in the application of principles of technical theatre in actual productions. (5/13)

**DRAM-16: Introduction to Costume Design and Construction**
Designations: (C-ID THTR 174)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course covers the history of costume design for theatre and film and basic costume design theory, including basic construction techniques. Fabrics, notions and their various uses will be covered. Students will participate in lab hours to assist with costume construction for current theatrical productions. (12/13)

**DRAM-23: Script Analysis: Plays in Performance**
Designations: (C-ID THTR 114)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course will introduce students to the principles, theoretical structures, and performance of play scripts. Students will explore diverse genres of the theatrical arts. Scripts will be analyzed, and performed as in-class activities. Students will attend and critique live theatre performances. (12/13)

**DRAM-70A-ZZ: Fine and Performing Arts-Special Topics**
Unit(s): 0.5 - 2
Lecture Hours: .50 - 2
Lab Hours: .50 - 2

Limitations on Enrollment: Participation is determined by audition, interview or permission of instructor.

Sections of this course may vary in unit value depending on subject matter, meeting time, and format. Each letter may be taken only once. (11/17)

**DRAFTING TECHNOLOGY**

**DRFT-04A: Fundamentals of Computer-Aided Drafting**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: INDT 38I; MATH 80 or MATH 85; ENGL 84A.

This course uses AutoCAD. The student will progress through the fundamental and some intermediate commands. Topics included are: drawing set-up, drawing, editing, text, and dimensioning. Also, the student will construct multi-view drawings as used in industry. Most drawings will be printed from paper space. (12/14)

**DRFT-04B: Introduction to 3D**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: INDT 38I

This course is an introduction to direct 3D modeling. Students will gain an understanding of how 3D modeling works, and how it can be used with other applications. (12/14)

**DRFT-04C: Introduction to Parametric Modeling**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: INDT 38I

This course uses Inventor. Students will use basic, and intermediate commands to create and modify solid models. The models will be used to create Small Assemblies (less than 10 parts), 2D drawings, and Renderings. (12/14)

**DRFT-04D: Advanced Parametric Modeling**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: DRFT 04C

This course uses Inventor and SolidWorks. Students will use advanced commands in both programs. Some of the topics covered are 3D sketches, Tabular Parts, Large Assemblies, and Top-Down Assemblies. (2/14)

**DRFT-05: Technical Graphics**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
This course utilizes computer graphics to prepare engineering drawings including geometric constructions, multi-view drawing, sectioning, auxiliary views, pictorial drawing, and tolerancing. It contains a strong tie to ANSI Y14.5 (2/13)

**DRFT-06: Production Methods**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: DRFT 05 or DRFT 44 or DRFT 59.  
This course covers different production methods and materials. Students will learn how the production method influences the design of a product. Materials covered are metals, plastics, matrix, and composites. Some of the methods covered are milling/turning, layups, casting, forging, punching, molding, and additive manufacturing. The use of welding and adhesives will also be covered. Students will create drawings of parts and production equipment. (12/11)

**DRFT - 10: Rendering and Animation**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: DRFT 04C or DRFT 42B.  
This course uses 3DS Max Design. Students will learn how to create objects in 3DS, Box Modeling, Material mapping, Rendering, and Animation. Students will also learn how to import objects for use in animations and how to complete basic video editing. (12/14)

**DRFT-25: Descriptive Geometry**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: DRFT 04A, DRFT 05.  
Advisories: MATH 81.  
This course involves the use of computer-aided drafting and hand sketching to solve problems and communicate ideas. The course is also an introduction to descriptive geometry using computers and more traditional methods of problem solving through the auxiliary view and two-view methods. The development of graphical methods in their application to graphs, charts, and spatial and vector geometry will be studied. (2/14)

**DRFT - 35: Capstone Design Project**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: DRFT 04C or DRFT 43.  
One-way Corequisite: DRFT 10.  
This course will guide students in the design process. Students will learn the steps in creating a new design (identify problem, planning, research, design, documentation, presentation). They will experience the different steps as they design a product/building to solve a problem or meet a need. Students will use different software as needed throughout the project, and they will learn how to use project management software. (2/11)

**DRFT-41: Civil Drafting**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: DRFT 04A  
This course uses AutoCAD. Students will learn about and create common civil drawings. Some of the drawings that will be included are Traverses, topo maps, plan and profile drawings, cut/fill, and borehole drawings. Students will also learn about file formats that are used with survey equipment and how to integrate them with AutoCAD. (12/15)

**DRFT-42A: Architectural Drafting-Auto Cad**  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Prerequisites: DRFT 04A  
This course uses AutoCAD. Students will learn about and create common civil drawings. Some of the drawings that will be included are Traverses, topo maps, plan and profile drawings, cut/fill, and borehole drawings. Students will also learn about file formats that are used with survey equipment and how to integrate them with AutoCAD. (12/15)

**ECON-01: Introduction to Microeconomics**  
Designations: (CSU breadth area D) (IGETC area 4) (C-ID ECON 201)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: ENGL 84A or ENGL 85AC or ENGL 85E ; MATH 81.  
Advisories: ENGL 01A  
ECON-01 is an introductory course in microeconomic theories including maximization, benefit versus cost, rational choice, the analysis of demand and supply, the role of price in free markets, consumer behavior, market structure, production cost, competitive business models, and resource pricing. The course examines the nature of production, distribution, behavior, market outcomes, and the role of government in the market. (5/13)

**ECON-02: Introduction to Macroeconomics**  
Designations: (CSU breadth area D) (IGETC area 4) (C-ID ECON 202)  
Unit(s): 3
**ELCT-30: Exploring the World of Electricity and Electronics**
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A; MATH 81 or MATH 85.
This is an overview of electricity and electronics presented in the context of the principles of science. Students will gain an understanding of electronic components and circuits and will learn how to use the scientific method to investigate the physical nature of electricity, magnetism and their applications. Topics such as electronics in biotechnology, communications, consumer electronics, and industrial technology will be addressed, along with the impact and context of the "electronic age" on modern society. (5/13)

**ELCT-31: Foundations of Electronics-DC and AC Circuits**
Unit(s): 5
Lecture Hours: 3
Lab Hours: 6
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E, MATH 85.
This course is an introduction to the fundamentals of electricity and electronics including basic direct and alternating current circuits, passive components, measuring instruments, circuit testing and troubleshooting. Students will learn about resistance, capacitance, inductance, and transformer action in direct and alternating current circuits. Laboratory activities are designed to offer practical experience in circuit assembly, use of test and measuring equipment, circuit analysis and troubleshooting. (12/12)

**ELCT-32: Fundamentals of Analog Electronics**
Unit(s): 5
Lecture Hours: 2
Lab Hours: 9
Prerequisites: ELCT 31
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course introduces the fundamental concepts of analog electronics, semiconductor devices and integrated circuits. Topics include semiconductor devices such as diodes, BJTs, FETs, and MOSFETs, as well as operational amplifiers and their practical applications (e.g. rectifiers, amplifiers, power supplies). The skills emphasized are interpretation of electronic schematic diagrams, software simulation, basic circuit analysis, assembly and testing. Laboratory activities are designed to offer practical experience in using test and measurement equipment to perform circuit analysis and troubleshooting. (2/13)

**ELCT-34: Digital Logic, Circuits, and Systems (Foundations of Electronics)**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ELCT 30, ELCT 31; ENGL 84A; MATH 85.
The aim of this course is to provide the student with an introduction to basic digital electronic devices (logic gates, flip-flops, seven-segment displays, counters, shift registers) and their applications in modern computing, mechatronics and automated systems. A/D and D/A converters and the basic operation of programmable logic controllers and microcomputers will be introduced. (1/13)

**ELCT-35: Microcontrollers and Programming With Robotics Applications**
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Prerequisites: ELCT 34
Advisories: ELCT 30, ELCT 31 ; ENGL 85A or ENGL 85AC or ENGL 85E.
This is an introductory course to the design and control of autonomous
ELCT-36: Networking Topologies and Cabling
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ELCT 51B; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This is a course designed to provide the student with information and knowledge to prepare for the industry-standard Building Industry Consulting Service International (BICSI) Register installer. Level I exam, and employment as a telecommunications cable installer. Students will gain an understanding of the cabling industry, U.S. and international standards, basic networking, signal transmission, copper cabling, fiber optics, installation, safety, structured cabling system basics, cable management, cable testing, and emerging technologies. Students will also be prepared to read network design documentation, architectural blueprints, set up part lists, purchase components, pull and mount cable, choose wiring closets, install jacks, and perform cable testing. (5/13)

ELCT-40A: Networking for Home and Small Businesses
Also: (CPSC 40A)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ELCT 51A; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This curriculum helps students develop the skills needed to obtain entry-level networking jobs. It provides a hands-on approach to networking education that allows students to gain practical experience working on PC's, their components, and applications. Students complete instructional labs to understand the general theory needed to build networks and connect them to the internet. Basic security and wireless concepts are covered. This course is for students with basic PC usage skills. (12/15)

ELCT-40B: Working At A Small-To-Medium Business or ISP
Also: (CPSC 40B)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: CPSC 40A or ELCT 40A.
This course prepares students for jobs as network technicians. Students develop soft skills required for computer and help desk technicians. Basic configurations of routing, remote access, addressing, and security are applied to routers and switches. Network monitoring and basic troubleshooting skills are examined. (12/15)

ELCT-40C: Routing and Switching in the Enterprise
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: CPSC 40B or ELCT 40B.
Complex configurations of switching devices in the enterprise network are introduced to students. Variable Length Subnet Masking (VLSM) is emphasized and Internet Protocol version 6 (IPv6) is introduced in device configurations. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises include configuration, installation, and troubleshooting of multi-router systems. (12/15)

ELCT-40D: Designing and Supporting Computer Networks
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ELCT 40C
This course introduces students to network design processes using two examples; a large stadium enterprise network and a medium-sized film company network. Students follow a standard design process to expand and upgrade each network, which includes requirements gathering, proof-of-concept, and project management. Lifecycle services, including upgrades, competitive analyses, and system integration are presented in the context of pre-sale support. (12/15)

ELCT-41: Industrial Motor and Equipment Control (Applications of Electronics)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ELCT 31; ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to present the principles and applications of electrical motor and equipment control techniques used in industry. Ladder logic diagrams, contactors, motor starters, and electronic controls and sensors are among the subjects to be studied. Lectures, demonstrations, and laboratory experiments will be the methods used to present and enrich the material to be learned. (2/13)

ELCT-42A: Principles and Applications of Programmable Logic Controllers
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Advisories: ELCT 34; ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides instruction in industrial type of computers called "Programmable Logic Controllers" (PLCs). The main topics introduce students to the PLC's basic hardware configuration and programming techniques. During the course students will learn how to configure and use programming instruction to create various applications. The students will program and operate on industrial PLCs as a part of laboratory assignments. (2/13)

ELCT-42B: Advanced Topics in PLC Configuration and Programming
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: ELCT 42A
Advisories: ELCT 31, ELCT 32, ELCT 34.
The course introduces students to a mid-size Programmable Logic Controller (Allen-Bradley SLC-500) hardware configuration, set-up and programming. During the course students will learn how to use advanced ladder addressing programming instructions as Math, Bit Shift, Compare, Jump, MCR and more, to develop various "real-world" industrial type of PLC applications. (2/13)

ELCT-43A: Industrial Instrumentation and Process Control
Unit(s): 3
Lecture Hours: 2.5
Lab Hours: 1.5
Advisories: ELCT 31; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course is designed to study instrumentation, sensors and controls that are used in industrial process control and automation. The course includes the study of the principles of operation and the practical applications of instrumentation in industry. Topics such as: decibels, micro-controllers, levers, friction, clutches and brakes, tooth rotor tachometers, vision sensors, dynamic braking of Direct Current (DC) motors, linear motors, and flux vector Alternating Current (AC) drives may be addressed. (5/13)

ELCT-44: Electronics Project Design, Fabrication and Repair
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ELCT 30 or ELCT 31.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
The aim of this course is to provide the student with an introduction to basic digital electronic devices (logic gates, flip-flops, seven-segment displays, counters, shift registers) and their applications in modern computing.
mechatronics and automated systems. A/D and D/A converters and the basic operation of programmable logic controllers and microcomputers will be introduced. (1/13)

**ELCT-47: Electrical Motors, Generators, Transformers, and AC Distribution**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: ELCT 31; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This course covers principles of AC and DC motors, generators, transformers, three-phase generation, and AC distribution systems. The course content will include lecture, demonstration, and laboratory projects using motors and transformers. (5/13)

**ELCT-51A: Personal Computer Configuration, Assembly and Repair**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This is a course addressed to students without any previous knowledge of personal computers (PC). The course introduces students to the fundamentals of desktop computer installation through simple, step-by-step instruction based on the most recent CompTIA A+ exam objectives. The course will cover the basic principles of PC operation, maintenance and troubleshooting techniques through lecture and various hands-on activities. (5/13)

**ELCT-51B: A+ Certification Training**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: ELCT 51A; ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This is a course designed to provide the student with a working knowledge of the hardware and software used with personal computers (PCs). The course will cover the basic principles of operation, established standards for maintaining compatibility between components and boards, the use of diagnostic software and hardware, various types of operating systems, and standard troubleshooting techniques. (5/13)

**ELCT-52: Introduction to Electricity and Electronics**

Unit(s): 3  
Lecture Hours: 2.5  
Lab Hours: 1.5  
Advisories: ENGL 84A; MATH 80 or MATH 85.

This is an introductory course to basic electronics/electricity theory and applications including resistance, inductance, capacitance in the series, parallel, and series-parallel circuits with DC and AC power sources. Circuit analysis is accomplished through basic circuit formulas according to Ohm's and Kirchhoff's laws. Fundamentals of Magnetism, DC and AC Motors, Diodes, Transistors and Integrated Circuits and the utilization of basic test equipment in electrical circuit construction and troubleshooting are also covered. (5/13)

**ELCT-53A: Solar Installer Course 1**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This is an introductory course that will examine and implement the design and installation of a working solar photovoltaic power system. Students will learn how to safely use appropriate tools, make electrical load and solar system size calculations, and examine installation techniques for both grid-tie and off grid photovoltaic systems. This course is intended for students who are contemplating a career in the solar photovoltaic industry. (5/14)

**ELCT-55: Electrical Conduit Bending Theory and Techniques**

Unit(s): 1  
Lecture Hours: 5  
Lab Hours: 1.5  
Advisories: ENGL 84A; MATH 80 or MATH 85.

This course provides a comprehensive overview of conduit bending, fabrication procedures and methods. It will develop basic competencies in electrical apprentices and beginning learners. It will discuss hand bending for 90 degree bends, offsets and kicks, saddles and corner offsets, segmented bends, threaders, benders and other conduit types. These conduit types will include electrical metallic tubing (EMT), galvanized rigid conduit (GRC), rigid aluminum, intermediate metallic conduit (IMC), various poly-vinyl chloride (PVC), and flexible plastic and metallic conduit. Wiring in accordance with the National Electrical Code (NEC) will be stressed. Students may petition, through the Office of Admissions and Records, to retake the course as the National Electrical Codes change. (5/13)

**ELCT-56: Introduction to Mechatronics**

Unit(s): 4  
Lecture Hours: 2  
Lab Hours: 6  
Prerequisites: ELCT 42A. Advisory ELCT 31, ELCT 42B.

This course introduces students to mechatronics, the rapidly developing field that integrates mechanical, electronic and software engineering in the service of advanced manufacturing. Students will develop an interdisciplinary and integrated approach to design, manufacturing and troubleshooting mechatronics systems. Students will learn how various components such as electronic sensors, electro-pneumatic valves, actuators, motors, and robotic arms work, and how they can be integrated with other mechanical components into complex automated systems. OSHA safety training and certification will be included. Hands-on experience in building and programming a variety of mechatronics projects that simulate real-life industrial automated systems will be provided in laboratory activities. (10/14)

**ELCT-58: Electrical Printreading for Installation and Troubleshooting**

Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 0  
Prerequisites: ELCT 52  
Advisories: ELCT 41, ELCT 42A, and INDT 35.

This course is a study in electrical print reading for installing and troubleshooting electrical systems presents foundational print reading skills needed to install and troubleshoot commercial and industrial electrical systems and equipment. (11/16)

**ELCT-71A-Z: Electronics/Industrial Electronics Technology Special Topics**

Unit(s): 0.5 - 4  
Lecture Hours: 0  
Lab Hours: 1.5 - 12  
Prerequisites: None.

This course is the study of principles, processes, and theories of the special topic being presented. (3/96)

**EMERGENCY MEDICAL CARE**

**EMER-10: Paramedic I**

Unit(s): 12.5  
Lecture Hours: 12.25  
Lab Hours: 0.75  
One-way Corequisite: None. Two-way corequisite: EMER 11.

Limitations on Enrollment: EMT course, within the last collegiate calendar year, passed with a grade of B or better, and successfully pass entrance examination. OR, If NREMT certification held for one full calendar year, passed with a grade of B or better, and successfully pass entrance examination. NREMT 1 Certification (current), and maintained throughout coursework. Minimum 18 years of age. Live scan background clearance. Health screen clearance. BLS Healthcare Provider card (current) and maintained throughout the course. Based upon State and Federal Regulations, CA Title 22.
Advisories: ENGL 01A; MATH 81.

This course introduces the student to the roles and responsibilities of the Paramedic within the EMS system, apply basic concepts of development, pathophysiology, pharmacology, patient assessment, medication administration, airway and ventilation concepts, the pulmonary, cardiac, neurological, and endocrine systems to be able to formulate a "field impression" of patient status. (2/13)

**EMER-11: Paramedic I Lab**

Unit(s): 1.5
Lecture Hours: 0
Lab Hours: 4.5

One-way Corequisite: None. Two-way corequisite: EMER 10.

Limitations on Enrollment: EMT course, within the last collegiate calendar year, passed with a grade of B or better, and successfully pass entrance examination. If NREMT certification held for greater than one (1) year- proof of field experience and successful completion of entrance examination. NREMT 1 Certification (current), and maintained throughout coursework. Minimum 18 years of age. Live scan background clearance. Health screen clearance. BLS Healthcare Provider card (current) and maintained throughout the course. Based upon State and Federal Regulations, CA Title 22.

Advisories: ENGL 01A; MATH 81.

This course is the corequisite for Paramedic I and occurs in the skills lab or simulation lab. The student will practice and master skills that will allow the student to meet clinical performance objectives. Competency testing is the focus of this course and will include physical assessment, medication administration, IV skills, and airway maintenance including intubation. (2/13)

**EMER-20: Advanced Paramedic**

Unit(s): 11.5
Lecture Hours: 11.5
Lab Hours: 0

Prerequisites: EMER 10, EMER 11.

One-way Corequisite: None. Two-way corequisite: EMER 21

Limitations on Enrollment: Health Screening Clearance Live Scan clearance. Maintenance of current NREMT. Maintenance of current BLS Healthcare Provider card. Based upon State and Federal Regulations, CA Title 22.

Advisories: ENGL 01A; MATH 81.

This theory course is the application of theory and skills in a wide variety of sick and injured clients in the pre-hospital setting. This course covers care of medical patients, trauma patients, special populations including obstetrical, pediatric, geriatric and mental health patients. This course is part of a program of study to prepare paramedics as described in California Code of Regulations, Title 22, Division 9, Chapter 4 and lists the required hours and subjects to be covered as set forth by the Department of Transportation curriculum. (2/13)

**EMER-21: Advanced Paramedic Lab**

Unit(s): 1.5
Lecture Hours: 0
Lab Hours: 4.5

Prerequisites: EMER 10, EMER 11.

One-way Corequisite: None. Two-way corequisite: EMER 20.


Advisories: ENGL 01A; MATH 81.

This course is the corequisite for Advanced Paramedic (Paramedic II) and occurs in the skills lab or simulation lab. The student will practice and master skills that will allow the student to meet the clinical performance objectives of the program. Practice and competency testing is the focus of this course and will include physical assessment, care of the medical patient, special populations' needs, trauma management, communication with EMS base station and medical director, implementing safety precautions for hazardous materials exposure and manage the scene of an emergency. (2/13)

**EMER-24: Work Experience in Emergency Medical Care**

Unit(s): 1-8
Lecture Hours: 0
Lab: 0

Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student's major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

**EMER-30: Paramedic, Acute Clinical Lab**

Unit(s): 3
Lecture Hours: 0
Lab Hours: 9 TBA

Prerequisites: EMER 10, EMER 11, EMER 20, EMER 21.


Advisories: ENGL 01A; MATH 81.

This course occurs in the acute care hospital setting in a precepted format. It is the hands-on application of theory and skills in a hospital setting to a wide variety of sick and injured clients. This course is part of a program of study to prepare paramedics as described in California Code of Regulations, Title 22, Division 9, Chapter 4 and lists the required hours and subjects to be covered as set forth by the Department of Transportation curriculum. (2/13)

**EMER-31: Paramedic Field Experience**

Unit(s): 9
Lecture Hours: 0
Lab Hours: 27 TBA

Prerequisites: EMER 10, EMER 11, EMER 20, EMER 21.

One-way Corequisite: EMER 30.


Advisories: ENGL 01A; MATH 81.

This course is the final course in the paramedic series and occurs completely in the field under the direct supervision of a certified or prearranged paramedic preceptor. It assists the student in developing and refining skills. A wide variety of client activities are taught, including: medical histories, physical examination, client management, triage, trauma care and supportive care of the sick or injured in a field setting. This course is part of a program of study to prepare paramedics as described in California Code of Regulations, Title 22, Division 9, Chapter 4 and lists the required hours and subjects to be covered as set forth by the Department of Transportation curriculum. (2/13)

**EMER-50A: Emergency Medical Technician 1, Module A**

Unit(s): 2.5
Lecture Hours: 2.25
Lab Hours: 0.75

Limitations on Enrollment: Negative TB skin test or negative chest x-ray for TB within 1 year; A CPR course based on American Red Cross Professional Rescuer or American Heart Association Healthcare Provider.

Advisories: Advisory ALLH-67; ENGL-85A or ENGL-85AC or ENGL-85E.

This is the first of two modules designed to teach basic emergency medical procedures and responsibilities, including stabilization of the sick and injured for transportation to medical facilities, care during transport, communication with base-hospital personnel, and transfer of the injured to the base-hospital emergency room. This course meets the requirements of Title 22, Division of California Administrative Code. Students successfully completing EMER-50A and EMER-50B are eligible to take the EMT
EMER-50B: Emergency Medical Technician 1, Module B
Unit(s): 4.5
Lecture Hours: 3.75
Lab Hours: 2.25
Prerequisites: EMER 50A.
Limitations on Enrollment: Negative TB skin test or negative chest x-ray for TB within 1 year; A CPR course based on American Red Cross Professional Rescuer or American Heart Association Healthcare Provider.
Advisories: ALLH 67; ENGL 85A or ENGL 85AC or ENGL 85E.
This is the second of two modules designed to teach basic emergency medical procedures and responsibilities, including stabilization of the sick and injured for transportation to medical facilities, care during transport, communication with base-hospital personnel, and transfer of the injured to the base-hospital emergency room. This course meets the requirements of Title 22, Division of California Administrative Code. Students successfully completing EMER 50A and EMER 50B are eligible to take the EMT 1 certifying exam from the National Registry of Emergency Medical Technicians. (10/14)

EMER-52: Emergency Medical Technician 1 Refresher
Unit(s): 1.5
Lecture Hours: 24 Total
Lab Hours: 0
Limitations on Enrollment: Current EMT Certification and Current CPR course based on American Red Cross Professional Rescuer or American Heart Association Healthcare Provider or Successful completion of an approved EMT 1 course and current CPR course based on American Red Cross Professional Rescuer or American Heart Association Healthcare Provider.
The course is for currently certified Emergency Medical Technician 1's and for those that have successfully completed an approved EMT 1 course. The course is designed to provide the medical continuing education refresher component modules required for maintaining certification and for those that require remediation for taking the National Registry examination. Students may petition, through the Office of Admissions and Records, to retake the course for the purpose of re-certification as necessary. (10/14)

ENGLISH (NONCREDIT)

ENG-121: College Prep English 1: Reading
Unit(s): 45-63 Total, Open Entry
Advisories: Read commonly used words and sound out words of more than two syllables.
This course will introduce students to text-based reading at four levels below transfer. Upon entry, students should be able to identify sight words and sound out unfamiliar words. Students will learn skills in order to increase vocabulary through context clues, to understand basic levels appropriate texts, and to think critically about those texts at four levels below transfer. (2/13)

ENG-122: College Prep English 2: Writing
Unit(s): 45-63 Total, Open Entry
Advisories: Read commonly used words and sound out words of more than two syllables.
Course duration: 45-63 hours; open entry format. This course will introduce students to writing at four levels below transfer. Upon entry, students should be able to identify sight words and sound out unfamiliar words. Students will learn skills in order to increase vocabulary, write complete sentences with grammatical accuracy, and to write critically about texts at four levels below transfer. (2/13)

ENG-801: Beginning ESL Skills
Unit(s): 204-255 Total, Open Entry
This course is for preliterate and nonliterate ESL students who have no, or very few, English language skills. Emphasis of the course is on aural/oral skills and visual reinforcement. (3/11)
ENGL-04B: Introduction to World Literature: 1650 to Present
Designations: (C-ID ENGL 145) (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course traces origins and developments of the poem as a major literary genre. Course includes an intensive study of the poetic process. Poems from ancient times to the present are analyzed in terms of form, idea, and language. (5/12)

ENGL-05: Introduction to Fiction
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course traces the origins and subsequent developments of short fiction and longer fiction (novels), and signals the specific characteristics of respective genres. Students will read a number of books of short fiction and three to five novels in order to study the various developments of style, form, structure, and other artistic choices associated with the history of fiction. (12/04)

ENGL-06A: Major English Writers to the Late 18th Century
Designations: (C-ID ENGL 160) (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course introduces students to the history and variety of English literature from its beginnings to the late eighteenth century. Representative works of major authors are read as examples of the various genres, literary trends, and historical eras in which they were written. (2/12)

ENGL-06B: Major English Writers Since the Late 18th Century
Designations: (C-ID ENGL 165) (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course introduces students to the history and variety of English literature from the late eighteenth through the twentieth, to the twenty-first centuries. Representative works of major authors are read as examples of the various genres, literary trends, and historical eras in which they were written. (2/12)

ENGL-07: Studies in Literature: Poetry
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course offers instruction in argumentative and critical writing, critical thinking, research strategies, information literacy, and proper documentation. Readings feature mostly non-fictional essays and books that reflect diverse cultural and gender perspectives on a variety of
ENGL-13H: Honors Critical Reasoning and Writing
Also: (PHIL 13H)
Designations: (C-ID ENGL 105) (CSU breadth area A3) (IGETC area 1B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Limitations on Enrollment: Enrollment in the Honors Program.
This course offers instruction in argumentative and critical writing, critical thinking, research strategies, information literacy, and proper documentation. Readings feature mostly non-fictional essays and books that reflect diverse cultural and gender perspectives on a variety of contemporary political and social issues, especially those involving race, ethnicity, and gender. ENGL 13/PHIL 13 meets the IGETC critical thinking/composition requirement. (3/12)

ENGL-14: Introduction to Film
Designations: (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A
This course includes critical and popular approaches to film. Students will study film form, genre, style, criticism, and history. They will read screenplays and film criticism and theory and view the films under consideration to obtain a better understanding of the film discipline. (3/12)

ENGL-15: History of Dramatic Literature
Designations: (CSU breadth area C1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This course traces origins and development of drama from classic to contemporary periods. It examines drama as a literary genre, including analysis of theme, style, character, and dramatic sub-genres. (10/12)

ENGL-18: African and African American Literature
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A
Advisories: ENGL 01B
This is an introductory course in African literature written in English or translated from African languages or French into English. It will present a survey of major works from colonial and post-colonial literature to introduce students to African works of merit, cultural relevance, and universal application. In addition to enabling students to view African works within a global context, its goal will be to show the connection of themes, issues, and styles between African and African-American literature and experience as well. Works studied will include epic and narratives, poetry and song lyrics, short fiction, novels, essays, films, and drama in an effort to assist students in acquiring an appreciation of important literary voices that have heretofore been neglected in literature studies. (5/12)

ENGL-83A: Foundations in Academic Literacy III
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENG 122
At an introductory level, this course focuses on effective critical reading and thinking skills, basic research strategies, and academic composition with simple documentation. Students write a variety of paragraphs and short essays informed by assigned readings, discussion, and/or rudimentary research using a variety of source material. (2/16)

ENGL-83E: Foundations in Academic Literacy III for Non-Native Speakers
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 83A or ENGL 83E.
At a high-intermediate ESL level, this course focuses on effective reading skills, introductory academic writing with a focus on grammar, and academic vocabulary acquisition. Students will write a variety of paragraphs and short essays and be introduced to incorporating basic research in writing. (5/16)

ENGL-84A: Foundations in Academic Literacy II
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 83A or ENGL 83E.
At an intermediate level, this course focuses on effective critical reading and thinking skills, basic research strategies and academic composition with proper documentation. Students write a range of increasingly complex short essays informed by assigned readings, discussion, and/or research using a variety of source material, including both fiction and non-fiction. (3/16)

ENGL-84E: Foundations in Academic Literacy II for Non-Native Speakers
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 83A or ENGL 83E.
This course is intended for students whose primary language is not English. At a low-advanced ESL level, this course focuses on effective critical reading and thinking skills, research strategies and academic composition with proper documentation. Students write a range of increasingly complex short essays informed by assigned readings, discussion, and/or research using a variety of source material including non-fiction. (5/16)

ENGL-85A: Foundations in Academic Literacy I
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 84A or ENGL 84E.
At a pre-transfer level, this course focuses on effective critical reading and thinking skills, research strategies, and scholarly composition with proper documentation. Students compose a range of academic writing informed by assigned readings, discussion, and/or research using primarily nonfiction source material. (5/19)

ENGL-85AC: Accelerated Foundations in Academic Literacy
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 84A or ENGL 84E.
This is an intensive course that focuses on effective critical reading and thinking, research strategies, and scholarly composition with proper documentation at the pre-transfer level. Students compose a range of academic writing including expository, analytical, and argumentative essays informed by assigned readings, discussion, and/or research using primarily non-fiction source material. (5/16)

ENGL-85E: Foundations in Academic Literacy I for Non-Native Speakers
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: ENGL 84A or ENGL 84E.
This course is intended for ESL students and is equivalent in content to ENGL 85A. This course focuses on effective critical reading and thinking skills, research strategies, scholarly composition with proper documentation, and advanced editing skills. Students compose a range
of academic writing informed by assigned readings, discussion, and/or research using primarily non-fiction source material. (12/16)

**ENGINEERING**

**ENGR-14: C++ Programming**
Also: (CPSC 14)
Designations: (C-ID COMP 122)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: MATH C or MATH 61.
Advisories: CPSC 01; ENGL 01A.
This is the entry-level comprehensive concepts course for computer science majors, and recommended for science and math majors. Algorithm design, logic diagrams, problem-solving, coding, and debugging are emphasized using a structured language such as C++. (2/18)

**ENGR-15: Elementary Mechanics (Statics)**
Designations: (C-ID ENGR 130)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: PHYS 04A
One-way Corequisite: MATH 04C.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is the study of rigid bodies when acted upon by forces and couples in 2-D and 3-D space. Included are trusses, frames, machines, beams, friction, centroids, centers of mass, and moments of inertia. (2/08)

**ENGR-18: Electrical Circuits Analysis**
Designations: (C-ID ENGR 260)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: PHYS 04B
One-way Corequisite: MATH 06.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course covers basic circuit analysis emphasizing resistive circuits, natural and forced response of inductive and capacitive circuits, phasor analysis, and semiconductor elements. Lab involves construction and measurement of circuits using power supplies, breadboards, multimeters, oscilloscopes, and function generators. (11/15)

**ENGR-30: Introduction to Engineering**
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH C or MATH 61.
This course covers three areas: a description of engineering careers, a factual comparison of engineering degrees and transfer universities, and a discussion of the academic skills required to earn an engineering degree. Successful students will be able to articulate their engineering career goals. The course includes laboratory activities and field trips to engineering companies. (2/18)

**ENGR-45: Engineering Materials**
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: CHEM 04A; MATH 04A; PHYS 04A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the atomic and microscopic structure of modern engineering materials. The effect of structure and manufacturing processes on the mechanical, electrical, and other physical properties of materials are studied. Metals, alloys, ceramics, polymers, and composites are explored. (5/13)

**ENGR-49A-ZZ: Special Topics in Engineering**
Unit(s): 0.5 - 3
Lecture Hours: 0-3
Lab Hours: 0-9
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; LRNR 30; MATH C or MATH 61.
This course covers special topics in engineering to meet needs that cannot be included in the current engineering courses. It will assist students in acquiring the most up-to-date information possible in order to cope with the rapidly changing world of technology and design. (2/18)

**ENGLISH AS A SECOND LANGUAGE**

**ESL-92: ESL Reading and Writing**
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Advisories: Upon entering the course it is recommended that the student be able to: Completion of Non Credit ESL Level 5 or at least three years of the study of ESL/ELD in high school or adult school programs or use complete sentences in Standard American English to carry on a conversation with a native speaker while using the telephone and read English magazines and newspapers and write complete sentences that may have some grammatical errors.
This is an intermediate writing and reading course for students whose native language is not English (ESL). This course focuses on reading strategies to improve fluency, vocabulary, and comprehension. Students will write about reading by using a step-by-step process to compose well-ordered paragraphs. (12/15)

**ESL-98: ESL Pronunciation and Speaking**
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: Upon entering the course it is recommended that the student be able to: Completion of Non Credit ESL Level 5 or at least three years of the study of ESL/ELD in high school or adult school programs or use complete sentences in Standard American English to carry on a conversation with a native speaker while using the telephone and read English magazines and newspapers and write complete sentences that may have some grammatical errors.
This is a pronunciation and speaking course. In this course students will practice the consonant and vowel sounds as well as learn how stress and intonation affect a person's ability to understand what is said. Students will practice the pronunciation skills and vocabulary presented while practicing conversations on topics related to assigned readings. It is recommended that students take this course concurrently with ESL 92. (12/15)

**FIRE TECHNOLOGY**

**FIRE-24: Work Experience in Fire Technology**
Unit(s): 0
Advisories: ENGL 85A ENGL 85AC ENGL 85E.
This course enables students to earn college credit for learning or improving skills or knowledge on-the-job. Occupational Work Experience is discipline-specific and must connect to the student's major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

**FIRE-30: Fire Protection Organization**
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and
regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; and introduction to fire strategy and tactics. (11/04)

**FIRE-31: Fire Behavior and Combustion**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course presents the theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics; fire characteristics of materials; extinguishing agents; and fire control techniques. (10/10)

**FIRE-32: Fire Prevention Technology**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire safety education and suppression systems. (3/12)

**FIRE-33: Fire Protection Equipment and Systems**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course covers information relating to features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers. (10/10)

**FIRE-34: Building Construction for Fire Protection**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is the study of components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies. (10/10)

**FIRE-35: Firefighting Tactics and Strategy**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course relates basic fire chemistry, equipment, and manpower, to firefighting tactics and strategy, methods of attack, and pre-planning. (10/10)

**FIRE-36: Hazardous Materials**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- One-way Corequisite: FIRE 31
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course presents the theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques. (11/12)

**FIRE-37: Fire Hydraulics**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30 or current volunteer, paid call, seasonal or full-time firefighter for a certified fire protection department.
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is a basic review of mathematics, hydraulic laws and formulas, and water supply and pump requirements as applied to fire service. (11/10)

**FIRE-39: Fire Company & Organization Procedure**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is a review of fire department organization, fire company organizations, the company officer, fire equipment, maintenance training, fire prevention, firefighting, company firefighting capability, and records and reports. (2/11)

**FIRE-40: Principles of Fire and Emergency Services Safety and Survival**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: FIRE 30

This course introduces the basic principles and history related to the national firefighter safety and survival, focusing on the need for cultural and behavior change throughout the emergency services. (10/16)

**FIRE-47A: Fire Investigation-1A**
- Unit(s): 2
- Lecture Hours: 36 Total
- Lab Hours: 0
- Prerequisites: FIRE 30 or current volunteer, paid call, seasonal or full-time firefighter for a certified fire protection department.
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an introduction to arson, types of incendiary fires, and methods of determining fire cause and recognizing and preserving evidence. A special emphasis will be placed on report-writing techniques. (11/10)

**FIRE-47B: Fire Investigation-1B**
- Unit(s): 2
- Lecture Hours: 36 Total
- Lab Hours: 0
- Prerequisites: FIRE 47A
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course covers evidence related to arson and fire deaths, interviewing, and interrogating. Investigation of structure, wildland, and vehicle fires are covered as well as fire scene documentation; search and seizure laws are also covered. (10/10)

**FIRE-49A-ZZ: Special Topics in Fire Technology**
- Unit(s): 0.5 - 4
- Lecture Hours: 0.5 - 4
- Lab Hours: 0 - 12
- Prerequisites: FIRE 30
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is designed to address special topics in fire technology to meet current needs of students. The course will allow pre-service and in-service personnel to maintain the most current training standards during emergency operations. (11/16)

**FIRE-63A: Basic Firefighter I, Academy A**
- Unit(s): 8
- Lecture Hours: 7
- Lab Hours: 3
- Prerequisites: FIRE 30
- Limitations on Enrollment: Physician's clearance for strenuous
activity.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides manipulative and technical training in basic concepts of fire department organization, miscellaneous equipment and tools, fire behavior and extinguishment theory, fire fighter safety, self-contained breathing apparatus, and portable fire extinguishers. The course also provides training in ropes, knots, hitches, hoses, nozzles, appliances, ground ladders, forcible entry, and confined space rescue. Students must supply instructor-approved personal protective equipment (required instructional material). (11/12)

FIRE-63B: Basic Firefighter I, Academy B  
Unit(s): 8  
Lecture Hours: 7  
Lab Hours: 3  
Prerequisites: FIRE 63A  
Limitations on Enrollment: Physician's clearance for strenuous activity.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides manipulative and technical training in basic concepts of ventilation, fire control, salvage and overhaul operations, fire protection water systems, fire protection systems, fire prevention and investigation, communications, vehicle extrication, wildland fire fighting, urban interface, and hazardous materials. (11/16)

FIRE-65C: Wildland Firefighting Strategy & Tactics  
Unit(s): 1  
Lecture Hours: 1  
Lab Hours: 0  
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course stresses the fundamentals of initial-attack wildland firefighting and how to apply wildland firefighting strategy and tactics during the suppression effort which also includes live fire control. Must have instructor approved fire protective gear. (11/12)

FIRE-65E: Introduction to Hazardous Materials Awareness  
Unit(s): 0.5  
Lecture Hours: 5  
Lab Hours: 0  
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is a general introduction to hazardous materials awareness with emphasis on placards, identification and recognition, decision making in emergencies, detecting hazardous materials presence, and estimating the likely harm without intervention. (11/10)

Unit(s): 1  
Lecture Hours: 207 Total  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; FIRE 30 or currently a paid call, seasonal, of full-time firefighter.  
This course covers how hazardous materials can harm people, the environment, and property, and how the first responder may use clues to recognize a hazardous materials incident and implement actions to protect themselves and the public. (2/11)

FIRE-65G: First Responder Operations-Decontamination (DECON FRO)  
Unit(s): 0.5  
Lecture Hours: 5  
Lab Hours: 0  
Advisories: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department, FIRE 65F.  
This course covers how to safely and competently perform "Fully/Primary" decontamination in at least "Level B" personal protective equipment based on agency or generic Decon SOP. This course builds upon FRO competencies to perform decontamination functions within the contamination reduction zone. (2/11)

FIRE-65H: Fire Command I-Module C  
Unit(s): 2  
Lecture Hours: 2  
Lab Hours: 0  
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides fundamental principles of wildland fire control and management. Topics to be covered include firefighter safety, wildland fire behavior, strategy and tactics, wildland-urban intermix fires, the Incident Command System, and large fire organization. Special attention will be focused on the role fulfilled by individual engine companies during fire control operations. (11/12)

FIRE-66A: Volunteer Firefighter Basic Skills  
Unit(s): 2.5  
Lecture Hours: 2.5  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides the firefighter with basic knowledge of fire behavior and control and basic skills to safely perform essential fire ground tasks with minimal supervision. Students must supply instructor-approved personal protective equipment (a required instructional supply). (2/13)

FIRE-66D: Equipment Operator for Volunteer Firefighters  
Unit(s): 2  
Lecture Hours: 2  
Lab Hours: 0  
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.  
Limitations on Enrollment: Full-time firefighter or minimum of one continuous year as a paid-call firefighter; valid California Class B (commercial or firefighter) permit with tank and air brake endorsements. If the student has a commercial California Driver's License, it must indicate manual transmission and have a current health questionnaire.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides the firefighter with basic knowledge of radio communications use regarding size-up and report conditions. Forms and reports related to operating equipment and incidents are covered as well as emergency equipment placement, and strategy and tactics for structure, wildland, and vehicle fires. Auto extrication and defensive driving and pump theory are included. (2/11)

FIRE-67A: Rope Rescue  
Unit(s): 1  
Lecture Hours: 1  
Lab Hours: 0  
Prerequisites: FIRE 30  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is designed to introduce the novice to the basics of equipment nomenclature, rope design and construction, care and maintenance, and knots and webbing as they apply to rope rescue emergencies. (2/13)

FIRE-67B: Auto Extrication  
Unit(s): 0.5  
Lecture Hours: 5  
Lab Hours: 0  
Prerequisites: FIRE 30 or currently a paid call, seasonal, or full-time firefighter.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course provides classroom instruction of vehicle rescue concepts. It introduces students to common vehicle rescue tools and hands-on practice of basic techniques used to free persons entrapped in vehicles as a result of traffic collisions. To successfully complete the skills portion, students must have the ability to lift tools that may weigh in excess of 50 pounds and perform other rigorous physical tasks. Students must supply instructor approved personal protective equipment (required instructional
material) equivalent to that of a structural firefighting ensemble. This shall, at a minimum, include a helmet with face shield and/or goggles, leather gloves, turnout coat and pants, and turnout boots (or steel toed lace-up leather boots at least 8" in height with lugged soles). (2/13)

FIRE-68B: Basic Incident Command System (I-200)
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to cover broad subject matter for potential fire officers to receive information necessary to organize and administer fire department operations. (11/16)

FIRE-71A: Fire Instructor I
Unit(s): 2.25
Lecture Hours: 405 Total
Lab Hours: 0
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed for the fire company officer who conducts in-service training programs. The course provides a variety of methods and techniques to help personnel select, develop and organize material for in-service programs. Methods of evaluation and opportunity to apply the major principles of learning through demonstrations are stressed. The course is certified by the office of the California State Fire Marshal. (11/16)

FIRE-71B: Fire Instructor II
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Prerequisites: FIRE 71A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed for the fire company officer who conducts in-service training programs. The course provides instruction in the use of visual aids, test construction, and teaching demonstrations. The successful completion of this course and the State Fire Marshal's examination will result in State certification. (11/16)

FIRE-72A: Fire Command I -- Module A
Unit(s): 2
Lecture Hours: 40 Total
Lab Hours: 0
Prerequisites: FIRE 73A
This course is designed to provide the fire company officer with information and experience in command and control techniques at the scene of an emergency. (11/16)

FIRE-72B: Fire Command I -- Module B
Unit(s): 2
Lecture Hours: 40 Total
Lab Hours: 0
Prerequisites: FIRE 72A
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to provide the fire company officer with information and experience in command and control techniques at the scene of a hazardous materials emergency. (12/04)

FIRE-73A: Fire Inspector 1A
Unit(s): 2
Lecture Hours: 40 Total
Lab Hours: 0
Prerequisites: FIRE 30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides students with a basic knowledge of the roles and responsibilities of a Fire Inspector I including legal responsibilities and authority, codes and standards, the inspection process, confidentiality and privacy requirements, and ethical conduct, and administrative tasks including preparing inspection reports, recognizing the need for a permit or plan review, investigating common complaints, and participating in legal proceedings. (10/17)

FIRE-73B: Fire Inspector 1B
Unit(s): 2
Lecture Hours: 40 Total
Lab Hours: 0
**FRUIT PRODUCTION**

**FPRO-13: Fruit Tree Maintenance**

- **Unit(s):** 3
- **Lecture Hours:** 2
- **Lab Hours:** 3
- **Advisories:** ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.

This course is designed to evaluate management decisions for fruit and nut trees. Management topics will include studies of climate zones, soil selection, financing, farm organization, irrigation systems, field layout, varietal selection, nutritional needs, harvesting, labor management, marketing, and budgeting. The student will be required to prepare a budget and calendar of orchard operations. (10/17)

**FRENCH**

**FREN-01: Elementary French I**

- **Designations:** (CSU breadth area C2) (IGETC area 6)
- **Unit(s):** 5
- **Lecture Hours:** 5
- **Lab Hours:** 0
- **Advisories:** ENGL 84A.

This is a beginner's course. The course will focus on the development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in French the most basic functions of everyday life. This course is not recommended for native speakers. (11/12)

**FREN-02: Elementary French II**

- **Designations:** (CSU breadth area C2) (IGETC area 6)
- **Unit(s):** 5
- **Lecture Hours:** 5
- **Lab Hours:** 0
- **Prerequisites:** FIRE 76A.
- **Advisories:** LRNR 30. FREN-03 is a continuation of FREN 02.

This course reviews and further develops grammatical concepts introduced in FREN 01 and FREN 02, as well as introduces the student to new concepts. Through varied readings, composition, and discussion, the student will increase with his or her vocabulary and cultural knowledge. (12/12)

**FREN-03: Intermediate French I**

- **Designations:** (CSU breadth area C2) (IGETC area 3B/6)
- **Unit(s):** 5
- **Lecture Hours:** 5
- **Lab Hours:** 0
- **Advisories:** LRNR 30. FREN-03 is a continuation of FREN 02.
- **Prerequisites:** FREN 02 or two years of high school French.

This course reviews and further develops grammatical concepts introduced in FREN 01 and FREN 02, as well as introduces the student to new concepts. Through varied readings, composition, and discussion, the student will increase with his or her vocabulary and cultural knowledge. (12/12)

**FREN-04: Intermediate French II**

- **Designations:** (CSU breadth area C2) (IGETC area 3B/6)
- **Unit(s):** 5
- **Lecture Hours:** 5
- **Lab Hours:** 0
- **Prerequisites:** FREN 03.
- **Advisories:** LRNR 30.

This course is a thorough review of the fundamentals of reading, writing, speaking and understanding French, designed to aid the student in preparing for advanced studies in French composition, grammar, and conversation as well as literature in French, history and culture. (2/13)

**GENERAL EDUCATIONAL DEVELOPMENT (NONCREDIT)**

**GED-101: Basic Skills Development and GED Preparation**

- **Unit(s):** 324 Total, Open Entry

This 324 hour course is designed to build the basic academic skills of adult learners in the areas of reading comprehension, language and evidence based writing, mathematical reasoning, life, physical, and earth sciences, and social science. Special emphasis is placed on analytical reading skills, problem solving, and test preparation. The content of this course is reflective of the modifications to the GED exam that will become effective in January of 2014. Subject matter included are the areas covered by the GED exam such as science, social studies, literature, mathematics and writing. (1/14)
GEOGRAPHY

GEOG-01: Physical Geography
Designations: (C-ID GEOG 110) (CSU breadth area B1) (IGETC area 5A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a spatial study of the Earth's dynamic physical systems and processes. Topics include: Earth-sun geometry, weather, climate, water, landforms, soil, and the biosphere. Emphasis is on the interrelationships among environmental and human systems and processes and their resulting patterns and distributions. Tools of geographic inquiry are also briefly covered; they may include: maps, remote sensing, Geographic Information Systems (GIS) and Global Positioning Systems (GPS). (10/14)

GEOG-01L: Physical Geography Laboratory
Designations: (C-ID GEOG 111) (CSU breadth area B1/B3) (IGETC area 5C)
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
One-way Corequisite: GEOG 01.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course focuses on the development of skills and analytic thinking in explaining landform processes, weather phenomena, climate patterns, and vegetation patterns. Exercises include contour map drawing, analysis of data and drawing graphs, study of weather maps, stereo photo interpretation, and landform processes. (5/03)

GEOG-02: World Geography
Designations: (C-ID GEOG 125 ) (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E. GEOG-02 is a survey of the geography of the world's regions. The study includes the ways in which environmental resources are utilized to satisfy the needs of mankind. There is emphasis on economic development, population, and food problems. Knowledge of the cultural and economic interaction between regions will enable the student to better understand contemporary world problems and potentials. (5/03)

GEOG-12: Introduction to Human Geography
Designations: (IGETC area 4) (C-ID GEOG 120) (CSU breadth area D)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Introduction to origins and global distribution of cultures. Examines cultural adaptations to the earth, human modifications of the landscape, and patterns of human organization as exemplified in population, agriculture, language, religion, political organization, popular culture, and economic development. Issues addressed include famine, political conflict, multiculturalism, suburban sprawl, industrial relocation and third world development. (11/14)

GEOG-15: Introduction to Weather and Climate
Designations: (IGETC area 5A) (C-ID GEOG 130) (CSU breadth area B1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
Introduction to the Earth's atmosphere: topics include atmospheric structure and composition, solar radiation and energy balances, temperature, seasonal changes, atmospheric moisture, clouds and fog, precipitation, air pressure, winds, air masses and fronts, cyclones, weather forecasting, climate and climate change. (11/14)

GEOLOGY

GEOL-01: Physical Geology
Designations: (C-ID GEOL 101) (CSU breadth area B1/B3) (IGETC area 5A/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH C.
This is a beginning course in geology stressing the beneficial and destructive forces of nature and their causes. The course includes a study of the development of landscapes, origin of minerals and rocks, geologic work of ground water, the phenomena of earthquakes, volcanism, metamorphism and other fundamental concepts of geology. Lab work includes the identification and study of rocks and minerals, study of topographic and geologic maps and aerial photographs, and introduction to cross section and profiles of topographic maps. A field trip is required for this class. (2/14)

GEOL-02: Historical Geology
Designations: (C-ID GEOL 111) (CSU breadth area B1/B3) (IGETC area 5A/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: ARCH 01 or GEOL 01; ENGL 01A.
This course covers the geological history of the earth and the development of plant and animal life as traced through the rock and fossil records. The correlation between geologic changes through time, the uses of the fossil record in determining geologic history, and the formation of economic mineral deposits is emphasized throughout the course. A field trip is required for this course. (2/13)

GEOL-03: Earth Science
Designations: (IGETC area 5A/5C) (C-ID GEOL 121) (CSU breadth area B1/B3)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
An introduction to the essentials of Earth Science including the geosphere, atmosphere, hydrosphere, and solar system. This course focuses on the interactions between physical and chemical systems of the Earth such as the tectonic cycle, rock cycle, hydrologic cycle, weather and climate. This course is designed to meet the content requirement for earth and space science for the Liberal Studies - Elementary Teaching preparation pathway. (2/14)

GERMAN

GERN-01: Elementary German I
Designations: (CSU breadth area C2) (IGETC area 6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This is a beginner's course. The course will focus on the development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in German the most basic functions of everyday life. (10/16)

GERN-02: Elementary German II
Designations: (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: GERN 01 or two years of high school German.
GERN-02 is a continuation of GERN 01. This course will focus on the further development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in German basic functions of everyday life. (10/16)

GERN-03: Intermediate German I
Designations: (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: GERN 02.
Advisories: LRNR 30. GERN-03 is a continuation of GERN 02.

This course reviews and further develops grammatical concepts introduced in GERN 01 and GERN 02, as well as introduces the student to new concepts. Through varied readings, composition, and discussion, the student will increase his or her vocabulary and cultural knowledge. (10/16)

GUIDANCE (NONCREDIT)

GUI-101: Introduction to College
Unit(s): 1.5 Total, Open Entry
This course will acquaint students with the College, academic regulations, the availability of campus resources, and the importance of educational planning. (1/06)

GUI-102: Probation Solutions-Level 1
Unit(s): 1.5 Total, Open Entry
Successful completion of this course is required for Level I academic and progress probation students to continue enrollment. The student will learn strategies for successful course progression and removal from probation status. They will also learn viable approaches for successfully retaining their academic goals. (10/13)

GUIDANCE

GUID-30: Foundations and Strategies for College Success
Designations: (CSU breadth area E)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This comprehensive course integrates the cultivation of skills, values, and attitudes indicative of confident, capable students/individuals with problem solving and critical/creative thinking. The course focuses on the following topics: life management, goal setting, career decision making, educational planning, college expectations and opportunities, instructor-student relationships, cultural diversity, lifestyle choices affecting health maintenance, stress management, campus resources, learning styles and strategies, and study skills. This course is recommended for all new students. (10/13)

GUID-45: Pathways to Transfer
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an introduction to the process of transfer from community college to a four-year college or university. Students will research and evaluate colleges and universities based on degrees offered, transfer requirements, application process, housing, financial aid, scholarships, support services, and student life. Students will develop an education plan and a portfolio of personalized research information to assist them in the transfer process. (10/10)

GUID-48: Life and Career Planning
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This is a structured sequential course in life and career planning. Experiences are provided that encompass education, occupation, and job trends. The total individual is explored; issues such as life roles, values, goals, life styles, preferences, coping skills, and personal barriers as they relate to decisions will be covered. (4/03)

GUID-53: Practical Strategies for College Success
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 83A.
The course is designed to introduce practical strategies for college success. Topics addressed will include: orientation, assessment and awareness of values, choices and behaviors that impact college success, understanding the college catalog, college policies, and campus resources, choosing a major and understanding graduation and transfer requirements, goal setting, study strategies, and educational planning. (12/15)

GUID-54: Foundations and Strategies for Academic Recovery
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 84A.

This course is appropriate for students wishing to improve their academic standing. Each student will identify his/her educational goal and develop an appropriate plan for achieving that goal. Academic policies will be addressed and strategies to get off and stay off probation, such as, informed decision-making, problem solving, classroom behavior, and behavior modification will also be studied. This course is recommended for all students on academic and/or progress probation. (9/13)

HISTORY

HIST-03A: History of Western Civilization, Part 1
Designations: (C-ID HIST 170)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of humanity's social, political, economic, and intellectual experiences for Western Civilization from prehistory to 1650. (12/17)

HIST-04A: World History Part 1
Designations: (C-ID HIST 150) (CSU breadth area C2/D) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of humanity's social, political, economic, and intellectual experiences for all major world civilizations from pre-history through at least 1500. (12/17)

HIST-04B: History of Civilization: Part II
Designations: (C-ID HIST 180) (CSU breadth area C2/D) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
HIST-05: History of Europe From 1901 to the Present
Designations: (CSU breadth area C2/D) (IGETC area 3B/4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of Europe from the 20th century to the present. The political, economic, and cultural development of Europe during this period will be covered. There will be emphasis on the thematic changes brought about by political realignment, colonialism, war, revolution, and economic upheaval. (12/06)

HIST-07: History of Southeast Asia
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of Southeast Asia from prehistoric times to the present. This course includes the study of traditional and modern Southeast Asia, cultural achievements, and contributions to both Eastern and Western civilizations. (12/17)

HIST-09A: China: Introduction to East Asian Civilization
Designations: (CSU breadth area C2) (IGETC area 3B/4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of China, the Far East's oldest civilization, from pre-historic times to the present with emphasis on China's cultural achievements and contributions to both Eastern and Western civilizations. (10/17)

HIST-09B: Japan: Introduction to East Asian Civilization
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of Japan from pre-historic times to the present. The course includes the study of traditional and modern Japan, significant institutions, cultural achievements, and contributions to both Eastern and Western civilizations. (10/17)

HIST-10: History of the Middle East
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides a broad historical survey of the Middle East from the ancient civilizations of Mesopotamia to the present. Topics of focus will include the impact of pre-Islamic civilization on the modern Middle East; the advent, progression, and influence of Islamic faith and culture in the Middle East; the global interplay between the Middle East and the larger world through various eras of Middle Eastern history; the religious, ethnic, social, economic, military, and political developments that shape the modern Middle East; examination contemporary issues facing the Middle East. (12/17)

HIST-17A: United States History and United States Constitution
Designations: (CSU breadth area C2/D/F1/F2) (IGETC area 3B/4) (C-ID HIST 130)
Unit(s): 3
Lecture Hours: 3
Advisories: ENGL 01A.
This is an extensive survey course of United States history from the period of exploration to the Reconstruction Period. The course covers the social, political, economic, and constitutional development of the nation. Course will emphasize the development of critical and historical thinking skills. (5/12)

HIST-17A: Honors United States History and United States Constitution
Designations: (CSU breadth area C2/D/F1/F2) (IGETC area 3B/4) (C-ID HIST 130)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Honors Program. (See the college catalog for a description of enrollment requirements.)
Advisories: ENGL 01A; ENGL 13/ENGL 13H or PHIL 13/PHIL 13H.
This course covers the social, political, economic and constitutional development of the nation. There will be an emphasis on academic rigor, analytical research, writing, critical thinking, and collaborative learning. (5/12)

HIST-17B: United States History and California State and Local Government
Designations: (CSU breadth area C2/D/F1/F2) (IGETC area 3B/4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Honors Program. (See the college catalog for a description of enrollment requirements.)
Advisories: ENGL 01A; ENGL 13/ENGL 13H or PHIL 13/PHIL 13H.
This course examines our national, state, and local history and government from the late 19th century to the present. There will be an emphasis on academic rigor, analytical research, writing, critical thinking, and collaborative learning. (5/12)

HIST-19: Women in American History
Designations: (IGETC area 4) (CSU breadth area C2/D)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course is a review of the history of women in America covering the period from 1600 to the present. The emphasis of the course is a multicultural and multi-class approach, examining the problems of women of various ethnicities, races and classes in America. The formation of gender roles is discussed along with an analysis of women's political and economic status across the period. The course will analyze women's struggle for equal rights, the impact of women's participation in significant events in American history, and regional and cultural differences in the way women are treated in society. Emphasis will be on California local and state governments, their operations and how women have politically participated in California. (11/15)

HIST-22: History of Minorities – Black Emphasis
Designations: (CSU breadth area D/F2) (IGETC area 4)
Unit(s): 3
HIST-23: The History of Hispanic-Americans in the Southwest U.S.
Designations: (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the history of the Mexican-American, and is designed to examine the contributions of Hispanics to the U.S. Emphasis will be placed upon the exploration, settlement, and ideology of Hispanics throughout the U.S. The course has pragmatic and relevant historical coverage that includes pre-Columbian to Hispanic civil rights movements. (4/06)

HIST-29: History of California
Designations: (IGETC area 3B/4) (CSU breadth area C2/D)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a survey of the early history of California through to the present, starting with the original peoples of California, the discovery and settlement of the area by the Spanish, the Mexican period, American conquest and occupation, and the gold rush. The course also examines topics including the economic, social, cultural, and political consequences of railroad expansion, and early twentieth-century urbanization. It also includes the impact of the Great Depression and World War II, water projects, protest and reform movements of the 1960's, the rise of conservatism and recent political trends. (2/15)

HIST-900: American Citizenship
Unit(s): 72 Total, Open Entry
Advisories: ENG 802.
This course is for preliterate and nonliterate ESL students who have no, or very few, English language skills. Emphasis of the course is on aural/oral skills and visual reinforcement. (12/15)

HEALTH
HLTH-10: Contemporary Health
Designations: (CSU breadth area E)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course surveys the human condition from birth to death. Emphasis is placed on the impact of personal choice throughout life. Mental health, stress, alcohol, drugs, tobacco, disease processes, nutrition, fitness, sexuality, aging, environmental issues, and other related topics are studied and examined. The student is challenged to assume responsibility for his or her own health, well being, and lifestyle. (5/07)

HLTH-15: Drugs, Alcohol, and Tobacco
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course will give students a basic understanding of the psychophysiological effects of drugs, alcohol, and tobacco. Included in the study will be use patterns, individual and societal problems that arise from abuse, and the medicinal effects. Personal coping skills will be included that can help individuals develop drug-free lifestyles. (12/06)

HMONG
HMNG-01: Elementary Hmong I
Designations: (CSU breadth area C2) (IGETC area 6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is a study of the fundamentals of pronunciation, audio-lingual training, and phonology; syllabication; appreciation of basic elements of the Hmong culture; use of the most frequent words in Hmong; basic sentences in conversation; reading and mastery of verb forms; practical vocabulary through conversation and practice in class and at home; elementary composition. (12/12)

HMNG-02: Elementary Hmong II
Designations: (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: HMNG 01.
This course is for the continuation of HMNG 01. The focus will be on further development of listening, speaking, reading and writing in a cultural context. There will be extensive use of Hmong grammar, written composition and oral communication. Selections from Hmong literature and history will be read and discussed in Hmong. Stress is given to reading, writing, speaking and understanding Hmong as these communication skills apply to practical situations. (9/12)

HUMAN SERVICES
HMSV-20: Social Welfare & Social Work
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
A practical and general study of theoretical concepts and institutional frameworks that guide social welfare policy and practice. This course provides an overview of the social work profession and the social welfare system within which it operates, including federal, state, and county organizations. Students will also review employment opportunities and requirements in social welfare. (11/14)

HMSV-21: Human Behavior and the Helping Process
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course examines the history and philosophies of human services; identifies what constitutes genuine and empathic relationships; analyzes the role of conflict in individual and societal systems; demonstrates a broad range of relevant communication skills and strategies, and assists students in designing integrated services using innovative practices in diverse settings. The course includes components on personality development; social and political influences that shape interactive behavior, and guidelines for identifying normal and exceptional behavior, as well as, practical ways of helping people who have problems in living. (11/14)

HMSV-22: Survey and Utilization of Community Resources
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course is designed to introduce students who are seeking careers in Human Services to community resources that facilitate the helping process. Students will become acquainted with various agencies, organizations (profit & nonprofit), and institutions that offer promotion,
prevention, treatment, and rehabilitation within the community. Other components of this course address the importance of advocating for community empowerment, participation, and change. Students will also begin the process of gaining a sense of self in relationship to community, and develop an understanding of social dynamics as they relate to power structures. (11/14)

HMSV - 24: Work Experience in Human Services
Unit(s): 1-8
Lecture Hours: 0
Lab: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

HMSV-41: Case Management
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to give the student an introduction to case management skills, including screening, assessment, treatment planning, and referral support. (11/14)

HMSV-42: Introduction to Counseling Skills
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is oriented to counseling clients within the field of human services. Course work is designed to give the student an introduction to counseling theory and classroom experience in applying basic counseling skills. (11/14)

HMSV-43: Ethics in Counseling
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course focuses on professional responsibilities in the field of human services. Awareness of state and federal laws and regulations, and the codes of conduct governing counseling in the human services are examined. Effective approaches and the examination of legal, ethical, and moral responsibilities and referral practices of the counselor will also be presented. (11/14)

HMSV-44: Leadership and Counseling in Groups
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the dynamics of group counseling. The group will study itself (under supervision) and learn various leadership skills. The factors involved in problems of communication, effective emotional responses and personal growth will be highlighted. (11/14)

HNRS-40B: Honors Seminar: Native American Philosophy
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Honors Program.
This course will focus on the in-depth discussion and analysis of Native American philosophy, politics, and music. (11/12)

HNRS-40C: Honors Seminar: Philosophy and Rock Music
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Honors Program.
This course will discuss and analyze traditional philosophical questions through the use of classic rock music. (11/12)

HNRS-40D: Honors Seminar: The Philosophy of Sex and Love
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Honors Program.
This course will focus on the in-depth discussion and analysis of religious and philosophical theories pertaining to sex and love. (11/12)

HUMANITIES

HUM-01: Studies in Humanities--Ancient Through Renaissance
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.
The principal aims of this course are to examine human existence and cultural endeavors from earliest ancient civilizations through the Renaissance. Students will examine the continuities of human endeavors through fine arts, literatures, philosophies, religions, and the sciences with an integration of certain non-Western cultures. (5/09)

HUM-01H: Honors Studies in Humanities--Ancient Through Renaissance
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.
The principal aim of this course is to examine human existence and cultural endeavor from the earliest ancient civilizations through the Renaissance. Students will examine developments in the fine arts, literature, philosophy, religion, and the sciences from a variety of cultures, both Western and non-Western. There will be an emphasis on collaborative learning, research, and writing. (11/15)

HUM-02: Studies in Humanities--Renaissance to Present
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.
The principal aims of this course are to examine human existence and cultural endeavors from the Renaissance to the present. Students will examine the continuities of human endeavors through fine arts, literatures, philosophies, religions, and the sciences, with an integration of certain non-Western cultures. (5/09)

HUM-02H: Honors Studies in Humanities--Renaissance to Present
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Limitations on Enrollment: Enrollment in the Honors Program. See the college catalog for a description of enrollment requirements.
Advisories: Advisory ENGL 01A.
The principal aim of this course is to examine human existence and cultural endeavors from the Renaissance to the present. Students will examine developments in the fine arts, literature, philosophy, religion, and the sciences from a variety of cultures, both Western and non-Western. There will be an emphasis on collaborative learning, research, and writing. (11/15)

**INDUS TRIAL TECHNOLOGY**

**INDT-10: Agricultural and Industrial Technical Skills**
Also: (MECH 10)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides an introduction to basic technical skills required throughout the industrial areas. The course includes identification and use of tools and materials, tool sharpening and care, hot and cold metal work, piping, electrical wiring fundamentals, basic woodwork, concrete materials and mixes, and sketching and estimating. (11/12)

**INDT-25: Fluid Power**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course covers the operational theory and practical applications of hydraulics, pneumatics and vacuum components and systems. This includes adjustment, service, and functional operation of pumps, controls, transmission systems, actuators and fluidics. The design and application of fluidic systems as they relate to industrial machinery will be covered together with systematic methods of trouble shooting. (10/13)

**INDT-32: Building Construction Concepts**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 84A; MATH 80.
This course will provide the student with an understanding of construction concepts by building scaled modulars of each area of house construction (floor, wall, and roof framing; installation of windows and doors). The student will learn the concepts of stairwell and fireplace framing. (3/06)

**INDT-35: Electrical Wiring: Residential and Industrial**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 84A; MATH 80 or MATH 85.
This course covers basic residential and industrial theory. Topics include electrical theory, wiring in accordance with the latest version of the National Electrical Code, blueprint reading, layout of electrical circuits according to blueprints, switches, electrical connections, grounding and electrical safety, materials, appliance connections, industrial wiring and components, power poles and low voltage remote control devices. Students may petition, through the Office of Admissions and Records, to retake the course as the National Electrical Codes change. (11/14)

**INDT-40: Commercial Refrigeration Systems**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course presents Commercial Refrigeration Systems to students. Systems studied will range from fractional to large tonnage refrigeration systems. Medium and low temperature systems, multiple defrost methods, and energy efficiency will be studied. Diagnostic and repair procedures on commercial systems and related equipment will be covered. (12/14)

**INDT-41: Industrial Power Transmission**
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course covers industrial power transmission systems. The components studied are gear reduction, torque multiplication, direct drive, belt drive, chain drive, bearings, seals, and related components. (1/14)

**INDT-49: Electrical Codes and Ordinances**
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This is a course in the interpretation and application of the National Electrical Code (NEC), and other national, state and local electrical codes and ordinances which regulate the installation, alteration and maintenance of electrical circuits, systems and equipment. Students may petition, through the Office of Admissions and Records, to retake the course as the National Electrical Codes change. (5/13)

**INDT-50: HVAC -- Heating and Control Systems**
Unit(s): 6
Lecture Hours: 4
Lab Hours: 6
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course will enable students to identify and understand the operation
of the various components found in heating and air conditioning units. Students will perform diagnostic and repair procedures on the above units and apply basic electrical concepts as they relate to HVAC industry heating and control technology. (1/14)

**INDT-51: HVAC -- Ventilation and Air Conditioning Systems**
- Unit(s): 6
- Lecture Hours: 4
- Lab Hours: 6
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; INDT 50, INDT 52; MATH 80 or MATH 85.
This course will enable students to identify and understand the operation of various components and systems found in air conditioning refrigeration systems. Students will perform diagnostic and repair procedures on air conditioning refrigeration systems and related equipment. Thermodynamic and psychometric principles as they relate to air conditioning systems will be covered. (1/14)

**INDT-52: Refrigerant Usage Certification and R-410A Safety**
- Unit(s): 1
- Lecture Hours: 1
- Lab Hours: 0
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course prepares students for EPA certification in refrigerant handling and R410A safety. The Clean Air Act and Montreal protocol will be discussed. Types I, II and III certification test requirements will be discussed. EPA testing will be accomplished as a component of the course. A testing fee will be required for those who wish certification. Certified technicians will perform laboratory exercises utilizing recovery equipment and procedures. (1/14)

**INDT-71AA-ZZ: Industrial Technology Special Topics**
- Unit(s): 0.5-4
- Lecture Hours: 0.5-4
- Lab Hours: 1.5 - 216
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course is the study of basic principles, processes, and theories of the special topic being presented during the semester. (1/14)

### JAPANESE

**JPNS-01A: Elementary Japanese**
- Designations: (CSU breadth area C2)
- Unit(s): 2.5
- Lecture Hours: 2.5
- Lab Hours: 0
- Advisories: ENGL 84A.
This course will focus on the development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn to express in Japanese the most basic functions of everyday life. (2/09)

**JPNS-01B: Elementary Japanese**
- Designations: (CSU breadth area C2) (IGETC area 6)
- Unit(s): 2.5
- Lecture Hours: 2.5
- Lab Hours: 0
- Prerequisites: JPNS 01A.
This course will continue to focus on the development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in Japanese the most basic functions of everyday life. (12/11)

**JPNS-02: Elementary Japanese**
- Designations: (CSU breadth area C2) (IGETC area 6)
- Unit(s): 5
- Lecture Hours: 5
- Lab Hours: 0
- Prerequisites: JPNS 01B. JPNS-02 is the continuation of JPNS 01B.
This course will focus on the further development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in Japanese basic functions of everyday life. (2/10)

### KINESIOLOGY

**KINE-01: Introduction to Kinesiology**
- Designations: (C-ID KIN 100)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the interdisciplinary approach to the study of human movement. An overview of the importance of the sub-disciplines in kinesiology will be discussed. Career opportunities in the areas of teaching, coaching, allied health, and fitness professions. (12/11)

**KINE-02: First Aid and CPR for the Professional Rescuer**
- Designations: (C-ID KIN 101)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
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 for the professional rescuer, and AED certification(s) can be granted upon successful completion of requirements. (2/13)

**KINE-03: Introduction to Athletic Training**
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is an introductory course in recognition, assessment, management, care and prevention of injuries occurring in physical activities. (2/14)

**KINE-04: Essentials of Exercise Science**
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
The purpose of this course is to introduce students to foundational scientific principles related to exercise science. Students will be introduced to the structures and functions of the systems of the body. Additionally, the basic principles of exercise science and training adaptations will be discussed. The students will also be introduced to the proper administration of fitness testing. (11/16)

**KINE-05: Foundations of Exercise Program Design**
- Unit(s): 3
- Lecture Hours: 2.5
- Lab Hours: 1.5
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
The purpose of this course is to introduce the fundamentals of personal fitness training. This course will successfully prepare students to take a national personal training certification. Participants will receive practical experience in fitness testing, injury prevention, client assessment and training concepts. The course examines different components of fitness, exercise science, assessment, and exercise program design. (11/16)

**KINE-06: Group Fitness Instruction**
- Unit(s): 3
- Lecture Hours: 2.5
- Lab Hours: 1.5
- Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course introduces students to exercise science concepts and their use in teaching group exercise. The course emphasizes the integration of anatomy and applied kinesiology with teaching principles and techniques for a variety of group exercise formats. Additionally, the course focuses
on motor learning and effective group leadership, while teaching and monitoring human movement. Students will receive technical information and practical experience as preparation for group fitness instructor certification and exam. (11/16)

KINE-07: Rehabilitation Techniques for Athletic Training
Unit(s): 3
Lecture Hours: 2.5
Lab Hours: 1.5
Advisories: KINE 03
Prerequisites: KINE 03
This course will provide students with applications and methods in athletic injury treatment and rehabilitation. A practical approach to rehabilitation programs will be presented through design, implementation, and supervision. This course will include a lab component to provide students the opportunity to apply the concepts that are introduced. (11/16)

KINE-09: Adaptive Physical Education
Designations: (CSU breadth area E)
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Advise that student provide medical verification of disability and recommendation of medical intervention.
This course is a continuing program of individualized instruction for the physically disabled student allowing that student long-range participation in an adapted exercise physiology environment designed to created more physical independence for the student. (9/15)

KINE-12A: Beginning Baseball
Unit(s): 1-2
Lecture Hours: 0
Lab Hours: 3-6
Advisories: 2 years varsity high school playing experience and/or instructors approval.
This is a course designed to teach the basic fundamentals of baseball. Hitting, fielding, throwing, base running, team play, and basic rules and strategies will be covered. Team competition is also included. (2/13)

KINE-12B: Intermediate Baseball
Unit(s): 1-2
Lecture Hours: 0
Lab Hours: 3-6
Advisories: KINE 12A.
Intermediate Baseball will cover techniques of the game, rules, and strategy. Individual and team techniques will be emphasized. Students will participate in intermediate level individual and team techniques in relationship to baseball strategy. (2/13)

KINE-13: Beginning Basketball
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This course offers the beginning student the opportunity to develop and improve the fundamental skills involved in basketball, such as, ball handling, shooting, defensive and offensive tactics, and physical endurance. It also covers team strategy and play. Rules, strategy, and sportsmanship are also stressed. (2/14)

KINE-14: Beginning Volleyball
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This course begins with the basic skills and court positions necessary to enjoy the sport. Each class session begins with warm-up exercises and "dry-land" drills. Skill period ends with class participation in a volleyball match. (2/14)

KINE-15: Softball
Designations: (CSU breadth area E)
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This is a course designed to teach the fundamentals of softball. Batting, throwing, catching, base running, team play, rules and strategy will be covered. (11/15)

KINE-16: Football-Offensive Development
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This course offers the student the opportunity to develop and improve the fundamental skills involved in football, such as passing, receiving, kicking, blocking (with the aid of blocking dummies), team play and strategy. Rules and class competition will also be included. (2/14)

KINE-19: Water Polo
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: KINE 24B.
This course is designed to develop the basic fundamentals of water polo. Focus will be placed on fundamental skill development, conditioning, rules, and terminology. This course provides the opportunity for intermediate and advanced swimmers to develop a greater understanding of the game of water polo. (2/14)

KINE-20: Aqua Aerobics
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This course is designed to improve cardiorespiratory fitness, muscular fitness, and flexibility. Exercises are performed in the pool to add resistance and minimize impact on bones and joints. Non-swimmers and swimmers will benefit from this course. (1/14)

KINE-23: Lifeguard Training
Unit(s): 2
Lecture Hours: 1.5
Lab Hours: 1.5
Limitations on Enrollment: Students must pass American Red Cross lifeguarding prerequisite skills.
Advisories: KINE 24B.
This course provides entry-level lifeguard participants with the knowledge and skills to prevent, recognize and respond to aquatic emergencies and to provide care for breathing and cardiac emergencies, injuries and sudden illnesses until emergency medical services (EMS) personnel take over. Upon completion of the course students can earn certification through the American Red Cross in lifeguard training, first aid, Title 22, and CPR/AED for the professional rescuer. (11/15)

KINE-24: Work Experience in Kinesiology
Unit(s): 1-8
Lecture Hours: 0
Lab: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work

166  •  Courses  •
**KINE-24A: Beginning Swimming**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

This course is a general introduction to swimming and aquatics. It is designed for the beginner or non-swimmer who wants to learn aquatic fundamentals and receive stroke instruction in the front crawl, elementary backstroke, and sidestroke. (2/14)

**KINE-24B: Techniques and Stroke Development for Swimming**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: KINE 24A.

This course is designed for the intermediate swimmer. Emphasis is placed on technique and stroke development of the front crawl, elementary backstroke, and side stroke. Back crawl, breaststroke, butterfly, turns, dives, and fitness and training concepts will also be introduced. (2/14)

**KINE-24C: Swimming for Fitness**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: KINE 24B.

This course is designed for the swimmer who has mastered the basic skills and is ready for more advanced swimming techniques. Emphasis is placed on the competitive swimming strokes, turns, starts, and principles of training. (2/14)

**KINE-30: Group Exercise**

Designations: (CSU breadth area E)

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Upon entering the course it is recommended that the student be able to: Good general health; absence of medical conditions that would prevent planned physical activity.

This course uses a variety of group exercise to improve cardiorespiratory fitness, muscular fitness, and flexibility. Strenuous physical activity is required. Good general health advised. (2/15)

**KINE-31: Aerobic Training**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

This class uses a variety of aerobic activities to improve cardio-respiratory endurance. Machines used include stair climber, treadmills, cycles, rowing, recumbent bikes and cross trainers. Emphasis will be placed on monitoring physiological response to exercise and teaching proper warm-up, training at target rate, and cool down. A pre-test and post-test will be administered to evaluate fitness level and monitor improvement. (2/14)

**KINE-32: Circuit Weight Training**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

The equipment (single station exercise machines) and routine utilized in the fitness lab are designed to exercise all major muscle groups for a well-rounded fitness program with the non-athletic in mind. Circuit weight training has proven beneficial for people of all ages and genders, who are interested in weight training, a desire to increase muscle tone and cardiovascular fitness. (2/14)

**KINE-33: Weight Training**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

An open laboratory experience for those people who desire an individualized strength program using a combination of exercise machines and free weights. This class is designed specifically to improve strength. The class is suited for athletes and men and women of all age groups who are interested in muscle toning and muscle building. (2/14)

**KINE-34: Fitness Through Activity**

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

Students will attain optimal levels of fitness by applying techniques used in a variety of team and/or individual activities. Drills and activities closely emulate actual conditions of competition performance. (2/14)

**KINE-35: Flexibility and Cardiovascular Fitness**

Designations: (CSU breadth area E)

Unit(s): 2
Lecture Hours: 0
Lab Hours: 6

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

Practical application of all aspects of flexibility and cardiovascular conditioning are presented and performed. A system of class presentation is used to insure gradual, safe, and total physiological adaptation of the student to exercise. A gradual progressive, safe and eventually total body fitness experience is pursued. (1/15)

**KINE-36: Walking for Fitness**

Designations: (CSU breadth area E)

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

This course is designed to improve cardiovascular efficiency, flexibility and strength through the use of walking and related activities. Students will use the latest techniques to improve walking performance. (4/16)

**KINE-41: Tennis**

Designations: (CSU breadth area E)

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Upon entering the course it is recommended that the student be able to: Good general health; absence of medical conditions that would prevent planned physical activity.

This course teaches basic skills of tennis including gripping the racket, body positioning, foot work, swing and follow through. Emphasis is placed on forehand, backhand, and the serve fundamentals. Drills and actual game participation are emphasized. History, rules, scoring and tennis etiquette are also taught. (2/15)

**KINE-42: Golf**

Designations: (CSU breadth area E)

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3

Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.

Through lecture, demonstration, video tapes, and drills, the basic principles of the golf swing will be studied and analyzed. Golf course and player etiquette will be stressed in addition to the rules of golf. This class also
LANDSCAPE HORTICULTURE

LAND-10A: Plant Identification and Usage: Fall
Designations: (C-ID AG 112)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course covers the identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nursery and Garden Centers (CAN & GC) and California Landscape Contractors Association (CLCA) plant lists. Topics include botanical nomenclature, plant hardiness and growth zones, growth habits, plant structural characteristics and soil nutritional requirements. Landscape uses are stressed along with cultural practices. Plants covered are those best observed and identified in the fall of the year. (10/17)

LAND-10B: Plant Identification and Usage: Spring
Designations: (C-ID AG 108)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course covers the identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nursery and Garden Centers (CAN & GC), and California Landscape Contractors Association (CLCA) plant lists. Topics include botanical nomenclature, plant hardiness and growth zones, growth habits, plant structural characteristics, and soil nutritional requirements. Landscape uses are stressed along with cultural practices. Plants covered are those best observed and identified in the spring of the year. (10/06)

LAND-11: Elements of Landscape Horticulture
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This is a course in the study of landscape horticulture with emphasis on nursery operations, landscaping, turf management, and floral industries. Topics include basic botany, cultural practices, propagation, structures and layout, pest management, planting, container gardening and houseplants, floral design, plant identification, turf grass installation and care, and survey of career opportunities. (12/06)

LAND-12: Landscape Design
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course includes the principles of landscape design and studies in form, space, color, texture, scale, balance, utility, and contrast. Materials used in landscape developments, site analysis, problems of design, correct use of plant material relating to ecology and function of landscape structures in the plan will be encompassed in this course. Basic irrigation design is also a component of the course. (9/14)

LAND-14: Landscape Construction and Installation
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course covers the fundamentals of landscape construction including soil preparation, paving and construction materials, hand and power tool use, turf and plant installation, plan reading, estimating and bid preparation. The course also covers local codes and state requirements and prepares students to pass the C-27 Landscaping Contractor's License Exam. (10/05)

LAND-15: Landscape Maintenance
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course prepares students to enhance the function and aesthetic value of public and private landscapes by applying appropriate maintenance techniques. Topics include planting, pruning, watering, soil fertility, pest management, weed control, and landscape maintenance business practices. (10/05)

LAND-16: Plant Propagation
Designations: (C-ID AG 116)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course teaches the principles of sexual and asexual propagation, seeding, cuttings, grafting, budding, and layering. The student will also be exposed to dedicated plant structures relating to propagation, specialized propagation media and rooting aids. (10/06)

LAND-17: Nursery and Garden Center Practice
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is a study of commercial retail nursery and garden center operations dealing with wholesale and retail nursery practices, including plant care, merchandising, and management practices. (10/06)

LAND-24: Work Experience in Landscape Horticulture
Unit(s): 1-8
Lecture Hours: 0
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

LAND-50: Residential Gardening
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course teaches the basic needs in residential gardening. Included in this course are plant identification, basic landscape design, sprinkler installation and care, fumigation and lawn installation, pruning, pest and disease recognition and control, soils, fertilization, and weed control. Also included will be foliage plant care for interiors. This course may be repeated three times (Intercollegiate Vocational Academics). (9/14)

LANGUAGE (NONCREDIT)

LANG-716: Spanish in the Workplace
Unit(s): 54 Total, Open Entry
This 54 hour introductory course is designed for non-Spanish speakers who wish to develop specific conversational skills that are related to their work or community environment. Special words and phrases are taught with an emphasis on basic vocabulary and word recognition skills that will result in improved communication with Spanish-speaking customers, patients, students, and clients. (12/13)
LAW-765: Spanish Language Interpreter for Court and Administrative Hearings

Unit(s): 108 Total, Open Entry

This 108 hour course is designed to help prepare students to take the state and or federal exams for Spanish language interpreters. It provides an introduction to the court system and an overview of the administrative hearing process. Topics also include public speaking, memory development, note taking, simultaneous interpretation, and legal and medical terminology. Fluency in Spanish and English reading, writing, and speaking will enhance student success. Students may repeat this course. (10/13)

LIBERAL STUDIES

LBST-10: Introduction to Education I

Designations: (C-ID EDUC 200)

Unit(s): 3
Lecture Hours: 2
Lab Hours: 3

Limitations on Enrollment: Students must obtain a fingerprint clearance and negative TB clearance.

Advisories: AOM 30; ENGL 01A; MATH 81.

Students are introduced to the profession of teaching through an understanding of the California State Content Standards, the Credential process, the role of the public school teacher, and the personal qualities and characteristics necessary to be a successful teacher. Practical experiences in the classroom will include a minimum of 45 hours tutoring literacy schools in K-3 Language Arts. This course is intended for students who plan to teach in the K-8 grade levels; the course is required of students in their first year of the CSU Stanislaus Liberal Studies Program. Students must provide own transportation to off-campus school sites. Note: Fingerprint clearance and TB clearance are required. Students must dress appropriately as recommended by off campus school sites. Observation placements will not be available for students with felony convictions. (1/14)

LBST-20: Introduction to Education II

Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: LBST 10.

Limitations on Enrollment: Students must obtain a fingerprint clearance and a negative TB clearance.

Students are provided additional opportunities to explore the teaching profession and how their personalities will fit with their career choice. Students will observe and teach in 4-8 Math and Science classroom environments and share observations with faculty and peers in weekly meetings to note differences in students, teaching/learning styles, and their personal reactions to the classroom setting. Placements for LBST 20 will be in a classroom setting different from placements for LBST 10 so students may obtain maximum variety of experience. This course is intended for students who plan to teach in the K-8 levels; the course is required of students in their second year of the CSU Stanislaus Liberal Studies Program. Students must provide own transportation to off-campus school sites. Note: Fingerprint clearance and TB clearance are required. Students must dress appropriately as recommended by off-campus school sites. Observation placements are required for class and will not be available for students with felony convictions. Insufficient observation exposure will negatively affect grades. (1/14)

LBST-24: Work Experience in Education

Unit(s): 1-8
Lecture Hours: 0
Lab: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student's major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

LBST-30: Children's Literature

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A.

This course is designed for prospective and current teachers who wish to acquire in-depth knowledge about the selection and use of children's literature in the K-8 classroom. The students will explore school district policies regarding literature selection and different genres, including, but not limited to, culturally diverse graphic novels, picture and story books, folklore and folktales, young adult literature, non-fiction such as biographies, math and science materials. Students will analyze literature for structural and organizational features. (1/14)

LEARNING RESOURCES

LRNR-30: Information Competency in the Electronic Age

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: AOM 50B, keyboard at a minimum rate of 25 wpm at 95% accuracy.

This course is designed to introduce students to library research and resources including information retrieval tools. Course work will include library literacy, research methods, and information technology literacy, including database applications, as well as consideration of ethical and legal implications of computer applications and information use. The student will learn techniques for successful research including documentation and citation of resources, evaluation of information resources, and bibliographic production. (11/09)

MATHEMATICS (NONCREDIT)

MAT-101: College Prep Math 1: Operation of whole Numbers

Unit(s): 45-63 Total, Open Entry
Advisories: ENG 121.

This is an introductory course of the whole number system, including counting, notation, and the number line. Particular emphasis is placed on the basic computational skills, addition, subtraction, multiplication, and division. (12/14)

MAT-102: College Prep Math II: Applications of Whole Numbers

Unit(s): 45-63 Total, Open Entry
Advisories: ENG 121; MAT 101.

This is an introductory course of the whole number system, with an emphasis on application problem solving. Particular emphasis is placed on the area, volume, and perimeter of geometric figures. (12/14)

MATHEMATICS

MATH-B: Applied Mathematics

Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: MATH 80.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course will explore mathematical applications from various vocational and technical areas. It will be an intense course covering a review of prealgebra, ratios, proportions, percents, measurements, basic algebra, plane and solid geometry. (2/13)

MATH-C: Intermediate Algebra

Unit(s): 4
Lecture Hours: 4
Lab Hours: 0
This course covers vectors and solid analytic geometry, vector-valued functions, partial differentiation, multiple integrals, and topics in vector calculus including Green's and Stokes' theorems. (3/10)

MATH-06: Elementary Differential Equations
Designations: (C-ID MATH 240) (CSU breadth area B4) (IGETC area 2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH 04C.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 08.

This course is an introduction to ordinary differential equations (ODEs), including analytical, graphical and numerical methods, as well as a variety of modeling applications. It introduces both theoretical and practical considerations, including definitions, existence and uniqueness of solutions, techniques for solving first-order ODEs and higher-order linear ODEs, series solutions and singular points for linear differential equations, Laplace transforms, homogeneous versus nonhomogeneous equations, linear systems, and numerical methods. (2/08)

MATH-07: Discrete Structures
Also: (CPSC 07)
Designations: (IGETC area 2) (C-ID MATH 160) (CSU breadth area B4)
Unit(s): 3
Lecture Hours: 2.5
Lab Hours: 1.5
Prerequisites: CPSC 06 or ENGR 14 or CPSC 14; MATH 04A.

This course is an introduction to the discrete structures used in Computer Science with an emphasis on their applications. Topics covered include: functions, relations and sets; basic logic; proof techniques; basics of counting; graphs and trees; and discrete probability. (12/15)

MATH-08: Linear Algebra
Designations: (C-ID MATH 250) (CSU breadth area B4) (IGETC area 2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH 04B.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course is an introduction to systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors with a strong emphasis on applications. (3/12)

MATH-10: Elementary Statistics
Designations: (C-ID MATH 110) (CSU breadth area B4) (IGETC area 2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH C or MATH 61 or MATH 62 or MATH-88.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course covers descriptive statistics, including organization and presentation of data; elementary probability including permutations, combinations, binomial and normal distributions; inferential statistics, including random sampling, hypothesis testing, regression, and correlation and chi-square distribution. (11/17)

MATH-15: Finite Mathematics
Designations: (C-ID MATH 130) (CSU breadth area B4) (IGETC area 2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH C or MATH 61 or MATH 62.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
MATH-20A: Basic Structure of Mathematics I  
Designations: (CSU breadth area B4) (C-ID MATH 120)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MATH C or MATH 61 or MATH 62.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is designed to complete the first course of a two-course sequence in basic concepts of mathematics required for students preparing to teach at the elementary school level. It covers elementary set theory, numeration systems, number theory, the set of integers, the set of rational numbers, and the set of real numbers. (11/17)

MATH-20B: Basic Structure of Mathematics II  
Designations: (CSU breadth area B4)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MATH 61 or MATH 62 or MATH C.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 20A.  
This course is designed to complete the second course of a two-course sequence in basic concepts of mathematics required for students preparing to teach at the elementary school level. The course covers the structure of plane and solid geometry, measurement, introduction to coordinate geometry, elementary probability and statistics. (11/17)

MATH-25: Trigonometry  
Designations: (CSU breadth area B4)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MATH C or MATH 61.  
Advisories: ENGL 83E or ENGL 85A or ENGL 85AC.  
This course is a review of right triangle geometry, real numbers, functions and graphs, trigonometric functions and their graphs, identities, inverse trigonometry functions, solve trigonometric equations, solve right triangles, solve triangles using the Law of Sines, and Law of Cosines. (11/17)

MATH-26: College Algebra for Liberal Arts  
Designations: (C-ID MATH 150 ) (CSU breadth area B4) (IGETC area 2)  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MATH C or MATH 61 or MATH 62.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This is a college level course in algebra for majors in the Liberal Arts. The course will cover topics on functions, including polynomial, rational, radical, exponential, absolute value, and logarithmic functions. Solving various types of equations, linear systems, and their applications for problem solving will also be discussed. (11/17)

MATH-61: Beginning & Intermediate Algebra for STEM  
Unit(s): 6  
Lecture Hours: 6  
Lab Hours: 0  
Prerequisites: MATH 80.  
Advisories: ENGL 85A ENGL 85AC ENGL 85E  
This course covers topics in both beginning and intermediate algebra. The beginning algebra topics include order of operations, graphing linear equations, solving equations and inequalities that are linear in form, operations on polynomials, and a brief introduction to functions. The intermediate algebra topics include factoring, graphing linear and non-linear functions, including piecewise defined graphs, problem solving with nonlinear equations, working with complex numbers, and graphing conic sections. This course is designed to prepare students for mathematics course work in trigonometry and precalculus.

MATH-62: Beginning & Intermediate Algebra for Liberal Arts  
Unit(s): 5  
Lecture Hours: 5  
Lab Hours: 0  
Prerequisites: MATH-80.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E  
This course covers the four basic operations on real numbers and algebraic expressions. Topics include order of operations, graphing and solving linear and absolute value equations and inequalities, systems of linear equations, quadratic, variation, geometric, financial, polynomial, exponential, and logarithmic models. This course is designed for non-STEM majors. (11/17)

MATH-80: Prealgebra  
Unit(s): 4  
Lecture Hours: 4  
Lab Hours: 0  
Prerequisites: MATH 91.  
This course covers the real number system and operations of addition, subtraction, multiplication, and division including whole numbers, integers, decimals, fractions and application problems involving percents, ratios, proportions, and square roots. It also covers real world application problems, formulas, measurement concepts, and an introduction to algebra including addition, subtraction, and multiplication of algebraic expressions. (11/08)

MATH-81: Beginning Algebra  
Unit(s): 4  
Lecture Hours: 4  
Lab Hours: 0  
Prerequisites: MATH 80.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course covers the four basic operations on real numbers and algebraic expressions. It also includes the order of operations, graphing and solving linear and absolute value equations and inequalities, systems of linear equations, exponents, polynomials, and a brief introduction to functions. (10/13)

MATH-85: Career Technical Education Math  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 3  
Advisories: MATH 90.  
This course is designed to help students improve their basic math skills and teach how to apply math to a variety of Career Technical Education courses including welding, electronics, and agriculture. (2/14)

MATH-88: Preparation for Elementary Statistics  
Unit(s): 4  
Lecture Hours: 4  
Lab Hours: 0  
Prerequisites: MATH 80.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
An accelerated one-semester course to transfer-level Elementary Statistics covering core concepts from arithmetic, pre-algebra, elementary and intermediate algebra, and descriptive statistics that are needed to understand the basics of college-level statistics. Concepts are taught through the context of descriptive data analysis. Topics include arithmetic and algebra skills needed to understand the concepts and formulas, solving and graphing linear equations, modeling with linear functions, and solving contextualized problems. This course is NOT intended for math, science, computer science, business, or engineering majors. Non-degree applicable. (11/17)

MATH-90: Fundamentals of Arithmetic  
Unit(s): 3  
Lecture Hours: 3 Lab Hours: 0  
This course is an intensive review of the whole number system, including counting, notation, word names, and the number line. Particular emphasis is placed on the basic computational skills: addition, subtraction, multiplication, and division. Written problems and life skills will be emphasized throughout the course. (10/06)
MECHANIZED AGRICULTURE & DIESEL EQUIPMENT MECHANICS

MECH-06: Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding
Also: (WELD 06)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 84A; MATH 80 or MATH 85.
This course emphasizes development of minimum skill standards in welding. The Shielded Metal Arc Welding (SMAW), Oxy-Fuel Welding (OFW) and Oxy-Fuel Cutting (OFC) processes are covered as prescribed in the (AWS) American Welding Training Qualification (QC 10) entry-level standards. (2/13)

MECH-08: Applied Mechanical Welding
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: MECH 30.
This course presents the skills and knowledge required in the Mechanized Ag/Diesel Technology field. Skills covered include Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Oxyfuel Cutting and Brazing (OF & OFB), and metal fabrication. Skills will be fashioned around industry-accepted standards of performance. (12/17)

MECH-10: Agricultural and Industrial Technical Skills
Also: (INDT 10)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course provides an introduction to basic technical skills required throughout the industrial areas. The course includes identification and use of tools and materials, tool sharpening and care, hot and cold metal work, pipe fitting, electrical wiring fundamentals, basic woodworking, concrete materials and mixes, and sketching and estimating. (11/12)

MECH-12: Agriculture Equipment-Fall
Designations: (C-ID AG 108)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is a study of the use, maintenance, adjustment, calibration, and repair of the equipment commonly used in California agriculture, with emphasis on primary and secondary tillage, planting, chemical application, and harvesting equipment. The selection and operation of both machinery and tractors will be practiced. Safety will be stressed throughout. (9/12)

MECH-13: Agriculture Equipment-Spring
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is a study of the use, maintenance, adjustment, calibration,
MECH-27: Applied Diesel Technical Skills
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: MECH 22A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course includes applied skill in the service and repair of diesel engines and their sub-systems. Emphasis is placed upon in-frame service/rebuild applications, electronic service information, and component installation and timing. Testing and diagnostic procedures for after service/repair is an important part of the course. Industry safety is emphasized throughout the course. (2/13)

MECH-30: Equipment Mechanics Skills
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is an introduction to skills and safety required within the Diesel Mechanics and Mechanized Agriculture areas. The course will include identification and use of hand tools and power equipment used within the equipment mechanic area. Emphasis will be placed on precision measuring and use of the following equipment: hydraulic press, pullers, cleaners, hoists, jacks, securing, dynanometers, valve grinders, boring machines, sharpening tools, reamers, hones, glass bead machine, boil out tank, forklifts, and other specialty tools. An in-depth study will also occur on fasteners and plumbing used within the equipment mechanic area. (9/12)

MECH-31: Equipment Safety
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is a study of safety on and about farm equipment and machines. The safe operation and daily maintenance of machines commonly used in the daily operation of farming operations will be covered along with hitching, driving, and operational safety skills. The safety rules and laws that apply to agriculture equipment will be stressed. (11/12)

MECH-32: Applied Electrical and Hydraulic Service
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80; MECH 21, MECH 26.
This course is designed to give the student knowledge and competencies in modern cab and chassis electrical, electronic, electron hydraulic, and hydraulic systems. Testing, diagnosis, repair, and replacement of computer-controlled systems, monitors, sensors, lighting systems, wiring harness, electro-hydraulic systems, and hydraulic systems will be emphasized throughout the course. (9/12)

MECH-33: Power Equipment Air Conditioning
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This is a study of power equipment air conditioning fundamentals designed to give the student knowledge and competencies in modern power equipment HVAC systems. Current EPA regulations that govern retrofit as well as the use of refrigerant installation, diagnostic, and recycling equipment are also covered. Environmental impacts by various protection procedures are emphasized. (9/12)

MECH-35: Compact Power Equipment
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80; MECH 15.
This is a study in basic principles of modern small equipment and engines and explores design, operation, and proper maintenance of equipment and current compact engines approved by the California Air Resources Board. Topics include application of compact engine systems to various machines, power transmission systems, attachments, related engine systems to various machines, power transmission systems, attachments, related engine systems, equipment operation, problem solving, and component failures. (9/12)

MECH-51: Truck Brake and Chassis
Unit(s): 4
Lecture Hours: 2
Lab Hours: 6
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is a study of truck and bus mechanics. It includes a study of the running gear, tires, wheels, brakes, electrical systems wiring, services, maintenance, and safety inspection. Troubleshooting and servicing are major portions of this course. (2/13)

MECH-70AA-ZZ: Special Topics in Mechanized Agriculture
Unit(s): .5 - 4
Lecture Hours: 0-4
Lab Hours: 0-12
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is the study of basic principles, processes, and theories of a special topic being presented during the semester. The material covered may not be part of an already existing program or presented as a licensing or certification course. Students may petition, through the Office of Admissions and Records, to retake the course as the topics change. (2/14)

MECH-71: Specialized Industry Training
Unit(s): .5 - 4
Lecture Hours: 0-4
Lab Hours: 0-12
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course is designed to present current information and materials on equipment computer, fuel, engine, powertrain and emission systems. Students may petition, through the Office of Admissions and Records, to retake the course as industry changes. (2/14)

MEDICAL (NONCREDIT)
MED-717: Medical Assisting
Unit(s): 960 Total, Open Entry
Advisories: none.
This entry level course designed for the adult students who desire vocational training in the field of medical assisting. Course instruction includes an overview of the career of medical assisting, knowledge of medical law and ethics, oral and written communication skills, medical terminology, anatomy and physiology, and administrative and clinical office procedures. (2/13)

MANAGEMENT
MGMT-31: Principles of Management
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This introductory management course gives an overview of the management function and its role in organizations. It is designed to provide the fundamentals of management theories. This course will focus on the management concepts of planning, ethics, motivation, communication and leading. (10/10)

MGMT-32: Human Resource Management
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
This course involves the study of the principles and methods involved in effective human resource utilization in organizations. It provides an overview of responsibilities and practices involved in recruiting, selecting, promoting, terminating and retiring employees, performance appraisal, job development and analysis, wage and salary administration, and effective working relationships. (2/10)

MGMT-33: Elements of Effective Leadership
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: AOM 30; ENGL 85A or ENGL 85AC or ENGL 85E.
This course deals primarily with the techniques of leadership in organizational settings. Topics discussed include leadership styles, the behavioral aspects of leadership, and effective leadership characteristics. (2/10)

MGMT-34: Employment Law
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to give the student an understanding of employment law. The student will have an opportunity, via simulations, case presentations, case analysis and classroom discussions to understand and analyze the legal decisions forming the basis of employment law and its effect on today's workplace and workforce. These experiences will include discussions of common law employment issues, equal employment opportunity issues, labor relations law and employment law issues. (10/14)

MGMT-37: Small Business Entrepreneurship
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: AOM 30.
This course is designed to educate prospective new business owners. Topics include the business environment, enterprise management, legal considerations, financing, insuring a business, budgeting, and marketing for a small business. (12/15)

MGMT-50A: Challenges of Leadership: Difficult People/Tough Conversations
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to equip the participant with skills needed to deal with the various challenges of leading people. Special emphasis will be placed on practical and proven tools to deal with difficult people and have tough conversations. The topic of accountability will be explored in regard to individual performance and organizational success. Participants will learn about progressive discipline and how to resolve performance problems. Pass/No Pass only. (2/14)

MGMT-50B: Values and Ethics
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to acquaint the participant with the importance of values and ethics in the workplace. Emphasis will be placed on how values influence actions, evaluating one's ethical behavior, and helping people do the right thing. Pass/No Pass only. (1/08)

MGMT-50C: Time Management
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to introduce the student to time management principles and specific tools that assist in making maximum use of time. Emphasis will be placed on how to prioritize, identifying time wasters, and goal setting. Pass/No Pass only. (1/08)

MGMT-50D: Communication in the Workplace
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to introduce the student to key elements in communication within business organizations. Topics will include verbal and nonverbal communication, listening skills and specific workplace communication skills. Pass/No Pass only. (1/08)

MGMT-50F: Team Building
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to provide the student with an understanding of how teams work together, common problems teams encounter, and how to solve them. Students will learn to recognize various personalities and how their strengths and weaknesses impact a team. Students will be introduced to team building in the workplace. Pass/No Pass only. (1/08)

MGMT-50G: Decision Making and Problem Solving
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to introduce the student to decision making and problem solving techniques including brainstorming, creativity in the workplace, how to find new perspectives, and seeking alternatives. Pass/No Pass only. (11/13)

MGMT-50H: Customer Service
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to provide the student with certain key skills and attitudes in order to effectively meet the needs of customers. The participants will be introduced to the key elements of outstanding customer service. Topics will also include understanding and exceeding customer expectations, and how to deal with unrealistic expectations. The course addresses why customers leave, and the long-term value of customers. Pass/No Pass only. (11/07)

MGMT-50I: Attitude in the Workplace
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to provide students with certain key skills in the area of attitude so that they may effectively maintain a positive attitude in the workplace and at home. Students will be introduced to the concepts of how attitudes are communicated, and how to adjust one's attitude. Pass/No Pass only. (11/13)

MGMT-50J: Thrive and Survive in the Workplace
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course focuses on the qualities that employers desire in employees and what it takes to thrive and survive in the workplace. Attitude, communication, and work ethics will be stressed. Pass/No Pass only. (1/13)

MGMT-50K: Generational Diversity: Managing Cross Generational Teams
MGMT-50L: Authentic Leadership: Know Yourself/Lead Your People
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to help participants recognize the importance of authenticity in leadership. Participants will learn what followers look for in a leader. The importance of trust in a leader and on a team will be explored. The connection of authenticity and employee engagement will be defined. Pass/no pass only. (11/15)

MGMT-50M: Cultural Diversity
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to help students understand, respect and value different cultural backgrounds. This course will help students interface more effectively with culturally diverse co-workers and customers. Topics will include our own cultural programming, the four layers of diversity, exploring differences and stereotyping. Pass/No Pass only. (2/11)

MGMT-50N: Employee Engagement
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: None.
This course will define what Employee Engagement is and what it looks like in the workplace. Participants will learn the difference between engaged, disengaged, and actively disengaged employees and how they impact the workplace. Participants will learn five key ways to engage employees. They will learn strategies to implement to help keep employees engaged. Participants will also learn how to re-engage disengaged employees. (9/13)

MGMT-50P: Emotional Intelligence
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is an introduction to the principles of Emotional Intelligence (EQ). EQ is the ability to identify and understand your emotions and those of others and use this understanding to guide your behavior and manage relationships. Topics covered include the five competencies of EQ: self-awareness, self-regulation, motivation, and effective relationships. Pass/No Pass only. (2/14)

MGMT-50S: Leading With Your Strengths
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course will help students understand their unique strengths and how applying their strengths can give them their best opportunity for success. Through the Strengths-finder 2.0 assessment, students will learn strategies to apply their strengths in the workplace and in everyday life. Students will also learn how to recognize the strengths of others and how to apply this knowledge to help teams work effectively together. Pass/No Pass only. (2/15)

MGMT-51C: Leadership Essentials: What Emerging Leaders Need to Know
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to acquaint the student with the essential things new and emerging leaders need to know. The roles, functions and responsibilities of a leader will be examined, as well as professionalism, coaching and mentoring. Pass/No Pass only. (2/14)

MGMT-51F: Conflict Resolution
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to introduce participants to the meaning of conflict, the causes of conflict, and strategies for resolving interpersonal conflict as well as dealing with difficult customers. Pass/No Pass only. (1/08)

MGMT-51G: Stress Management
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to introduce the participant with key elements of stress management. Topics will include the recognition of stress, causes of stress, and the benefits of stress management. Various stress management techniques will be covered. Pass/No Pass only. (1/08)

MGMT-52C: Successful Business Speaking
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to assist the student in developing the skills necessary to successfully speak in a variety of business situations. Topics will include overcoming stage fright, how to gain credibility with the audience, how to make a presentation appealing and tips and techniques to be a better presenter. Pass/No Pass only. (11/15)

MGMT-52D: Managing Organizational Change
Unit(s): 0.5
Lecture Hours: 5
Lab Hours: 0
Advisories: ENGL 84A.
This course is designed to provide the participant with an understanding of change and the influence it has on an organization and the individuals in that organization. Topics will include understanding organizational change, stages of change, and how to manage organizational change. Pass/No Pass only. (1/08)

MARKETING

MKTG-30: Principles of Marketing
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides a broad understanding of the promoting, pricing, and distribution of products and services. Promotional mixes are studied including sales promotion, advertising, packaging, personal selling, public relations, and publicity. A study is made of understanding customer needs and behaviors; developing a product and/or service mix to satisfy customer needs, and profitability. Legal, political, cultural, social, economic, competitive, and ethical aspects of marketing are discussed. (2/14)

MKTG-31: Retailing and E-Commerce
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: BUS 10; ENGL 85A or ENGL 85AC or ENGL 85E.
This introductory management course gives an overview of the
MKTG-33: Advertising
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: AOM 30; ENGL 85A or ENGL 85AC or ENGL 85E.  
This is an introductory course in advertising principles and techniques. Areas of study will include advertising agencies, preparation of advertisements, including copyrighting, illustration and layouts, media selection, budgeting for advertising, psychology and persuasion of advertisements, and the use of advertising as a tool in sales promotion. (12/11)

MUSIC, APPLIED

MUSA-20: Applied Music  
Designations: (C-ID MUS 160)  
Unit(s): 0.5  
Lecture Hours: 0  
Lab Hours: 1.5  
Limitations on Enrollment: Students enrolling in MUSA•20 must be able to demonstrate a level of performance competence on their selected instrument or voice at a level equivalent to that of a music major attending a four-year college or university in the appropriate term of their freshman or sophomore year of studies.  
Advisories: Concurrent participation in an appropriate ensemble and enrollment in appropriate-level major preparation courses (Theory, Musicianship, Keyboard, etc.)  
This course provides for private individual instruction in voice, piano, or traditional band or orchestra instruments at a level equivalent to that of a music major in the appropriate term of the their freshman or sophomore year of music studies. It requires one lesson per week with a private instructor approved by the music department faculty. A minimum of 15 lessons must be verified. A jury examination by the music department faculty is required at the conclusion of the course. This course can be repeated three times. (12/13)

MUSA-21A: Voice I  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Limitations on Enrollment: Must demonstrate the ability to match pitch; see instructor.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This is a course in elementary voice training. It emphasizes posture, diaphragmatic-intercostals breathing, breath support, breath control, tonal placement, articulation, stage presence, and overcoming performance anxiety. Critical evaluation, demonstration, and written reviews will be required. A basic understanding of music fundamentals, although not required, would be highly desirable. (12/13)

MUSA-21B: Voice II  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MUSA 21A.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This is a course for those singers who desire to develop their abilities in song interpretation. Particular emphasis is placed on music theatre literature and presentation. Character development, motivation, blocking, facial and body gestures and emotional discovery are all incorporated into the song presentation. In lieu of the prerequisite, students may choose to challenge by audition with instructor. (12/13)

MUSA-25A: Guitar I  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is an introduction to the basic playing techniques, theory and history of the guitar. Students will develop a basic foundation for playing the guitar while surveying its historical development and various stylistic uses in artistic, folk, and popular music. (12/13)

MUSA-25B: Guitar II  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MUSA 25A.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is a continuation of skills and techniques learned in MUSA 25A Beginning Guitar. Additional emphasis will be placed on classical and popular guitar styles. Chord-melody, bar chords, and hybrid picking techniques are introduced. (12/13)

MUSA-27A: Class Piano I  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is designed for the beginning piano student with little or no background in piano. It is designed to develop sight reading skill and keyboard technique incorporated into solo and ensemble music. (12/13)

MUSA-27B: Class Piano II  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Prerequisites: MUSA 27A.  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.  
This course is a continuation of MUSA 27A. It is the second semester of class piano studies. The student will perform musical pieces with greater accuracy and musical expression. (12/13)

MUSIC, ENSEMBLE

MUSE-41: Concert Band  
Designations: (C-ID MUS 180)  
Unit(s): 1  
Lecture Hours: 0  
Lab Hours: 3  
Limitations on Enrollment: Audition by instructor.  
This course provides experience in performing concert and symphonic band literature chosen from Classical, Romantic, Modern and contemporary eras. Literature may range from sacred to secular in the genres of classical, traditional, pop, and jazz band repertoire. Attention will be given to the composers of the literature and particular performance practices historically applicable. Public performance and exchange concerts are scheduled in addition to class rehearsals. This course may be repeatable three times. (3/16)

MUSE-42: Jazz Ensemble  
Designations: (C-ID MUS 180)  
Unit(s): 1  
Lecture Hours: 0  
Lab Hours: 3  
Limitations on Enrollment: Audition by instructor.  
This course is a study of jazz music in the big band tradition and modern eras, as is standard first semester lower division college performance ensemble classes. Attention will be given to the composers of the literature and those particular performance practices which are historically applicable. The course emphasizes individual, sectional and ensemble instrumental performance. Tone, intonation, balance, precision, breath control, articulation, style, and improvisation are included. The jazz ensemble makes several public performances each year. This course may be repeatable three times. (3/16)

MUSE-43: Guitar Ensemble  
Designations: (C-ID MUS 180)
MUSG-10: Music Fundamentals
Designations: (C-ID MUS 110) (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 84A.
This course is a study of music fundamentals, including principles and procedures of rhythm and pitch notation, musical symbols, scales, key signatures, intervals, diatonic chords. The course is applicable to those who have learned to play and sing without training in fundamentals and to beginners in music. This course is open to all students. (12/13)

MUSG-11: Classical Music History I
Designations: (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of the important composers and their works in classical music from early music (e.g., Gregorian chant) to Bach (600 to 1750). Students will develop an understanding and appreciation of various types of classical music from different eras as a medium of cultural development and as a background toward further musical study. (12/13)

MUSG-12: Classical Music History II
Designations: (CSU breadth area C1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of the important composers and their works in classical music from the classical era to the present day. Emphasis is on classical, romantic, impressionistic, nationalistic, and contemporary periods in classical music history. Students will develop an understanding and appreciation of various types of classical music from different eras as a medium of cultural development and as a background toward further musical study. (12/13)

MUSG-13: Jazz Music History
Designations: (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course presents the history of jazz music from 1890 to present, including an introduction and analysis of major jazz artists and their contributions to this American art form. Special emphasis will be given to developing listening skills appropriate to the understanding and appreciation of jazz. International influences and the development of jazz as a world musical form will be discussed. This course is a listener’s guide to the appreciation of jazz and incorporates principles of structure, expression, instrumentation, cultural and social issues integral to jazz music. (12/13)

MUSG-14: American Popular Music History
Designations: (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course presents an introduction to the history and literature of the popular music movement in the United States; it is a study of the relationships of popular music to the social history of America. Emphasis is on styles and personalities of folk, blues, jazz, musical theater, country & western, and rock "n" roll. This course is designed for the non-music major. (12/13)

MUSG-15: Introduction to Digital Music
Designations: (CSU breadth area C1) (IGETC area 3A)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MUSG 10.
An introduction to the principles, uses, and applications of professional music software and MIDI hardware. Students work with MIDI software and hardware in order to explore the basic possibilities of digital music technology, including composition, sequencing, arranging, digital recording, and printing music. (12/13)

MUSG-01: Music Theory I (Diatomic Harmony)
Designations: (C-ID MUS 120)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MUSG 10.
This course provides a thorough study of diatomic harmony found in music literature of the common practice period. This includes an introduction to harmonic and voice leading principles, triads & 7th chords, and harmonic
progression. This course is open to all students. While previous training in music is not required, it is expected that the student understands basic principles found in music (e.g., ability to read music.) This is a core requirement for the student who is pursuing an AA in music. (12/13)

**MUST-02: Music Theory II (Diatonic Harmony II)**
- Designations: (C-ID MUS 130)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: MUST 01.
This course is a continuation of MUST 01. It is the second semester of music theory studies. It completes a thorough study of diatonic harmony while introducing basic concepts found in chromatic harmony. This course is open to all students who meet the prerequisites but is intended for the music major. This is a core requirement for the student who is pursuing an AA in music. (12/13)

**MUST-03: Music Theory III (Chromatic Harmony)**
- Designations: (C-ID MUS 140)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: MUST 02.
  Advise: Advisory MUSA 27B.
This course examines chromatic music theory as it relates to classical and popular music using skills acquired in MUST 01 and MUST 02. This course covers concepts that help the student develop as a musician. These skills are essential to both performance and song writing. It is open to all students interested in music who have met the prerequisites of the course. This is a core requirement for the student who is pursuing an AA in music. (12/13)

**MUST-04: Music Theory IV (Music Theory of the 20Th & 21St Centuries)**
- Designations: (C-ID MUS 150)
- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: MUST 03.
  Advise: Advisory MUSA 27B.
This course incorporates the concepts from Music Theory III. In addition, through writing and analysis, the course will include: post-Romantic techniques such as borrowed chords and modal mixture, chromatic mediant, Neapolitan and augmented-sixth chords, 9th, 11th and 13th chords, altered chords and dominant; and 20th century techniques such as: Impressionism, tone rows, set theory, pandiatonicism and polytonalism, meter and rhythm. (2/14)

**MUST-05: Aural Skills I**
- Designations: (C-ID MUS 125)
- Unit(s): 1
- Lecture Hours: 5
- Lab Hours: 1.5
  Advise: MUSG 10.
Basic drill in the singing and recognition of intervals, scales, and diatonic melodies, in treble, bass, alto, and tenor clefs. Dictation of diatonic melodies and counterpoint in first and second species. (12/13)

**MUST-06: Aural Skills II**
- Designations: (C-ID MUS 135)
- Unit(s): 1
- Lecture Hours: 5
- Lab Hours: 1.5
  Prerequisites: MUST 05.
Basic drill in the singing and recognition of intervals, scales, and diatonic melodies, in treble, bass, alto and tenor clefs. Dictation of diatonic melodies and counterpoint in first and second species. Use of computer music programs. (12/13)

**MUST-07: Aural Skills III**
- Designations: (C-ID MUS 145)

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**NUTR-10: Nutrition**
- Designations: (C-ID NUTR 110) (CSU breadth area E)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
- Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
  Advise: MATH 81.
This course presents an in-depth study of the essential nutrients and their functions, and the chemical composition of foods and their utilization in the body. It includes discussion on the nutritional values of foods, current topics in nutrition and nutritional needs throughout the life cycle. The relationship between diet and diseases will also be covered. (12/11)

**NUTR-20: Principles of Foods**
- Designations: (C-ID NUTR 120)
- Unit(s): 3
- Lecture Hours: 2
- Lab Hours: 3
  Advise: ENGL 01A; MATH 91; NUTR 44.
This course will study the application of food science principles with emphasis on ingredient function and interaction, food preparation techniques, sensory evaluation standards, food safety and sanitation, and nutritional values. (10/15)

**NUTR-24: Work Experience in Nutrition**
- Unit(s): 1-8
- Lecture Hours: 0
- Lab Hours: 0
  Advise: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning or improving skills or knowledge on-the-job. Occupational Work Experience is discipline-specific and must connect to the student's major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)
NUTR-26A: Independent Study in Foods and Nutrition
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Prerequisites: NUTR 10.
One-way Corequisite: NUTR 45.
This course is an in-depth study in the student's area of interest. The food and nutrition student will complete an appropriate project related to the food and nutrition field of study. It will be planned, arranged, and carried out with instructor supervision. (10/16)

NUTR-26B: Independent Study in Foods and Nutrition
Unit(s): 2
Lecture Hours: 0
Lab Hours: 6
Prerequisites: NUTR 10.
One-way Corequisite: NUTR 45.
This course is an in-depth study in the student's area of interest. The food and nutrition student will complete an appropriate project related to the food and nutrition field of study. It will be planned, arranged, and carried out with instructor supervision. (10/16)

NUTR-26C: Independent Study in Foods and Nutrition
Unit(s): 3
Lecture Hours: 0
Lab Hours: 9
Prerequisites: NUTR 10.
One-way Corequisite: NUTR 45.
This course is an in-depth study in the student's area of interest. The food and nutrition student will complete an appropriate project related to the food and nutrition field of study. It will be planned, arranged, and carried out with instructor supervision. (10/16)

NUTR-37: Nutrition and Food Service Supervised Field Experience
Unit(s): 3
Lecture Hours: 1
Lab Hours: 6
Prerequisites: NUTR 44.
One-way Corequisite: NUTR 42, NUTR 45.
Limitations on Enrollment: Students must provide proof of a negative TB skin test or chest x-ray within past six months, immunizations and criminal background check.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 91.
This course is designed to help students learn problem solving and communication skills. The student is engaged in on-the-job learning activities under the supervision of a Dietary Service Supervisor or Registered Dietitian and College Nutrition Professor. Learning objectives are established based on Dietary Service Supervisor functions. Students rotate through experiences in healthcare facilities, schools and own work site if applicable. Students will be required to follow dress standards required by the facility in which they work. This course is recommended at or near the completion of the Dietary Service Supervisory Program. Students are required to show proof of a current negative TB clearance (within last 6 months) and other immunizations required by the clinical facility to which they are assigned along with criminal background check. (1/15)

NUTR-40: Menu Planning for Food Service Operations
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; NUTR 10, NUTR 45.
This course covers the principles of menu planning for a variety of food service operations including childcare, schools, hospitals, eldercare, and restaurants. Emphasis is on multicultural and healthful menus as well as menu management, marketing and the significance of the menu in diverse settings. (10/15)

NUTR-41: Infant and Toddler Feeding
Also: (CLDV 41)
PHIL-01: Introduction to Philosophy

This is a survey class designed to introduce the professional foundations of physical education and exercise science. The course includes historical and philosophic development of physical education. This course will also acquaint the student with current issues, qualifications, and opportunities in the field. (1/05)

PHED-20: Introduction to Physical Education and Exercise Science

Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This is a survey class designed to introduce the professional foundations of physical education and exercise science. The course includes historical and philosophic development of physical education. This course will also acquaint the student with current issues, qualifications, and opportunities in the field. (1/05)

PHIL-02: Social and Political Philosophy

Designations: (CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 100)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This course examines philosophical issues concerning the nature of society and justifications for the authority of government. Concepts to be discussed include liberty, equality, justice, the common good, and the legitimate use of state power. (2/15)

PHIL-03: Ancient Philosophy

Designations: (CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 130)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This course presents an introduction to the history of philosophy from the ancient world through the Middle Ages, with emphasis on the development of Greek philosophy from the Pre-Socratics through Aristotle. (10/13)

PHIL-04: Modern Philosophy

Designations: (CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 140)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This course presents an introduction to the history of philosophy from the Renaissance to the present, with emphasis on Descartes through Kant. (4/13)

PHIL-05: Contemporary Ethical Issues

Designations: (CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 120)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
PHIL-10: Critical Thinking
Designations: (CSU breadth area A3)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This course examines the concept of morality and values, representative ethical theories, and their application to contemporary ethical issues such as capital punishment, abortion, war, animal rights and economic justice. (4/13)

PHIL-12: Introduction to Logic
Designations: (CSU breadth area A3) (C-ID PHIL 110)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This is a practical course in sound and logical reasoning. The focus of this course is to develop the abilities to analyze, to criticize, and to reach reasoned conclusions. This includes the ability to recognize and avoid common fallacies in reasoning, and to construct cogent arguments and essays. (3/08)

PHIL-13: Critical Reasoning and Writing
Also: (ENGL 13H)
Designations: (C-ID ENGL 105) (CSU breadth area A3) (IGETC area 1B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A.

This course offers instruction in argumentative and critical writing, critical thinking, research strategies, information literacy, and proper documentation. Readings feature mostly non-fictional essays and books that reflect diverse cultural and gender perspectives on a variety of contemporary political and social issues, especially those involving race, ethnicity, and gender. ENGL 13/PHIL-13 meets the IGETC critical thinking/composition requirement. (3/12)

PHIL-13H: Honors Critical Reasoning and Writing
Also: (ENGL 13H)
Designations: (C-ID ENGL 105) (CSU breadth area A3) (IGETC area 1B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 01A.

Limitations on Enrollment: Enrollment in the Honors Program.

This course offers instruction in argumentative and critical writing, critical thinking, research strategies, information literacy, and proper documentation. Readings feature mostly non-fictional essays and books that reflect diverse cultural and gender perspectives on a variety of contemporary political and social issues, especially those involving race, ethnicity, and gender. ENGL 13/PHIL 13 meets the IGETC critical thinking/composition requirement. (3/12)

PHIL-15: Comparative Religions
Designations: (CSU breadth area C2) (IGETC area 3B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.

This course surveys the historical background and fundamental philosophical concepts of the major religions of the world, including Hinduism, Buddhism, Shinto, Confucianism, Judaism, Christianity, Islam, and some typical basic religions. (4/06)

PHOT-10A: Introduction to Photography
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

Introduction to Photography covers camera and darkroom principles of black and white photography. Topics include current aesthetic trends and compositional elements, image capture techniques, exposure control, film developing, contact prints, enlargements, lighting, filters, print finishing and photo mounting. (2/14)

PHOT-10B: Intermediate Photography
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: PHOT 10A or PHOT 11A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course deals with the aesthetic underpinnings and practical application of intermediate photographic principles relevant to film and digital cameras. The course emphasizes technical and compositional control and the perfection of image processing. Broad-based professional studio lighting practices factor into the course. (2/14)

PHOT-11A: Introduction to the Digital Camera
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: PHOT 10A or PHOT 11A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This course introduces students to the creative use of digital cameras through lectures, hands-on experience and computer use. Instruction includes digital camera functions, technical and creative control, computer processing of images, and digital output options. Students gain essential knowledge of digital photographic strategies through image capture and creative Photoshop and Lightroom manipulation. (2/14)

PHOT-33: The History of Photography
Designations: (IGETC area 3A) (CSU breadth area C1)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: ENGL 85A or ENGL 85AC or ENGL 85E.
Advisories: ENGL 01A.

This historical survey course covers image capture techniques from the camera obscura through current digital technologies. The artistic significance and broad social implications of photography provide an underlying basis for critical analysis. The course includes lecture and discussion components coupled with visual presentations. (2/14)

PHOT-35: Studio Careers in Photography
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: PHOT 10B.

This course covers advanced studio lighting through black and white and color assignments. Students become acquainted with commercial equipment and image processing related to portraiture, weddings, fashion, product, and fine art photography. Assignments emphasize concept development, lighting, location work, and small and large products. Design and layout may be incorporated into specialized portfolio pieces. (2/14)

PHOT-36: Photo Portfolio Expressions
Designations: (CSU breadth area C1)
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
PHOT-49: Independent Study in Photography

Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Prerequisites: PHOT 10A or PHOT 11A.
Advisories: AOM 50C.

This course covers a variety of topics and/or activities of current interest in the field of photography. The student chooses the topic(s) of study for the semester. (1/18)

PHYSICS

PHYS-02A: General Physics I
Designations: (C-ID PHYS 105) (CSU breadth area B1/B3) (IGETC area 5A/5C)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: MATH 02 or MATH 02H; or MATH 25 and MATH 26.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This introductory laboratory is designed to provide hands-on exploration in parallel with the topics covered in the introduction to Survey of Chemistry and Physics lecture course - Physical Science 2. Emphasis will be placed on (1) classical science experimentation, (2) laboratory activities in the real world, and (3) support of the laboratory activities through use of modern technologies. This course is intended for non-science majors. (11/14)

PHYS-02B: General Physics II
Designations: (CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID PHYS 110)
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: PHYS 02A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

PHYS-02B is a continuation of PHYS 02A with emphasis on electricity, magnetism, radiation, relativity, atomic and nuclear processes, astrophysics, cosmology, and a look toward the future. (12/12)

PHYS-04A: Physics I
Designations: (C-ID PHYS 205/200) (CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID PHYS 140)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH 81.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

This introductory laboratory is designed to provide hands-on experimentation in parallel with topics covered in the lecture course, PHYS 04A. Emphasis will be placed on 1) classical science experimentation, 2) laboratory activities in the real world, and 3) support of the laboratory activities through use of modern technologies. Students planning on becoming K-12 teachers will find materials applicable to their future profession. (2/13)

PHYS-04B: Physics II
Designations: (C-ID PHYS 210/200) (CSU breadth area B1/B3) (IGETC area 5A/5C) Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: PHYS 04A.
One-way Corequisite: MATH 04B.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.

PHYS-04B is a continuation of PHYS 04A with emphasis on the areas of electricity, magnetism, and light. (12/12)

PHYS-04C: Physics III
Designations: (CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID PHYS 200S)
Unit(s): 4

This course is intended for students other than physics and engineering majors. PHYS-02A is the first semester of a one-year physics course designed to develop major concepts and give an understanding of general principles of physics. This course will also try to relate physics to other areas of knowledge and discuss science in general, and physics specifically, as part of the concept of culture and time. The development of ideas will begin with those of Aristotle and terminate with present-day concepts of the atom and nucleus. PHYS-02A will emphasize the universe, motion, forces in nature, energy, fields, conservation laws, waves, sound, light, and thermal phenomena. (10/13)
PLSC-10: Elements of Plant Science
Designations: (C-ID AG 106 ) (CSU breadth area B1) (IGETC area 5A)  
Unit(s): 3  
Lecture Hours: 2  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.  
This course is designed to provide the students with a working knowledge of fundamental structures and processes of plants. Principles to be applied cover plant structures, physiology, heredity, environmental relationship to growth, adaptation, and management of crops. Techniques of research, exploration of plant growth, and identification of economical crops will be included. (12/06)

PLSC-12: Weeds  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.  
This is a study of classification, identification, and life cycle of common and poisonous weeds in California which are detrimental to cultivated crops, grasslands, animals, and man. Management practices include: prevention, mechanical, biological, and chemical methods. Weed establishment and chemical resistance are also covered. (2/14)

PLSC-13: Economic Entomology  
Unit(s): 3  
Lecture Hours: 3  
Lab Hours: 0  
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.  
This course will cover insects and mites of economic importance to agriculture. Morphology, taxonomy, identification, life cycles, hosts, habitat relationships, and control methods will be discussed. Collection and labeling of specimens will be required. (2/13)

PLSC-70A-Z: Special Topics in Plant Science  
Unit(s): .5 - 4  
Lecture Hours: .5 - 4  
Lab Hours: 1.5 - 12  
Prerequisites: None.  
This course is the study of basic principles, processes, and theories of the special topic being presented during this semester.

PLSC-71A-Z: Topics in Agricultural Pest Control Updating  
Unit(s): 1
PSYC-01AH is an in-depth survey course designed to provide an introduction to facts and theories underlying human behavior. Special emphasis is given to the following topics: schools of psychology, physiological factors, sensation, perception, motivation, learning, thinking, emotion, abnormal behavior, personality, heredity, environment, and social factors. There will also be an emphasis on research, writing, and critical thinking. (2/06)

PSYC-01B: Introduction to Psychological Research Methods
Designations: (C-ID PSY 200)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: PSYC 01A or PSYC 01AH; MATH 10 or PSYC 05.
Advisories: ENGL 01A.
This course reviews psychological methods of research. Attention will be focused on foundations of experimental design, procedures and methodology for collecting research data, and techniques used to analyze, report, and present findings in APA format. Research design will also be examined through a review of past psychological research. (10/12)

PSYC-05: Introduction to Statistics in Psychology
Designations: (C-ID SOCI 125, MATH 110) (CSU breadth area B4) (IGETC area 2)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: MATH C or MATH 61 or MATH 62 or MATH 88.
Advisories: ENGL 01A.
The theory of parametric and nonparametric statistical methods and their application to psychological data. Topics include: descriptive statistics, probability and sampling distributions; statistical inference and power, linear correlation and regression, chi-square; t-tests; and one-way analysis of variance (ANOVA). Application of both hand-computation and statistical software printouts to data in a psychology context, including the interpretation of the relevance of the statistical findings. (2/18)

PSYC-09: Human Development
Also: (CLDV-09)
Designations: (C-ID PSY 180) (CSU breadth area E)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is an introduction to the scientific study of human development from conception through death. It examines the interplay of biological, psychological, social, and cultural forces on the developing human being. (4/12)

PSYC-15: Biological Psychology
Designations: (C-ID PSY 150) (CSU breadth area B2/D) (IGETC area 4/5B)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Prerequisites: PSYC 01A or PSYC 01AH.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
An introduction to the scientific study of the biological bases for human thought and behavior. Topics include basic neuroanatomy and neurophysiology, research methods in biological psychology, the autonomic and peripheral nervous system; and the physiological mechanisms underlying sensation, perception, consciousness, motivation, emotion, learning, memory, and psychological disorders. (11/12)

PSYC-22: Human Sexuality
Designations: (C-ID PSY 130) (CSU breadth area D/E) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course explores the psychology of human sexuality. Psychological, biological, and sociocultural research is presented concerning all aspects of human sexuality in contemporary society. Specific topics include sexual anatomy and physiology, gender, sexual orientations, contraception, sexually transmitted infections, sexual dysfunction and sex for sale. (11/12)

PSYC-23: Personal and Social Adjustment
Designations: (C-ID PSY 115) (CSU breadth area D/E) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course examines personality factors as they relate to the problems of growth and adjustment. Concepts covered in the course are personality development, the psychological bases of behavior, mental health, and interpersonal relations. Stress is placed on the importance of applying therapeutic principles and techniques in everyday life. (5/14)

PSYC-25: Introduction to Abnormal Psychology
Designations: (C-ID PSY 120) (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to provide the student with an understanding of abnormal behavior as delineated in the "Diagnostic and Statistical Manual of Mental Disorders." Topics include classifications, clinical pictures, casual factors, treatment, and outcomes of maladaptive behavior. Special emphasis will be placed on assessment, therapy, and prevention of maladaptive behavior. (10/12)

PSYC-36: Developmental Psychology: Adolescence
Designations: (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a study of human development during adolescence. The focus is on major theories and psychological research relating to the physical, cognitive, and psychological research relating to the physical, cognitive, and psychosocial aspects of development during adolescence, with an emphasis on the influence of culture. (5/12)

PSYC-37: Sport Psychology
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course will examine the Psychological Dimensions of Sport and Exercise Performance. Topics will include motivation, personality, emotions and mood as they relate to individual and group sports. Social psychology of sport and cognitive and behavioral interventions will also be discussed. Relevant and current literature in the field will be used to support concepts. (12/16)

PSYC-40: Drugs and Behavior
Designations: (CSU breadth area E)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course will examine psychoactive drugs and their mode of action on the central nervous system and on behavior. Motivational aspects of drug use and abuse and the psychological treatment of substance-use disorders will be evaluated. (11/14)

PSYC-49A-ZZ: Special Topics in Psychology
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
RADT-10: Introduction to Radiologic Sciences and Health Care
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: ALLH 67; RADT 50.
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program; Student supplied criminal background and drug screening clearances; physical evaluation within the last 6 months; negative TB screening or chest x-ray report with the last 6 months; current inoculations; annual flu vaccination; current CPR.
This course provides an overview of the foundations of radiography and the practitioner's role in the health care delivery system. Students will be oriented to the administrative structure of program, health science professions and career advancement, health care environment, cultural awareness in the radiologic sciences, ethics and the law, and regulatory agencies. The basic principles of radiation protection, patient care and pharmacology will also be presented. An overview of computer fundamentals, digital imaging, computer literacy, software applications, library use, time management, study skills and a mathematics review will be presented. (11/13)

RADT-11: Radiologic Procedures I
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: BIOL 16; ENGL 01A.
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program; Minimum of 2.75 GPA in prerequisite courses.
Advisories: BIOL 18.
This course is designed to provide the knowledge base necessary to perform standard imaging as it relates to radiographic anatomy and positioning of the thoracic viscera, abdomen, upper extremities, shoulder girdle, lower extremities, hip & pelvis and upper gastrointestinal tract. The laboratory portion of this course will include positioning exercises and image evaluation of these areas to achieve both accuracy and speed. (11/13)

RADT-12A: Radiologic Procedures II
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides basic radiographic anatomy and positioning of the lower gastrointestinal tract, biliary system, genitourinary system, vertebral column, bony thorax, mobile and trauma radiography. The laboratory portion of this course will include positioning exercises and image evaluation of these areas to achieve both accuracy and speed. (11/13)

RADT-12B: Clinical Education I
Unit(s): 5
Lecture Hours: 0
Lab Hours: 15 hours TBA lab (270 Total TBA hours).
One-way Corequisite: RADT 12A.
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, patient information management, work efficiency and image evaluation is provided. (11/13)

RADT-13: Radiologic Sciences I
Unit(s): 3
Lecture Hours: 2
Lab Hours: 3
Prerequisites: CHEM 02A; MATH C.
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers the nature and characteristics of radiation, x-ray production, and photon interactions with matter. It also establishes a knowledge base in radiographic and mobile equipment requirements and design. The laboratory portion of this course will focus on solving radiographic technical problems and verification of the basic laws of the radiation sciences. (10/15)

RADT-14A: Radiologic Sciences II
Unit(s): 2
Lecture Hours: 27 Total
Lab Hours: 27 Total
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers the theory and application of factors that govern and influence the production of quality radiographic images. A basic knowledge of quality control, optimal imaging standards, image evaluation and factors that can affect image quality such as anatomy and positioning will be reviewed to assure consistency in the production of quality radiographic images. (11/13)

RADT-14B: Clinical Education II
Unit(s): 3.5
Lecture Hours: 0
Lab Hours: 189 Total TBA
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides continued clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, patient information management, work efficiency and image evaluation is provided. (11/13)

RADT-15A: Radiologic Procedures III
Unit(s): 1
Lecture Hours: 5
Lab Hours: 1.5
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course is designed to provide a knowledge base necessary to perform standard radiographic procedures of the cranial, facial bones and paranasal sinuses. The laboratory portion of this course will include positioning exercises and image evaluation of these areas to achieve both accuracy and speed. (11/13)

RADT-15B: Clinical Education III
Unit(s): 5.5
Lecture Hours: 0
Lab Hours: 17 hours TBA lab (306 Total TBA hours).
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides continued clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, patient information management, work efficiency and image evaluation is provided. (11/13)

RADT-15C: Advanced Radiologic Procedures I
Unit(s): 2
Lecture Hours: 2
Lab Hours: 189 Total TBA
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers advanced radiographic procedures of vascular and non-vascular procedures and interventional radiology. (11/13)

RADT-15D: Radiographic Pathology
Unit(s): 1.5
Lecture Hours: 1.5
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
The course introduces concepts related to disease and etiological consideration with emphasis on radiographic appearance of disease and impact on exposure factor selection. (10/15)

RADT-16A: Advanced Radiologic Procedures II
Unit(s): 2.5
Lecture Hours: 2.5
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of CT and MRI devices. In addition, the basic concepts of venipuncture and administration of diagnostic contrast agents will be introduced. The appropriate delivery of patient care during these procedures is emphasized. (11/13)

RADT-16B: Advanced Clinical Education I
Unit(s): 10
Lecture Hours: 0
Lab Hours: 540 Total TBA
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides continued clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, patient information management, work efficiency and image evaluation is provided. (11/13)

RADT-16C: Fluoroscopy
Unit(s): 2.25
Lecture Hours: 405 Total
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course is designed to prepare the senior radiography student to sit for the California Radiologic Technologist Fluoroscopy Permit examination. (11/13)

RADT-17A: Radiologic Sciences III
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course presents an overview of the principles of the interaction of radiation with living systems, the principles behind radiation protection, including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. (11/13)

RADT-17B: Advanced Clinical Education II
Unit(s): 7
Lecture Hours: 0
Lab Hours: 378 Total TBA
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides clinical experience for reapplication of theoretical principles and concepts covered in previous and current didactic coursework to ensure continued competency. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, work efficiency and image evaluation is provided. (11/13)

RADT-18A: Integrative Study in Radiography
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers a comprehensive analysis and assessment of all previous radiography instructional coursework in preparation for writing the national registry examination (ARRT). Job market readiness skills will also be presented. (11/13)

RADT-18B: Advanced Clinical Education III
Unit(s): 9
Lecture Hours: 0
Lab Hours: 486 Total TBA
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course provides clinical experience for reapplication of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, positioning skills, equipment utilization, radiation protection application, patient information management, work efficiency and image management and evaluation is provided. (11/13)

RADT-18C: Sectional Anatomy
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers an introduction to sectional anatomy. Emphasis will be placed on the major anatomic structures normally seen in axial sections with some coronal and sagittal sections included. (11/13)

RADT-24: Work Experience in Radiology
Unit(s): 1-8
Lecture Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. (10/15)

RADT-50: Career Exploration in Medical Imaging
Unit(s): 1
Lecture Hours: 0
Lab Hours: 54 TBA Total
Limitations on Enrollment: Negative TB screening test or chest x-ray (within last 6 months); some facilities may require criminal background and drug screening clearances; some facilities may require current immunizations. Advisories: ALLH 67; BIOL 16.
This course allows students to sample an experience in a medical imaging setting in order to enhance their understanding of the challenges and opportunities in considering a career in diagnostic medical imaging. The instructor of record will be responsible for arranging the student's clinical placement during the course's orientation meeting. (10/15)

READING
READ-80A: Foundations in Reading II
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0

186  •  Courses  •  209.384.6000
This introductory level course is designed as a support course for students to improve basic reading skills in cross-disciplinary content areas. The course will emphasize the application of reading strategies to improve students’ abilities to read effectively in a variety of contexts. The course will stress comprehension, critical reading, vocabulary acquisition, and fluency. (1/17)

REAL-42: Real Estate Principles
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is an analysis of principles of real estate in California, history of California real estate, property, contracts, agency, listings, real estate financing, deeds, liens and encumbrances, escrows and title insurance, land descriptions, real estate mathematics, and real estate licensing and state regulations. (1/09)

REAL-43: Real Estate Practices
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80.
This course is an analysis of problems related to establishing and conducting a real estate business, which includes but is not limited to preparing and evaluating listings, prospecting, advertising, the selling process, closing the sale, financing real estate, exchanges and specializing brokerage, income properties, management and leasing, taxes, land utilization, and professional and public relations. (11/15)

RECREATION

RECR-30: Introduction to Community Recreation
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course teaches a general orientation to the field of recreation and parks. It will include a history of the recreation and leisure services, a description of recreational forms, and the nature, scope, and significance of leisure, and recreation as a social force in contemporary society. Emphasis is placed on the role of the professional leader in a variety of settings. (12/06)

REGISTERED NURSING

REGN-01: Transition LVN to RN
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: BIOL 16, BIOL 18, BIOL 20; ENGL 01A; MATH C.
Limitations on Enrollment: California VN license.
Registered Nursing 01 is a series of lectures and discussions that provides the concepts and principles necessary to facilitate the transition of the Licensed Vocational Nurse to the changing role of the Registered Nurse. Incorporates best practices, professional standards, and legal and ethical responsibilities of the professional nurse as applied in various health care settings. Emphasis will be placed upon the registered nurse as a decision-making member of the health care team and the responsibilities to be assumed by such a practitioner. (2/14)

REGN-02: Clinical Skills Transition-LVN to RN
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3 TBA
Prerequisites: REGN 01.
Limitations on Enrollment: California VN license, enrolled in REGN Program 3rd semester.
Registered Nursing 02 consists of practice in the clinical setting with the skills and principles necessary to facilitate the transition of the Licensed Vocational Nurse to the changing role of the Registered Nurse. Emphasis is placed on nursing skills related to first year RN nursing concepts in clinical practice. (2/14)

REGN-15: Foundations of Nursing
Unit(s): 9
Lecture Hours: 4
Lab Hours: 15 TBA
Prerequisites: BIOL 16, BIOL 18, BIOL 20; ENGL 01A; MATH C.
One-way Corequisite: None. Two-way corequisite: REGN 18.
Limitations on Enrollment: 1) Enrollment in the REGN program, 2) CPR card Module AC, 3) physical within past 6 months, 4) negative TB screening test within past 6 months or negative chest x-ray within past year, 5) proof of current immunizations, 6) criminal background clearance, 7) drug screening.
Registered Nursing 15 (Foundations of Nursing) focuses on foundational concepts necessary for safe, patient-centered nursing care to a diverse patient population while integrating legal and ethical responsibilities of the nurse. Introduces critical thinking applied to nursing, the nursing process, diversity, and communication techniques used when interacting with patients and members of the interdisciplinary team, and applies evidence-based nursing practice. Includes acquisition of basic nursing skills. Application of knowledge and skills occurs in the nursing skills laboratory and a variety of acute and long-term care clinical settings. (2/13)

REGN-18: Pharmacology in Nursing Practice
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
One-way Corequisite: None. Two-way corequisite: REGN 15.
Limitations on Enrollment: Enrollment in the REGN Program.
Advisories: VOCN 46A.
Registered Nursing 18, Pharmacology in Nursing Practice, presents an overview of the basic principles of pharmacology including major drug classifications and prototypes. Principles of medication administration include all aspects of best practice for safe, quality, patient-centered care including developmentally and culturally appropriate interventions. Includes dosage calculations. (2/13)

REGN-24: Acute Medical/Surgical and Nursing of the Childbearing Family
Unit(s): 10
Lecture Hours: 5
Lab Hours: 15 TBA
Prerequisites: REGN 15, REGN 18.
Limitations on Enrollment: Enrollment in the REGN program 2nd semester.
Registered Nursing 24 provides for the acquisition and application of nursing theory, communication, collaboration, and critical thinking skills necessary for safe, patient-centered nursing care to a developmentally and culturally diverse patient populations experiencing various common medical/surgical interventions and to the childbearing family. Incorporates best practices, professional standards, and legal and ethical responsibilities of the professional nurse as applied in various healthcare settings. Includes acquisition of nursing skills required in acute care and childbearing family settings. Application of knowledge and skills occurs in the nursing skills laboratory and clinical settings. (2/13)
SEWING (NONCREDIT)

SEW-402: Beginning Quilting
Unit(s): 54 Total, Open Entry
This 54 hour noncredit course will teach students the fundamentals of quilting. Students will learn ideas and techniques for creating quilted and patchwork bed covers, wall art, clothing and other quilted projects. Topics include piecing, appliqué, and other quilting skills. (1/14)

SEW-407: Needlecrafts and Sewing
Unit(s): 54 Total, Open Entry
This 54 hour course provides instruction in knitting, crocheting, stitching and sewing with an emphasis on: making needlecrafts easier, learning the basic techniques in each of the areas, and learning how to select the right equipment, and the correct pattern for each level of expertise. (12/13)

SKILLS (NONCREDIT)

SKLS-210: Daily Living Skills
Unit(s): 435-455 Total, Open Entry
This 435-455 hour course is designed primarily for mentally and or physically disabled students who are functioning at very low levels. The course teaches the basic living skills necessary for successful social interaction, self-care, and to help enhance self-esteem. (11/13)

SOCIOLOGY

SOC-01: Introduction to Sociology
Designations: (C-ID SOCI 110) (CSU breadth area D) (IGETC area 4)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
This course provides an introduction into what it means to be "sociologically mindful" and to think "sociologically" while understanding the difference from other ways of seeing the social world. The course begins with the understanding of the differences between personal troubles and public issues, and how sociologist apply various theoretical perspectives to a wide range of issues, such as: culture; socialization; social structure of society; deviance; issues of feminization; family; gender; race; inequality; economics; politics and population; and the relationship between the individual and society. The course acccents international comparisons to show how similar institutions are structures and function differently in different societies around the world. (2/06)

SOC-02: Contemporary Social Problems
Designations: (C-ID SOCI 115)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 01A.
SOC-02 introduces fundamental theories and methodologies employed in the study of contemporary social problems. An emphasis is placed on analysis of causes and possible solutions to such problems as poverty, discrimination, crime, delinquency, alcoholism, drug abuse, suicide, family, and politics. A global perspective focuses on the international influences and contributions to various contemporary social problems. (2/06)

SOC-03: Marriage and the Family
Designations: (IGETC area 4) (CSU breadth area D) (C-ID SOCI 130)
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course provides an overview of sociological theories and concepts utilized to investigate marriage and family relationships. An empirical as well as experiential analysis of the changes in marriage and family functions, structures, and roles is emphasized. Special focus is placed to contemporary issues, concerns and debates regarding marriage and family dynamics.

SOCIAL (NONCREDIT)

SOCL-760: Career and Life Planning
Unit(s): 435-455 Total, Open Entry
This course is designed for students who function at limited levels of cognitive development. It is designed to help students acquire positive workplace attitudes, skills, and habits. This course is 435 - 455 hours in duration. (11/13)

SOCL-761: Vocational Life Planning
Unit(s): 8 Total, Open Entry
This course is designed primarily for students who are part of the Merced College Independent Living Program (ILP). The course addresses issues and barriers that students will typically encounter while seeking and maintaining employment and success in becoming an independent adult. Course content includes instruction in the areas of education, employment, housing, money management, and daily living skills. (5/06)
biological properties of soils and their characteristics. The course includes factors of fundamental soil properties, soil and plant relationships, principles of soil formation, fertilizers and soil management, salinity, pH, erosion management, and nonagricultural uses. (2/13)

SOIL-11: Fertilizers and Soil Amendments
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E; MATH 80 or MATH 85.
This course will cover the composition, value, selection and use of fertilizer materials and soil amendments. Soil, plant, and fertilizer relationships will be covered. Application practices common to area crops and soils will be discussed. (2/13)

SONOGRAPHY, DIAGNOSTIC MEDICAL

SONO-40: Basic Ultrasound Physics
Unit(s): 1.5
Lecture Hours: 18 Total
Lab Hours: 27 Total
Prerequisites: ENGL 01A; MATH C, MATH 26; PHYS 10 or RADT 13.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course covers the basic principles and terminology of diagnostic ultrasound physics to include: a review of mathematical skills, transducers, beam dynamics, and instrumentation. Hands-on instruction will introduce the student to necessary elementary scanning skills. (5/17)

SONO-41: Introduction to Sonography
Unit(s): 1.5
Lecture Hours: 18 Total
Lab Hours: 27 Total
Prerequisites: ALLH 67; BIOL 16, BIOL 18; ENGL 01A or COMM 01.
Limitations on Enrollment: Completion of a two-year Allied Health program that is patient-care related, such as radiologic technology, registered nursing, respiratory therapist, physical therapy, associate degree-licensed vocational nurse, or a baccalaureate degree in biological sciences with patient care experience; minimum cumulative GPA of 2.35 in prerequisite course work; enrollment in the Diagnostic Medical Sonography Program.
This course is an overview of diagnostic medical sonography and its role in health care delivery. Students will be oriented to the academic and administrative structure of the program, clinical affiliates, and to the profession as a whole. An introduction to the principles, instruments, and routine sonographic procedures will be emphasized. The laboratory portion of this course will include a hands-on orientation to the equipment, instrumentation, and scanning techniques. (2/15)

SONO-42A: Abdominal Sonography
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Prerequisites: BIOL 16, BIOL 18.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track.
This course covers abdominal sonographic positioning and scanning protocol; related anatomy and physiology to include the retroperitoneum; pathology and clinical symptomology and how they relate to the sonographic appearance of these structures. Interpretation and critique of normal and abnormal anatomy with correlation of clinical, didactic, and image information will be presented. The laboratory component of this course will include demonstration and scanning exercises to provide a "live lab" experience in conducting abdominal sonographic procedures. (2/08)

SONO-42B: Clinical Experience I
Unit(s): 9
Lecture Hours: 0
Lab Hours: 28
One-way Corequisite: None. Two-way corequisite: SONO 42A.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track.
This course provides clinical experience for application of theoretical principles and concepts covered in previous and current didactic course work. Clinical experience in patient care and handling, scanning techniques, instrumentation, work efficiency, and image evaluation for abdominal imaging is provided. (5/17)

SONO-43A: OB/GYN Sonography
Unit(s): 4
Lecture Hours: 3
Lab Hours: 3
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track.
This course presents a review of anatomy and physiology of the gravid and nongravid pelvis. Techniques of transabdominal and transvaginal preparation are introduced. Symptomology of the female patient with correlation to the sonographic appearance of pathology are covered. First, second, and third trimester obstetrical assessment are covered in depth. (2/08)

SONO-43B: Clinical Experience III
Unit(s): 9
Lecture Hours: 0
Lab Hours: 28
One-way Corequisite: None. Two-way Corequisite: SONO 43A.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track.
This course provides clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, scanning techniques, instrumentation, work efficiency and image evaluation in all areas of general sonography is provided with emphasis in OB-GYN imaging. (5/17)

SONO-44A: Advanced Ultrasound Physics
Unit(s): 1.5
Lecture Hours: 1.5
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography Program.
A continuation of basic physics and instrumentation including continuous and pulsed wave Doppler. Basic principles of color flow imaging. Advanced principles in medical ultrasound instrumentation, hemodynamics, bioeffects, artifacts, and sonographic quality assurance/control procedures. (5/17)

SONO-44B: Clinical Experience II
Unit(s): 4.5
Lecture Hours: 0
Lab Hours: 252 Total TBA
One-way Corequisite: None. Two-way corequisite: SONO 44C.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course provides clinical experience for application of theoretical principles and concepts covered in previous and current didactic course work. Clinical experience in patient care and handling, scanning techniques, instrumentation, work efficiency, and image evaluation for superficial structure is provided. Clinical experience in abdominal, obstetric and gynecological imaging is also provided. (5/17)

SONO-44C: Superficial Structures
Unit(s): 1
Lecture Hours: 9 Total
Lab Hours: 27 Total
Two-way corequisite: SONO 44B.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course covers basic positioning and scanning protocol of the superficial structures; related anatomy and physiology to include the neck, breast,
and testes; pathology and clinical symptomology and how they relate to the sonographic appearance of these structures. Interpretation and critique of normal and abnormal anatomy with correlation of clinical didactic and image information will be presented. The laboratory component of this course will include demonstration and scanning exercises. (2/15)

SONO-45A: Integrative Study in Sonography
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course covers a comprehensive analysis and assessment of all previous diagnostic medical sonography instructional course work in preparation for writing the national registry examination. Job market readiness skills will also be presented. (4/13)

SONO-45B: Clinical Experience IV
Unit(s): 9
Lecture Hours: 0
Lab Hours: 28 TBA
One-way Corequisite: None. Two-way corequisite: SONO 45C.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course provides clinical experience for application of theoretical principles and concepts covered in previous and current didactic coursework. Clinical experience in patient care and handling, scanning techniques, instrumentation, work efficiency and image evaluation of basic vascular sonography is provided. Clinical experience in abdominal, obstetric and gynecological, and superficial structures imaging is also provided. (5/17)

SONO-45C: Basics of Vascular Sonography
Unit(s): 2
Lecture Hours: 1.5
Lab Hours: 1.5
One-way Corequisite: None. Two-way corequisite: SONO 45B.
Limitations on Enrollment: Enrollment in the Diagnostic Medical Sonography program.
This course covers basic positioning and scanning protocol of the vascular system. Vascular terminology specific to the hemodynamics of the arterial venous and cerebrovascular application will be presented. Normal, abnormal, and pathological states of the human vascular system with emphasis on the external carotid system and the venous systems of the lower extremity will be included. The laboratory component of this course will include demonstration and scanning exercises to provide a "live lab" experience in conducting basic vascular procedures. (4/13)

SONO-49A-ZZ: Special Topics in Diagnostic Medical Sonography
Unit(s): 0.5 - 3
Lecture Hours: 0.5-3
Lab Hours: 0-9
Limitations on Enrollment: Current student or graduate of a diagnostic medical imaging program or six months of experience in a diagnostic medical sonography career track.
This course is designed to address special topics in diagnostic medical sonography to meet the current needs of students. It will provide students access to instruction that will assist them in acquiring the most up-to-date information possible in order to cope with the rapidly changing health care environment. (4/05)

SPANISH

SPAN-02: Elementary Spanish II
Designations: (SPAN 110) (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: SPAN 01 or two years of high school Spanish.
This course is the continuation of SPAN 01. This course will focus on the further development of listening, speaking, reading, and writing in a cultural context, with primary emphasis on communicative competency. Students will learn how to express in Spanish the most basic functions of everyday life. This course is recommended for students who have completed two years of high school Spanish; it is not recommended for native speakers. Native speakers should enroll in SPAN 11. (9/13)

SPAN-03: Intermediate Spanish I
Designations: (C-ID SPAN 200) (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: SPAN 02.
This course is the continuation of SPAN 02 and SPAN 11. This course reviews and further develops grammatical concepts introduced in SPAN 02 and SPAN 11, as well as introduces the student to the remaining major linguistic concepts of the language. Through varied readings, composition, and discussion, the student will increase his or her vocabulary and cultural knowledge. (10/16)

SPAN-04: Intermediate Spanish
Designations: (C-ID SPAN 210) (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: SPAN 03.
This course is a thorough review of the fundamentals of reading, writing, speaking, and understanding Spanish designed to aid the student in preparing for advanced studies in Spanish composition, grammar, and conversation, as well as literature in Spanish, history, and culture. (11/03)

SPAN-10: Spanish for Spanish Speakers I
Designations: (C-ID SPAN 220) (CSU breadth area C2) (IGETC area 3B/6)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
Prerequisites: SPAN 02 or the equivalent.
This course is designed for native and heritage speakers, as well as other linguistically qualified students, whose formal training in the language is not complete. The course will focus on extensive reading of all types of texts and their reworking in written form with the intention of expanding the vocabulary, creating an incipient awareness of linguistic registers, discussing items beyond the familial routine, improving written expression, and developing an appreciation for Hispanic culture as manifested in Spanish speaking countries and the U.S. This course is entirely conducted in Spanish. (4/13)

SPAN-11: Spanish for Spanish Speakers II
Designations: (CSU Breadth C2) (IGETC area 3B/6) (C-ID SPAN 230)
Unit(s): 5
Lecture Hours: 5
Lab Hours: 0
This course will focus on the development of listening, speaking, reading,
Prerequisites: SPAN 10 or two years of "Spanish for Spanish Speakers."
This course represents the continuation of SPAN 10. It is designed for students who are fluent in Spanish and who are ready to develop literacy skills. This course continues to focus on extensive reading of all types of texts and their reworking in written form with the intention of expanding the vocabulary, increasing the awareness of linguistic registers, discussing items beyond the familial routine, improving written expression -- particularly accentuation and spelling -- and developing an appreciation for Latino culture as manifested in any of the Spanish-speaking countries, including the USA. (11/11)

STUDENT GOVERNMENT

STGV-33A: Student Government I
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course surveys the theory and practice of parliamentary law, committee techniques, and democratic organization. Students will study some of the factors of successful leadership and effective group membership. Participation in student organization events such as lectures, leadership workshops, and conferences, is required. Students may enroll without holding an office. (2/13)

STGV-33B: Student Government II
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: STGV 33A.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is a continuation of STGV 33A. The course is designed to introduce students to the ethical dimensions of an organization and to train them to identify social dilemmas, analyze them systematically and resolve them based on core values and codes of conduct found in a college setting. Students may enroll without holding an office. (2/13)

STGV-33C: Student Government III
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: STGV 33B.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is the third of four sequential STGV courses. This course focuses on the development of leadership skills, provides an understanding of leadership and group dynamics theory and will assist the student in developing a personal philosophy of leadership and management skills. Topics include decision making, goal setting, building trust, empowering others, conflict resolution, managing change, and team building. Students may enroll without holding an office. (2/13)

STGV-33D: Student Government IV
Unit(s): 2
Lecture Hours: 1
Lab Hours: 3
Prerequisites: STGV 33C.
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This is the fourth of four sequential STGV courses. This course examines the role of power and influence in organizations. Topics of study include recognizing the role of the dominant and non-dominant groups in the decision making process and understanding individual factors that influence governance. The course examines American political culture, intergovernmental relations, public opinion, interest groups, and the media. Students may enroll without holding an office. (2/13)

TRAINING (NONCREDIT)

TRNG-768: Bus Driver Training/Recertification
Unit(s): 36 Total, Open Entry
This 36-hour course is designed to improve the bus driver's public relations ability and to provide basic and refresher course information on vehicle checkout procedures, first aid, and emergency procedures. This classroom instruction course also includes good driving fundamentals, assessing, and adjusting to road conditions, and techniques for safe downhill driving. Defensive driving skills and passenger discipline are addressed. A discussion of new state laws and requirements and analysis of bus accidents is provided. (12/13)

TUTORING (NONCREDIT)

TUT-106: Supervised Tutoring
Unit(s): 102 Total, Open Entry
This 102-hour course is designed to assist credit enrolled students who are experiencing difficulty in their college courses. The course provides tutoring from qualified tutors in either a one-to-one or small group setting. (12/13)

TUTORIAL

TUTR-35: Tutorial Seminar
Unit(s): 1
Lecture Hours: 0
Lab Hours: 3
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course is designed to provide tutors in the Merced College Tutorial program with an opportunity to explore their experiences in the program more fully. Tutors will receive instruction in the areas of tutorial technique, group organizations, relationships with faculty and peers, evaluation techniques, and content tutoring. (11/13)

VIRTUAL OFFICE

VIRT-50: Virtual Office
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: BUS 10; AOM 30.
Learn how to become an independent contractor/freelancer in the virtual world. (11/14)

VIRT-51: Social Media
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
The student will learn how to use social media platforms effectively for a business setting. (3/17)

VIRT-55: Social Media Marketing and Strategy
Unit(s): 3
Lecture Hours: 3
Lab Hours: 0
Advisories: VIRT 51.
This course prepares the student for the role of a Social Media Strategist and for the National Institute for Social Media strategist certification examination. (10/15)

VIRT-56: Introduction to Search Engine Optimization
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
This course is an introduction to the basics of search engine optimization, including the formulation of appropriate keyword planning and the measurement of optimization. (1/15)

VOCATIONAL NURSING

VOCN-40: Foundations of Nursing
VOCN-46B: Pharmacology for Nurses
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Prerequisites: VOCN 46A.

This is an introductory pharmacology course which uses effects and safe administration of medications. Common local and systemic drugs are studied. Nursing responsibilities and client safety are emphasized. (10/12)

VOCN-47A: Nursing Guidance I
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
One-way Corequisite: None. Two-way corequisites: VOCN 40, VOCN 47A.
Limitations on Enrollment: Enrollment in the Vocational Nursing Program.

This course examines socialization and interpersonal communications related to vocational nursing. Course topics include verbal and non-verbal communication; communication problems in the nurse-patient relationship; the hospital as a working and learning environment; self-actualization relating to the elderly; and death and dying. (1/07)

VOCN-47B: Nursing Guidance II
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
One-way Corequisite: None. Two-way corequisite: VOCN 42.
Limitations on Enrollment: Enrollment in the Vocational Nursing Program.

This course examines the nature of stress and its influences on coping and adapting. Related topics examine include crisis and crisis intervention, and psychophysiological and somatopsychic responses to stress and anxiety. (11/12)

VOCN-47C: Nursing Guidance III
Unit(s): 1
Lecture Hours: 1
Lab Hours: 0
One-way Corequisite: None. Two-way corequisite: VOCN 44.
Limitations on Enrollment: Enrollment in the Vocational Nursing Program.

This course examines current and evolving patterns of mental health care and the shifts from inpatient custodial care to community-based treatment for the mentally ill. This course also examines the health-illness continuum, psychopathology, neuroses and psychoses, clinical disorders and maladaptations of behavior, and psychopharmacological approaches to treatment. (1/07)

VOCN-48: Intravenous Therapy/Blood Withdrawal
Unit(s): 2
Lecture Hours: 2
Lab Hours: 0
Limitations on Enrollment: Licensed as a Vocational Nurse (required by section 2860.5 of the Board of Vocational Nurses and Psychiatric Technicians) or Registered Nurse.

This short-term course is designed to prepare nurses to start and superimpose intravenous fluid and perform blood withdrawal as ordered by the physician. The course will cover psychological preparation of the patient, selection of equipment, aseptic technique, relevant anatomy and physiology, pharmacology of intravenous solutions, and administering blood components. Students will perform simulated and actual intravenous catheterization and blood withdrawals. (12/09)

WELDING TECHNOLOGY

WELD-06: Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding
Also: (MECH 06)
Unit(s): 3
WELD-52: Advanced Pipe Welding and Fitting
This course covers advanced welding processes and welding positions as well as covering advanced skills in pipe and tube fitting. This course covers advanced food processing and liquid/gas material handling industry topics. (2/15)

WELD-53: Fabrication Equipment Operation and Safety
This course is an introduction to the welding program. It gives students the opportunity to familiarize themselves with commonly used equipment in industry. In addition to familiarizing themselves with industry standard equipment, they will be trained in lab procedure which will ensure students in more advanced classes can use the equipment without reserve. (12/16)

WORK EXPERIENCE
WORK-24: Work Experience in (Subject)
Also: ALLH 24, ANSC 24, AUTO 24, CLDV 24, EMER 24, FIRE 24, HMSC 24, KINE 24, LAND 24, LBST 24, NUTR 24, RADT 24.
Units(s): 1-8
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course enables students to earn college credit for learning and/or improving skills or knowledge on-the-job. Occupational Work Experience is discipline specific and must connect to the student’s major or occupational goal(s). Seventy-five (75) hours of documented paid work experience equals 1 unit of credit. Sixty (60) hours of documented volunteer experience equals 1 unit of credit. A student may enroll in up to 16 total units of work experience at Merced College. Students must have an established work site prior to enrolling in the course. (11/16)

WORK-40: General Work Experience
Advisories: ENGL 85A or ENGL 85AC or ENGL 85E.
This course will enables students to earn college credit for learning or improving skills or knowledge while working. Any type of work is suitable, either paid or volunteer. This course will allow students to sample an experience in a career field that is not related to the student’s major. A student may not enroll in any more than 16 units of any cooperative work experience course at Merced College. Seventy-five (75) hours of documented paid work experience or (60 hours volunteer work) equals 1 unit of cooperative work experience credit. (11/16)

WATER/WASTEWATER TECHNOLOGY
WWT-60: Water Treatment Plant Operations
Advisories: ENGL 84A; MATH 80.
This course is an introduction to water treatment plant operations and processes. It will include the study of sources of water supply, water quality, treatment systems, and introduction to water treatment operations arithmetic. This course prepares the student to test for state certification for water treatment plant operator grade I and II. (3/17)

WWT-61: Introduction to Wastewater Treatment
Advisories: ENGL 84A; MATH 80.
This course is an introduction to wastewater treatment plant operations and processes. It will include the study of wastewater terminology; current methods of wastewater treatment - primary, secondary, and advanced; wastewater quality; and basic wastewater mathematics. This course prepares the student to test for state certification for wastewater treatment plant operation grade 1 and 2 (entry-level). (5/11)
This course provides for the mastery of mathematical calculations, specifically involving water and wastewater treatment plant operations and processes. It incorporates the use of handheld calculator, scientific notation, and the use of dimensional analysis as tools of problem solving. This course prepares the student to test for state certification for wastewater treatment plant operator, grade I and II (entry level). (5/11)

WWT-63: Advanced Water Treatment Plant Operations

- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: WWT 60.

This course is a continuation of the study of water treatment plant operations and processes, with emphasis on the knowledge and skills needed by operators of conventional surface and ground treatment. Topics include control of metallic ions, trihalomethanes, disposal of wastes in the operation of water plants, instrumentation and advanced laboratory procedures, safety and drinking water regulations. Provides background to prepare students to take state certification exams. (3/11)

WWT-64: Advanced Wastewater Treatment

- Unit(s): 3
- Lecture Hours: 3
- Lab Hours: 0
- Prerequisites: WWT 61.

This course is a continuation of the study of wastewater treatment plant operations and processes. It will emphasize the details of the process that occur in a wastewater treatment plant, including aeration, maintenance of microbe populations, sludge digestions, and chemical removal. (3/17)
### Administration & Faculty

#### Board of Trustees

<table>
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<tbody>
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<td>JEAN UPTON</td>
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<td>LEONEL VILLARREAL</td>
<td>Trustee Representation</td>
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#### Administration

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<tr>
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<tr>
<td>CHRIS VITELLI</td>
<td>Superintendent/President</td>
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<tr>
<td>B.S., University of Florida; M.Ed., Harvard University</td>
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<td>JOSEPH ALLISON</td>
<td>Vice President of District Administrative Services</td>
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<td>B.S., California State University, Fresno; CPA</td>
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<tr>
<td>KELLY FOWLER</td>
<td>Vice President of Instruction/Assistant Superintendent</td>
</tr>
<tr>
<td>MICHAEL MCCANDLESS</td>
<td>Vice President of Student Services/Assistant Superintendent</td>
</tr>
<tr>
<td>B.A., University of California, Santa Barbara; M.A., California State University, Stanislaus; Ed.D., California State University, Stanislaus</td>
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<tr>
<td>KELLY UNDERWOOD</td>
<td>Associate Vice President of Human Resources</td>
</tr>
<tr>
<td>ARLIS BORTNER</td>
<td>Chief Technology Officer/Director, Information Technology Services</td>
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<tr>
<td>B.S., DeVry University</td>
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<td>BABA ADAM</td>
<td>Dean, Office of Institutional Effectiveness</td>
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<tr>
<td>B.S., M.Sc., Ed.D., Oklahoma State University</td>
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<tr>
<td>JOHN ALBANO</td>
<td>Dean of Fine and Performing Arts, Humanities &amp; Social Sciences</td>
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<td>B.A., Sonoma State University, M.M., University of Southern California</td>
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<tr>
<td>ANNE DICARLO</td>
<td>Dean of Student Services</td>
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<tr>
<td>B.A., University of California, Santa Barbara; M.B.A., University of Notre Dame; Ed.D., California State University, Stanislaus</td>
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<tr>
<td>ROBERT ANDERSON</td>
<td>Dean of Allied Health, Child Development, Kinesiology, Public Safety</td>
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<tr>
<td>B.S., M.A., California State University, Fresno; Ed.D, University of La Verne</td>
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#### Directors

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<tr>
<td>NANCY GOLZ</td>
<td>Dean of Learning Resources Center</td>
</tr>
<tr>
<td>B.A., Fresno Pacific University; M.L.S., Clarion University, Clarion; Ed.D., Saint Marys College</td>
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<tr>
<td>DOUGLAS KAIN</td>
<td>Dean of Math, Science and Engineering</td>
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<tr>
<td>M.A., Humboldt State University; B.A., Ph.D, University of California, Berkeley</td>
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<tr>
<td>BRENDA LATHAM</td>
<td>Dean of Los Banos Campus</td>
</tr>
<tr>
<td>A.A., DeAnza College; B.S., California State University, Chico; Ph.D., Syracuse University</td>
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<tr>
<td>VINCE PIRO</td>
<td>Dean of English, Basic Skills, Noncredit</td>
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<tr>
<td>B.A., M.A., San Jose State University; M.S California State University, Fullerton</td>
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<tr>
<td>TONI PIRTLE</td>
<td>Dean of Agriculture, Business, Industrial Technology, Career Tech Ed</td>
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<tr>
<td>Bachelor's equivalent, Bournemouth University, England; M.S., Eastern Illinois University</td>
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#### Educational Directors

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>PAMELA BRANCH</td>
<td>Director, DSP&amp;S/CalWORKS</td>
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<tr>
<td>B.A., California State University, Fresno</td>
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<td>M.S., M.B.A., National University</td>
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<tr>
<td>REGINA COLETTO</td>
<td>Director of Guided Pathways and First-Year Experience</td>
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<tr>
<td>B.A., California State University, Chico; M.A., California State University, Stanislaus</td>
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<tr>
<td>SYLVIA A. RUANO</td>
<td>Director, EOP &amp; S</td>
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<td>B.A., Simpson University</td>
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<td>M.S., University of La Verne</td>
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<td>VACANT</td>
<td>Director, Office of Relations with Schools</td>
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<tr>
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</tr>
<tr>
<td>B.S., California State University, Stanislaus</td>
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<tr>
<td>TRACI VEYL</td>
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<tr>
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</tr>
<tr>
<td>OMAS AMANIZCA</td>
<td>Learning Resources Center Technical Manager</td>
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English
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<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Fong, Adam</td>
<td>History</td>
<td>B.A., M.A., San Francisco State University; Ph.D., University of Hawaii</td>
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<td>Fregene, Paul</td>
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<td>Counseling</td>
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<td>Fries, Melissa</td>
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<td>Fuentes, Christine</td>
<td>Counseling</td>
<td>B.A., California State University Stanislaus; M.S., California State University, Fresno</td>
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<td>Garcia, Cristina</td>
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<td>Gargano, Gary</td>
<td>Psychology</td>
<td>A.A., Cuesta College; B.A., M.A., California State University, Fresno; Ph.D., Washington State University</td>
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<td>Gilardi, Michelle L.</td>
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<td>B.S., M.S., California State University, Fresno</td>
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<td>Gonzalez, Araceli</td>
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<td>Gonzalez, Heather</td>
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<td>A.A., Riverside Community College; B.A., University of California, Santa Barbara; M.A., University of California, Riverside</td>
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<td>Gregory, Aaron</td>
<td>Automotive Technology</td>
<td>A.A., Merced College</td>
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<td>Grise, Rochelle</td>
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<td>Halpin, William</td>
<td>Kinesiology/Health</td>
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<td>Hamilton, Aaron</td>
<td>Electronics</td>
<td>B.S., California State University East Bay</td>
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<td>Hardcastle, Cindy</td>
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<td>B.A., San Jose State University; M.S., California State University, Fresno</td>
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<td>History</td>
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<td>Haugen, Annette</td>
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<td>B.S., San Jose State University; M.B.A., California State University, Stanislaus</td>
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<tr>
<td>Heidelbach, Carin</td>
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<td>Heidingsgaard-Vierra, Jill</td>
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Los Banos Campus Map
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