FROM THE PRESIDENT

It is my great pleasure to present Merced College’s 2015-16 Catalog. Here you will find information about courses of study, academic programs and departments, and the kinds of services available to you as a student. You will also find information about the College’s accreditation. 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, which you will find stated in the “General District Information” section. 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 a proud institution which puts learning and service to our community first in everything we do. We enjoy broad support from our community, and we are extremely grateful for that enduring support.

We are glad that you have discovered Merced College as a place where you can continue on your individual path to increased learning and increasing opportunity. Every member of the college community is here to support you in reaching your academic goals.

Sincerely,

Ronald C. Taylor, Ph.D.
Superintendent/President
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### Summer 2015

**SUMMER 2015 dates for 6 week classes**

- Summer and Fall 2015 Semester Registration Begins: April 15, 2015
- SUMMER 2015 SEMESTER BEGINS: June 8, 2015
- Adds require instructor’s signature beginning first day of the term: June 8, 2015
- Refund Deadline for 6 week classes meeting MTWTh: June 9, 2015
- Last Chance to Drop with No Entry on Transcripts for 6 week Classes meeting MTWTh in person: June 11, 2015
- **For all other classes, you must drop the day before 10% of the class meetings.**

**SUMMER 2015 dates for 8 week classes**

- Summer and Fall 2015 Semester Registration Begins: April 15, 2015
- SUMMER 2015 SEMESTER BEGINS: June 8, 2015
- Adds require instructor’s signature beginning first day of the term: June 8, 2015
- Refund Deadline for 8-week classes meeting MTWTh: June 10, 2015
- Last Chance to Drop with No Entry on Transcripts for 8 week Classes meeting MTWTh: June 15, 2015
- **For all other classes, you must drop the day before 10% of the class meetings.**

### Fall 2015

- Fall 2015 Semester registration begins: April 15, 2015
- FALL 2015 SEMESTER INSTRUCTION BEGINS: August 17, 2015
- Adds require instructor’s signature (for 18 week classes): August 17, 2015
- Refund deadline for 18 week classes: August 30, 2015
- Graduation and Certificate of Completion applications accepted: September 14 - October 16, 2015
- Last chance to drop with no entry on transcripts for 18 week classes in person: October 16, 2015
- OR online: September 30, 2015
- **For all other classes, you must drop the day before 20% of the class meetings**
- Instructional Dean signature required on adds if effective date is after 3rd week: September 8, 2015
- Pass/No Pass Option deadline: September 18, 2015
- FALL 2015 Mid-Session begins: October 19, 2015
- Adds require instructor’s signature beginning first day of the term: October 20, 2015
- Last chance to drop with a “W” for 18 week classes in person: November 20, 2015
- OR online: November 22, 2015
- **For all other classes, you must drop the day before 75% of the class meetings.**
- Final Exams: December 14-18, 2015
- End of FALL 2015 Semester: December 18, 2015

### Spring 2016

- Spring 2016 Semester Registration Begins: October 14, 2015
- Martin Luther King’s Day Holiday: January 18, 2016
- Spring Semester Instruction Begins: January 19, 2016
- Adds require Instructor’s Signature (18-week Classes): January 19, 2016
- Graduation and Certificate of Completion Applications Accepted: February 1 - March 31, 2016
- Lincoln’s Day Holiday: February 15, 2016
- Last Chance to Drop With No Entry on Transcripts (18-week Classes): February 15, 2016
- **For all other classes, you must drop the day before 10% of the class meetings.**
- President’s Day Holiday: February 15, 2016
- Pass/No Pass Option Deadline: February 19, 2016
- Spring Mid-Session Begins: March 21, 2016
- Scholarship Application Deadline: March 31, 2016
- Spring Break – campus closed: March 28 – April 1, 2016
- Last Chance to Drop with a “W” (18-week Classes): April 22, 2016 in person; April 24, 2016 online
- Spring Semester Ends/Graduation: May 27, 2016
- Memorial Day - campus closed: May 30, 2016

Calendar dates are subject to revision. Consult the current Schedule of Classes for updated information.
## ACADEMIC CALENDAR 2015-2016

### JULY 2015

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**SUMMER 2015 SESSION, JUNE 8-JULY 16**

**CENSUS DAY (6-WEEK SESSION), JUNE 13**

**INDEPENDENCE DAY OBSERVED, JULY 2**

### AUGUST 2015

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**FALL 2015 SEMESTER BEGINS, AUG 13**

**FLEX DAY, AUG 13-14**

**FALL 2015 INSTRUCTION BEGINS, AUG 17**

### SEPTEMBER 2015

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**NO SATURDAY CLASSES, SEPT 5**

**LABOR DAY, SEPT 7**

**CENSUS DAY, SEPT 8**

### OCTOBER 2015

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**MID-SESSION BEGINS, OCT 19**

### NOVEMBER 2015

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**VETERANS DAY, NOV 11**

**THANKSGIVING BREAK, NOV 26-27**

**COLLEGE CLOSED, NOV 28**

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**FINALS, DEC 14-18**

**END OF SEMESTER, DEC 18**

**CAMPUS CLOSED, DEC-24-JAN 1**

### JANUARY 2016

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**NEW YEAR'S DAY, JAN 1**

**SPRING SEMESTER BEGINS, JAN 14**

**FLEX DAYS JAN 14-15**

**MLK DAY, JAN 18**

**SPRING 2016 INSTRUCTION BEGINS, JAN 19**

### FEBRUARY 2016

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**CENSUS DAY, FEB 8**

**LINCOLN'S DAY, FEB 12**

**NO SATURDAY CLASSES, FEB 13**

**WASHINGTON'S DAY, FEB 15**

### MARCH 2016

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**SPRING BREAK, MARCH 25**

**NO CLASSES, MARCH 26-APRIL 1**

### APRIL 2016

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**NO SATURDAY CLASSES, APRIL 2**

### MAY 2016

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**FINALS, MAY 23-27**

**END OF SEMESTER, MAY 27**

**GRADUATION, MAY 27**

**MEMORIAL DAY, MAY 30**

### JUNE 2016

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**SUMMER 2016 SESSION, JUNE 6-JULY 14**

**CENSUS DAY (6-WEEK SESSION), JUNE 13**
MERCED COLLEGE

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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 Los 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.

Partnership
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 lifelong 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.

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 gymnasium, 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, Los Banos, 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.
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.
2. Participate in the orientation, assessment, student planning/advising.
3. Register online for classes and pay fees.

Detailed information regarding this process is available online.
- http://www.mccd.edu/students_new_returning.html

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 www.mccd.edu/services/index.html.

Información en 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:
2. Participe en la orientación de estudiantes nuevos; examen diagnóstico; y planeación y consejo académico.
3. Regístrate en el internet por clases y el pago de matrícula.

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 tocan de estos servicios, contacte el Colegio Comunitario de Merced a: www.mccd.edu/services/index.html

Information in Hmong

Qhov Zoo Ntawm Kev Kawm Ntawv
Teabi tsim thawn 1962, Merced College muaj kev kawm ntau yam rau cov tub nthxhais kawn ntauw kom tau ib daim Associate in Arts (AA) los yog Associate in Science (AS) degree, lossis xav tsais mus kawm nbxriv rau University of California (UC), California State University (CSU). Merced College muaj ntau hom certificates rau ntau yam txuaj ua hauj lwm, thiab pab cov pejxeem nyob cheeb tsam hauv lub nroog.

Kev Tuaj Kawn rau Merced College
Txhua leeg tub nthxhais kawn ntauw yuav tsum muaj ib daim high school diploma los yog ib daim ntauw ntau li ntwav, lossis muaj hnuh nyooj 18 xyo rox saud thiab muaj pexxwm tuaub txog boj kev cob qhia los ntauw tsum xibfw.

Sau Npe Kawm Ntawv nyob Merced College
Qhov chaw ua hauj lwm Office of Admissions and Records (A&R) lub luag hauj lwm yog pab thiab txais cov tub nthxhais kawn ntauw usau muaj feemcuam raws cai tuaj kawm. Cov xav tuaj kawn ntauw yuav tuau ua raws cov txhajxheem txais los thiab saud npe kawn kawm ntauw.
2. Mus koom sau npe kawn hauv orientation, xeeb assessment, thiab teev student planning/advising.
3. Sau thiab zwm online kom tau cov chaw kawn thiab cov nqii.

Yog xav tau ntau txhajxheem information ntxiv, tshwb hauv tau hauv online.
- http://www.mccd.edu/students_new_returning.html

Kev Pab Tub Ntxhais Kawn Ntauw
Peb muaj kev tuav xam pab cov tub nthxhais kawn ntauw los xaiv txhua yam txuaj ua laww xav kawn ntor kev txhawb nqii thiab qhia laww mus rau lwm qhov chaw pab. Muaj kev pab nyaj ua nqii kawn ntauw, Financial Aid, rau cov tub nthxhais kawn ntauw kws muaj feemcuam tau. Muaj ntau hom nyaj tseemfwv thiab/lossis nyaj pab thiab los pab them tej nqii kawn kawm ntauw thiab.

Yog xav tau xov ntxiv txog tej kev pab nvoj, nej tshwb nxiv tau rau www.mccd.edu/services/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
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.

- Willful misconduct which results in injury or death to a student or to another person.
- 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.
- 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 outline 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 underdrinking laws and federal and state drug laws, and descriptions of available drug or alcohol abuse programs. Copies of pertinent data, program information, and procedures are available from the Security Office.

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 you to make you aware of the disciplinary and/or criminal actions that can result from violations as stipulated in Board Policies and Administrative Procedures #3550 and #5500. It is also to familiarize you with support resources available. If you or a fellow student has a drug or alcohol related problem, you are encouraged to meet with the Student Health Nurse (384-6045) or a Personal Counselor (384-6045) so that we may assist you in locating the appropriate resources.

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. Students may obtain such information through the Student Health Center. Students are asked to review the “Standards of Student Conduct” section in the College catalog for details regarding legal and disciplinary sanctions for violations of these policies. If there are any questions regarding these regulations, please see the Vice-President of Student Services, located in the Administration Building.

Health Risks

Substance abuse on college campuses is not new, but it is taking on more extreme and dangerous forms. Higher rates of binge drinking and prescription drug abuse, in addition to the abuse of other substances, is resulting in more negative consequences for students, including arrests and risky sexual behavior.

Alcohol and drugs can make you sick, damage your body and brain, or kill you. Health risks from excessive use of alcohol and/or controlled substances may include poor vision, loss of coordination, memory loss, loss of sensation, mental and physical disturbances (DT’s), brain damage, liver failure, digestive problems, heart disease, and malnutrition. When alcohol is used with other drugs, there is a greater risk of serious illness or death.

Using drugs or alcohol can make it difficult for you to learn and remember things. When using drugs, you often lose your coordination and can’t think clearly. Alcohol or drug use may cause or increase feelings of anxiety, depression, and unhappiness, and may even trigger psychosis (loss of reality). More than half of all teenage suicides are drug related. Drug and/or alcohol abuse have significant consequences for the health and well-being of those who use, as well as those around them.

Disciplinary Actions

Disciplinary action for violation of the Merced College Drug and Alcohol Policies:

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.

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
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, wherever offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to the College 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 on page 107. Please note that Lot P8 (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 designated for staff use only. 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
- Gym-Southwest Corner
- Pool-Southeast by FFA
- Tennis Courts-Middle
- Vocational Bldg-East
- Central Plant-West
- Plant Science-Southwest
- Child Development Center-Front
- Library-Front
- Allied Health Center-Southwest
- Science Bldg-North
- Services Bldg-West
- IAC-Southwest
- Fitness Lab-East
- Pool-Northwest
- Tri College-Northwest
- Science-South

Motorcycle Parking (M):
- S/E Corner of Parking Lot P9
- S/E Corner of Parking Lot P10
- N/E Corner of Parking Lot P5
- West side of Parking Lot P2

PARKING on campus is by permit only. This includes all streets and parking lots on campus. Permits must be properly displayed at all times. Semester permits cost $20 and may be purchased from Student Fees (located on the third floor in the Lesher Student Services Center). Day permits cost $1 and may be purchased at the yellow permit dispensers located in parking lots throughout campus. Day permits shall be placed “This side up” on the dashboard as directed on the permit and must be displayed in a manner that the permit number is clearly visible and unobstructed. Plastic permits shall be hung from the rearview mirror facing forward. Non-operational dispensers should be reported to the Campus Police Department.

DISABLED PARKING—Placards or license plates shall be displayed in conjunction with a valid parking permit. Disabled placards will exempt time limits in timed parking spaces but shall be displayed in conjunction with a valid parking permit. Disabled parking regulations are strictly enforced on campus.

Privacy of Records

All student records of Merced College are kept in accordance with the provisions of the Family Educational Rights and Privacy Act of 1974. Students may request access to academic records which personally identify the student. The student may challenge the accuracy of the record or the appropriateness of its retention. Student consent is needed for the release of records covered by the Act to outside parties (i.e., other schools, prospective employers) except for those agencies entitled to access under the provisions of the Act (i.e., campus officials, federal educational and auditing officials). These provisions apply to records received and used after November 19, 1974.

Copies of the full text of the Family Educational Rights and Privacy Act of 1974 are available in the Admissions and Records office. Particular questions with respect to a student’s prerogative under the Family Educational Rights and Privacy Act should be directed to the Registrars.

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 the conduct is explicitly or implicitly made a term or condition of an individual’s employment, academic status, or progress;
2. Submission to, or rejection of, the conduct by 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 educational environment; or
4. Submission to, or rejection of, the conduct by 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 environment as hostile.

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 1965. For comprehensive information regarding sexual assault prevention and reporting, as well as campus and community resources, please refer to the Campus Police web page http://www.mccd.edu/about_us/merced_college/operations/police/sexual_assault.html, or search “Sexual Assault Help” on the MC website. You may also contact Campus Police at (209) 384-8054, or Student Health Services at (209) 384-6045.

Smoking
Smoking is permitted in all outdoor areas under the following conditions:
- All smoking materials and matches are deposited into a receptacle designated for disposal of smoking materials.
- A “no smoking” sign is not posted in the area and it is not within 20 feet of covered corridors, doors, elevators, stairways, stairwells and open windows.
- A safety and/or fire threat is not created by smoking.
- Smoking is not done in college vehicles. (A “no smoking” statement will be included on vehicle request forms and a “no smoking” sign will be installed in all District vehicles.)
- Smoke will not enter any District or District rented building. (Language will be included in rental agreements stating that smoking is not permitted indoors or near any entrances.)

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.
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 complete and transfer rates to all current and prospective students. Beginning in Fall 2010, 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 2010 to Spring 2013. 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 2011 to Spring 2013 are transfer students.

More information about Student Right-To-Know Rates and how they should be interpreted can be found at the California Community Colleges "Student Right-To-Know Information Clearinghouse Website" located at http://srtk.cccco.edu/index.asp

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

Seccin 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 Americana con Discapacidades. Los Estados Unidos proporciona acceso a programas y fisicamente para personas que tienen discapacidades y estan calificados sin embargo a recibir y participar en el colegio en modos diferentes por acomodelaciones educacionales. Ademá», la ley estipula: No se permite exclusion de cualquier persona quien tiene discapacidades de actividades del colegio solamente por razin de tener discapacidades. Ademá», la ley prohbe denegaci n de beneficios, discriminacion y exclusion de participacion en cualquier programa o actividad que recibe asistencia financiera del gobierno federal. Ademá, 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 eficicica a las ofrecidos a personas quienes no tienen discapacidades. Para mas informacion, contacte:
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 to 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.

Some courses meet computer and information literacy competency area requirements. These courses are noted with brackets [ ] in the course description.

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 www.cccapply.org. 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
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 that, although not having met the health or safety pre- or corequisite, feel they don’t pose a threat to themselves or others;
3. Believe they will be subjected 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.);
4. Believe that the pre- or corequisite was established in violation of Title 5 regulations or in violation of district-approved policies;
5. 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:

- 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; Paperwork must be submitted to the area dean. Approval requires the signature of two faculty members in the discipline and the area dean.

For Competency: General Petition; 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; 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.

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. (See also Computer and Information Literacy under Competency Requirements.)

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).

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: College of the Sequoias; Columbia College; Fresno City College; Reedley College; Porterville College; Taft College, and West Hills College. 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 8 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 one is enrolled in at least 10 units at the time of applying to audit a class. Students are already enrolled in at least 10 units may audit up to three
units free of charge. The audit fee is non-refundable.

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 audit student 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
To add a class, 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.

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.) After the fourteenth 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: 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: 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 classes or by completing the drop process for all classes through WebAdvisor 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.
- 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.

WWW.MCCD.EDU 2015-2016 CATALOG

WWW.MCCD.EDU
**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 mc4me.mccd.edu.

**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. 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). Information regarding California residency 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.

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 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, non-resident 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>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
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<tr>
<td>B</td>
<td>3</td>
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<tr>
<td>C</td>
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<td>P</td>
<td>N/A</td>
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<td>W</td>
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<td>IP</td>
<td>N/A</td>
</tr>
<tr>
<td>RD</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The non-evaluative grading symbols above (marked as “N/A” - not applicable) are not used in the calculation of GPA (grade point average).

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 the 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 the 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.

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
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, page ??.

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. Information about which courses may be attempted using Credit by Examination may be obtained in the Counseling Area.

International Baccalaureate

Merced College participates in the International Baccalaureate (IB) offered by the American Council on Education (ACE). Students may only receive credit towards the Merced College associate’s degree general education requirements. IB general education subject area applicability exists system-wide for students completing CSU GE Breadth or IGETC Breadth patterns. Specific information is provided in the section entitled INTERNATIONAL BACCELAURATE (IB). Please see a counselor for more information.

Military Experience

After earning 12 units of credit in residence at Merced College, military veterans will be awarded up to 12 units of credit for military training and experience. These units will be recorded on the student’s Merced College transcript. This award will be based upon the American Council of Education’s (ACE) recommendations found on the individual’s ACE Registry Transcript. The basis for awarding credit for military training and/or experience is as follows:

**Basic Training:** The student will receive two units of credit in Physical Education/Kinesiology.

**Other Military Training/Experience:** Merced College will grant a maximum of 10 units of general elective credit.

Community College of the Air Force transcripts will be evaluated in the same manner as described in Students Transferring from Another College and will not be subject to the above unit limitations and residency requirements.

Students seeking credit for specific Merced College courses based upon military training and/or experience must apply for credit by examination. See Credit by Examination for additional information.

Students seeking to use military training and/or experience in lieu of stated prerequisites must challenge the prerequisite using the standard college process. See Challenging a Prerequisite for additional information.

Probation & Dismissal

**Academic Probation**

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.

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 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 your 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 may be 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) 384-6077.
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 cadet 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 http://www.mccd.edu/TheArts/ or call 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 (CCCSAA).

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 Membership and Fee

To be an ASMC member, a student must be registered for the current semester and pay the $10 ASMC member fee at the Student Fees Office. Members will be provided a discount card (for use at select restaurants and businesses) and a sticker to place on their student ID card. A $10 replacement fee will be charged for lost ASMC stickers.

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 Baños 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 stationary 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 www.mercedcollegebookstore 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 the workforce.

CalWORKs staff provides customized support services during the student’s educational and employment journey toward self-sufficiency. For more information, contact: Merced College (209) 381-6515 or Los Banos Campus (209) 381-6428, or visit www.mccd.edu/programs.

**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 catering menu at www.mccd.edu and click on services, or call (209) 381-6549.

**Career/Transfer Center**
The Career/Transfer Center provides services to assist individuals in making occupational and educational decisions. Included in these services are:
- Career search software with information on hundreds of occupations and training programs;
- A resource center for career information material;
- Career interest testing to help students determine occupational and educational goals;
- Counseling services and current information on transfer programs which include Transfer Admission Agreements and articulation agreements on various majors and general education requirements;
- Contact with four-year colleges and universities including scheduled on-campus visits by representatives, college fairs, and transfer workshops;
- A library of college catalogs including the UC, CSU, and community college systems and many independent institutions;
- Assistance completing UC and CSU applications;

The Career/Transfer Center is the college’s career and college information and resource center. Students planning to transfer are encouraged to visit the center as early as possible. The Career/Transfer Center is open during the fall and spring semesters from 08:00a. to 04:30p. Monday through Friday. Summer hours will vary. Call (209) 384-6243 for Career Services or (209) 384-6239 for Transfer Services.

**Child Development Center**
Child Development Center 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. www.mccd.edu/services/child_dev

**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 registered student clubs
- Promote the development of student leadership, service and networking
- Promote campus 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 at: www.mccd.edu/organizations/student/asmc.html

**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 and advisors 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 (DSP&S), International Student Services, the Career/Transfer 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 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 http://www.mccd.edu/services/finaid.

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.
**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 attain 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 grace 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/organizations/student/ags/index.html

**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.

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 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.

Puente 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 Galaviz 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.

Counseling: Puente students work closely with their Puente counselor until they transfer, exploring career options, developing an academic educational plan, and identifying lifetime goals. Students visit University of California, California State University and private college campuses and attend an annual Puente student transfer conference.

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 Student Health Services mission is to provide students with services, education, and resources necessary to make responsible, informed choices to keep students physically and emotionally healthy so they can succeed in school and life. Quality services, innovative health promotion activities, resource and referrals are provided in a caring, and confidential manner for Merced College students.

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

Eligibility: Full-or part-time students, who have paid enrollment fees and 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: None for noted services (all services are included with payment of the health fee, and there are no additional charges)

Services include:
- Personal counseling with a licensed therapist
- Blood pressure checks
- Family planning: information, condoms, pregnancy tests
- First aid
- T.B. skin testing
- Health information and education regarding medical conditions, nutrition, sexually transmitted diseases, drug and alcohol recovery resources.

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 www.mccd.edu/studenthealth for more information.
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 near the cafeteria 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/academics/resources/schedule.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 http://www.mccd.edu/services/guidance/veterans.html or by calling (209) 384-6113.
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.
- You must complete at least 12 units at Merced College.
- You must file an application for graduation by the current deadline as reflected in the school calendar.
- You must complete associate breadth requirements consisting of 23-27 units.
- You must complete the major requirements for either an Associate in Arts or Science degree (see below and listings under “Programs, Associate Degree, Certificate, and Transfer”). Courses taken to satisfy either the associate breadth requirement or the associate major requirement may be double-counted.

Note: Students may be awarded more than one associate degree if they’ve completed all applicable requirements; however, they must meet the requirements in effect at the time the new degree is declared.
Competency Requirements

Students must achieve competency in the areas of reading, writing, mathematics, and computer and information literacy 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 or a grade of "C" or better in any course which has the prerequisite of Math C, or the equivalent.

Computer and Information Literacy

Merced College instituted a competency in Computer and Information Literacy in fall 2000. To meet the competency required in Computer and Information Literacy, students must receive a grade of "C" or better in courses which meet each of the competency requirements A through G listed below.

A. Name and describe the typical digital computer components and their functions;
B. Describe common computer applications and related social and ethical problems/impact;
C. Learn fundamental operation and concepts of word processing, spreadsheet, and/or database software applications;
D. Understand the difference between information and knowledge;
E. Understand the links among information centers and the access points available through technology and reference sources;
F. Understand the basic structure of electronic databases and the strategies used to access them;
G. Recognize the different levels, types, and formats of information including but not limited to primary vs. secondary, and popular vs. scholarly.

The courses and programs listed in the following grid show the areas of competency covered in a given catalog year. The catalog year in which the course or program is completed determines if a particular competency is met. Competencies met by a specific course or program may change on a yearly basis.

Students should check their completed course work against the competency grid and consult a counselor to identify any specific competency still required.

Computer and Information Literacy competencies catalog rights are determined by the grid listed in the current catalog. Courses are determined to meet the competencies based upon the catalog year in which the student completes the target course, not upon the catalog when the student began attending Merced College.
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## 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:

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<thead>
<tr>
<th>Code</th>
<th>Degree</th>
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<td>13010.AST Early Childhood Education</td>
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<tr>
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<td>04130.CB</td>
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<td>09104.CT CAD Drafting - Architectural</td>
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<td>09103.CB CAD Operator</td>
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</tbody>
</table>

### Notes

- **AA-T** = Associate in Arts (A.A.-T.) Degree for Transfer
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- **CO** = Other credit Award, under 6 semester units

---

[WWW.MCCD.EDU](http://WWW.MCCD.EDU)
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<thead>
<tr>
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<tr>
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<td>09660.AA Mechatronics/Automated Systems Technology (AA)</td>
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<tr>
<td>09040.CT Computer &amp; Networking Technology (CT)</td>
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<td><strong>Sonography</strong></td>
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<td>12800.CT Diagnostic Medical Sonography (CT)</td>
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<td>11600.AAT Spanish (AAT)</td>
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<tr>
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<tr>
<td>09810.CL Advanced Welding and Metal Fabrication (CL)</td>
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<tr>
<td><strong>Management</strong></td>
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<tr>
<td>05450.AA Management/Supervisory Training (AA)</td>
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<td>05460.AA Marketing (AA)</td>
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<td>17400.AST Mathematics (AST)</td>
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<td><strong>Mechanized Agriculture</strong></td>
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<tr>
<td>01453.CL Compact Power Equipment (CL)</td>
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<tr>
<td><strong>AA-T = Associate in Arts (A.A.-T.) Degree for Transfer</strong></td>
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<tr>
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</tbody>
</table>

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**NOTE:**
- **AA** = Associate in Arts (A.A.) degree
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- **CT** = Certificate requiring 18 to fewer than 30 semester units...
### Continuing Education (Noncredit)

- **49165.NC** Basic Skills
- **21078.NC** Court Interpreter
- **49196.NC** ESL Beginning Skills Program
- **49198.NC** ESL Intermediate Skills Program
- **10100.NC** Medical Assistant
- **07744.NC** Technical Office Occupations

### Certificates Not Transcribed

- **05200.CO** Customer Service Academy Certificate (CO)
- **13180.CE** Dietetic Services Supervisor (CE)
- **12100.CE** Emergency Medical Technician (CE)
- **09780.CE** Entry Level Welding (CE)
- **12150.CO** Nursing Assistant (CO)
- **05725.CE** Social Media (CE)
- **05800.CE** Virtual Office Professional (CE)

---

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ASSOCIATE DEGREE BREADTH REQUIREMENTS
2015-2016

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
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.)

<table>
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<tr>
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<tbody>
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<td>ENGL-01A</td>
<td>English Composition</td>
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<tr>
<td>COMM-01, 01H</td>
<td>Communication and Analytical Thinking</td>
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### Area B - Natural Sciences
Courses in the natural sciences are those which examine the physical universe, its life forms, and its natural phenomena.

<table>
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<th>Title</th>
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<tbody>
<tr>
<td>ANSC-10</td>
<td>Anthropology</td>
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<td>ANTH-01</td>
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</tr>
<tr>
<td>ARCH-01</td>
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<td>ASTR-01, 01L</td>
<td>Astronomy</td>
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<td>BIOL-01, 02</td>
<td>Biology</td>
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<tr>
<td>CHEM-02A, 02B, 04A, 04B, 04C</td>
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<td>ELCT-30</td>
<td>Electrical Engineering</td>
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<tr>
<td>GEOG-01, 01H</td>
<td>Geography</td>
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<td>GEO-01, 02</td>
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<td>GEOL-01, 01H</td>
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<td>PHIL-01, 01H</td>
<td>Philosophy</td>
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<tr>
<td>PHIL-02, 02H, 04C, 06, 07, 08, 10, 15, 20A, 20B, 25, 26</td>
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</tr>
<tr>
<td>PSYC-05</td>
<td>Psychology</td>
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### Area C - Humanities
Courses in the humanities are those which concentrate on the study of cultural activities and artistic expressions of human beings.

<table>
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<td>ENGL-01B, 04A, 04B, 05, 06A, 08B, 07, 08, 10, 11, 14, 15, 18</td>
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<td>FREN-01, 02, 03, 04</td>
<td>French</td>
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<td>GERM-01, 02, 03, 04</td>
<td>German</td>
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<td>HMNG-01, 02</td>
<td>Health Management</td>
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<td>HUM-01, 01H, 02, 02H, 15*, 21</td>
<td>Human Behavior</td>
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<td>JPN-01A, 01B, 02</td>
<td>Japanese Language</td>
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<tr>
<td>MUSE-44, 45</td>
<td>Music Theory</td>
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<td>MUSG-10, 11, 12, 13, 14</td>
<td>Music Theory</td>
</tr>
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<td>MUST-01, 02</td>
<td>Music Theory</td>
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<td>PHIL-01, 01H, 02, 03, 04, 05, 15</td>
<td>Philosophy</td>
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<td>PHOT-10A, 10B, 11A, 33, 35, 36</td>
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<tr>
<td>SPAN-01, 02, 03, 04, 10, 11</td>
<td>Spanish Language</td>
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### Area D - Social and Behavioral Sciences
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.)

<table>
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<td>SOC-01, 02, 03</td>
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<td>PSYC-01A, 01AH, 15, 25</td>
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<td>NUTR-10</td>
<td>Nutrition</td>
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<tr>
<td>PSYC-09, 09+</td>
<td>Psychology</td>
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</table>

### Area E - Lifelong Understanding and Self-Development
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.)

<table>
<thead>
<tr>
<th>Code</th>
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<td>BUS-35</td>
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<td>CPSC-01</td>
<td>Computer Science</td>
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<td>BUS-35</td>
<td>Business Administration</td>
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<td>LAND-11</td>
<td>Land Use Planning</td>
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<tr>
<td>NUTR-10</td>
<td>Nutrition</td>
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<tr>
<td>PSYC-09+</td>
<td>Psychology</td>
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<tr>
<td>REGN-34</td>
<td>Government</td>
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### (E2) Activity
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.)

<table>
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<tr>
<td>PHED-10A, 10F, 10H, 11C, 12H, 15</td>
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*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.

209.384.6000

06-11-15
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.

### CLEP 2015-2016

**COLLEGE LEVEL EXAMINATION PROGRAM**

**CSU System-wide Credit for External Examinations as of April 1, 2014**

If a student passes more than one CLEP test in the same language other than English (e.g., two exams in French), 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 for each test is considered “Level II” and earns additional units of credit and placement in Area C2 of GE Breadth, as noted.

<table>
<thead>
<tr>
<th>CLEP Examination</th>
<th>Merced College General Education Breadth Areas</th>
<th>Passing Score</th>
<th>Minimum Merced College Semester Units</th>
<th>CSU-GE Breadth and/or American Institutions 2/ Units</th>
<th>Minimum CSU Semester Credits Earned 3</th>
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<td>American Government</td>
<td>POSC-01 (D2)</td>
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<td>3</td>
<td>D8 - 3 units</td>
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<tr>
<td>Analyzing and Interpreting Literature</td>
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<td>English Literature</td>
<td>ENGL-06A or ENGL-06B</td>
<td>50</td>
<td>C2 - 3 units</td>
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<td>3</td>
</tr>
<tr>
<td>French Level II</td>
<td>FREN-01 or FREN-02 (C)</td>
<td>50</td>
<td>6</td>
<td>N/A - 0 units</td>
<td>6</td>
</tr>
<tr>
<td>French Level II</td>
<td>FREN-03 or FREN-04 (C)</td>
<td>59</td>
<td>6</td>
<td>C2 - 3 units</td>
<td>12</td>
</tr>
<tr>
<td>German Level I</td>
<td>GERM-01 or GERM-02 (C)</td>
<td>50</td>
<td>6</td>
<td>N/A - 0 units</td>
<td>6</td>
</tr>
<tr>
<td>German Level II</td>
<td>GERM-03 or GERM-04 (C)</td>
<td>60</td>
<td>12</td>
<td>C2 - 3 units</td>
<td>12</td>
</tr>
<tr>
<td>History, United States I</td>
<td>HIST-17A (D2)</td>
<td>50</td>
<td>3</td>
<td>D6+US-1 - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>History, United States II</td>
<td>HIST-17B (D2)</td>
<td>50</td>
<td>3</td>
<td>D6+US-1 - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Human Growth and Development</td>
<td>PSYC-09 or CLDV-09 (E1)</td>
<td>50</td>
<td>3</td>
<td>E - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>HUM-01 or HUM-02 (C)</td>
<td>50</td>
<td>3</td>
<td>C2 - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Introductory Business Law</td>
<td>BUS-18A (No GE area)</td>
<td>50</td>
<td>4</td>
<td>N/A - 0 units</td>
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<tr>
<td>Introduction to Psychology</td>
<td>PSYC-01A (D1)</td>
<td>50</td>
<td>3</td>
<td>D9 - 3 units</td>
<td>3</td>
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<tr>
<td>Introduction to Sociology</td>
<td>SOC-01 (D1)</td>
<td>50</td>
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<td>D0 - 3 units</td>
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<tr>
<td>Pre-Calculus</td>
<td>MATH-02 (A2)</td>
<td>50</td>
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<td>B4 - 3 units</td>
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<tr>
<td>Principles of Macroeconomics</td>
<td>ECON-02 (D1)</td>
<td>50</td>
<td>3</td>
<td>D2 - 3 units</td>
<td>3</td>
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<tr>
<td>Principles of Management</td>
<td>MGMT-31 (No GE area)</td>
<td>50</td>
<td>3</td>
<td>N/A - 0 units</td>
<td>3</td>
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<tr>
<td>Principles of Marketing</td>
<td>MKTG-30 (No GE area)</td>
<td>50</td>
<td>3</td>
<td>N/A - 0 units</td>
<td>3</td>
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<tr>
<td>Principles of Microeconomics</td>
<td>ECON-01 (D1)</td>
<td>50</td>
<td>3</td>
<td>D2 - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Spanish Level I</td>
<td>SPAN-01 or SPAN-02 (C)</td>
<td>60</td>
<td>3</td>
<td>B4 - 3 units</td>
<td>3</td>
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<tr>
<td>Spanish Level II</td>
<td>SPAN-03 or SPAN-04 (C)</td>
<td>63</td>
<td>6</td>
<td>C2 - 3 units</td>
<td>12</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>MATH-25 (A2)</td>
<td>50</td>
<td>3</td>
<td>C2 or D6 - 3 units</td>
<td>3</td>
</tr>
<tr>
<td>Western Civilization I</td>
<td>HIST-04A (D2)</td>
<td>50</td>
<td>3</td>
<td>D6 - 3 units</td>
<td>3</td>
</tr>
</tbody>
</table>

1 Areas of GE Breadth (A1 through E) are defined in EO 1033. Areas of American Institutions (US-1 through US-3) are set forth in Sections 1A and 1B of EO 405, and at assist.org.

3These units count toward eligibility for admissions to the CSU. The units may not all apply toward certification of the corresponding GE-Breadth area. (CSU Executive Orders 1033 and 1036). 06-05-14
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 UC/CSU applied to the appropriate General Education requirements (CSU-GE/IGETC). 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>IB Examination</th>
<th>Passing Score</th>
<th>Merced College General Education Breadth Areas</th>
<th>CSU-GE Breadth Areas</th>
<th>IGETC Breadth Areas</th>
<th>Removal Date for GE Breadth&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology HL</td>
<td>5</td>
<td>B2 – 3 units</td>
<td>B2 – 4 units</td>
<td>5B (no lab) – 3 units</td>
<td></td>
</tr>
<tr>
<td>Chemistry HL</td>
<td>5</td>
<td>B1 – 3 units</td>
<td>B1 – 4 units</td>
<td>5A (no lab) – 3 units</td>
<td></td>
</tr>
<tr>
<td>Economics HL</td>
<td>5</td>
<td>D1 – 3 units</td>
<td>D2 – 3 units</td>
<td>4B – 3 units</td>
<td></td>
</tr>
<tr>
<td>Geography HL</td>
<td>5</td>
<td>D1 – 3 units</td>
<td>D5 – 3 units</td>
<td>4E – 3 units</td>
<td></td>
</tr>
<tr>
<td>History (any region) HL</td>
<td>5</td>
<td>D2 – 3 units</td>
<td>C2 or D6 – 3 units</td>
<td>3B or 4F – 3 units</td>
<td></td>
</tr>
<tr>
<td>Language A1 (any language) HL</td>
<td>4</td>
<td></td>
<td>C2</td>
<td>3B and 6A – 3 units</td>
<td>F13</td>
</tr>
<tr>
<td>Language A2 (any language) HL</td>
<td>4</td>
<td></td>
<td>C2</td>
<td>3B and 6A – 3 units</td>
<td>F13</td>
</tr>
<tr>
<td>Language A1 (any language) HL</td>
<td>4</td>
<td></td>
<td></td>
<td>3B – 3 units</td>
<td></td>
</tr>
<tr>
<td>Language A (any language) HL</td>
<td>4</td>
<td></td>
<td></td>
<td>3B – 3 units</td>
<td></td>
</tr>
<tr>
<td>Language B (any language) HL&lt;sup&gt;8&lt;/sup&gt;</td>
<td>4</td>
<td>C – 3 units</td>
<td>n/a</td>
<td>6A – 3 units</td>
<td></td>
</tr>
<tr>
<td>Mathematics HL</td>
<td>4</td>
<td>A2 – 3 units</td>
<td>B4 – 3 units</td>
<td>2A – 3 units</td>
<td></td>
</tr>
<tr>
<td>Physics HL</td>
<td>5</td>
<td>B1 – 3 units</td>
<td>B1 – 3 units</td>
<td>5A (no lab) – 3 units</td>
<td></td>
</tr>
<tr>
<td>Psychology HL</td>
<td>5</td>
<td>D1 – 3 units</td>
<td>D9 – 3 units</td>
<td>4I – 3 units</td>
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</tr>
<tr>
<td>Theatre HL</td>
<td>4</td>
<td>C – 3 units</td>
<td>C1 – 3 units</td>
<td>3A – 3 units</td>
<td></td>
</tr>
</tbody>
</table>

<sup>3</sup> Students seeking certification in GE Breadth prior to transfer must have passed the test before this date.

<sup>8</sup> 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.

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.
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 can not 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.

ADVANCED PLACEMENT (AP) GRID

<table>
<thead>
<tr>
<th>AP Subject</th>
<th>Semester Credits Toward CSU-GE Breadth Certification</th>
<th>American Institutions and/or CSU-GE Breadth Area</th>
<th>Removal Date for GE Breadth</th>
<th>IGETC Applicability (3 sem/4qtr)</th>
<th>MC Associate Degree Breadth Areas &amp; unit credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Art History</td>
<td>3</td>
<td>C1 or C2</td>
<td>3A/3B</td>
<td>C (3)</td>
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<tr>
<td>AP Biology</td>
<td>4</td>
<td>B2 + B3</td>
<td>5B + lab</td>
<td>B2 (3)</td>
<td></td>
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<tr>
<td>AP Calculus AB 4</td>
<td>3</td>
<td>B4</td>
<td>2A</td>
<td>A2 (3)</td>
<td></td>
</tr>
<tr>
<td>AP Calculus BC 4</td>
<td>3</td>
<td>B4</td>
<td>2A</td>
<td>A2 (3)</td>
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<tr>
<td>AP Calculus BC / AB Subscore 4</td>
<td>3</td>
<td>B4</td>
<td>2A</td>
<td>A2 (3)</td>
<td></td>
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<tr>
<td>AP Chemistry</td>
<td>6</td>
<td>B1 + B3</td>
<td>F09</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>AP Chemistry</td>
<td>4</td>
<td>B1 + B3</td>
<td>5A+Lab</td>
<td>B1 (6)</td>
<td></td>
</tr>
<tr>
<td>AP Chinese Language and Culture</td>
<td>3</td>
<td>C2</td>
<td>6A+3B</td>
<td>C (3)</td>
<td></td>
</tr>
<tr>
<td>AP Comparative Government &amp; Politics</td>
<td>3</td>
<td>D8</td>
<td>4H</td>
<td>D2 (3)</td>
<td></td>
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<tr>
<td>AP Computer Science A 4</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>AP Computer Science AB 4</td>
<td>0</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>AP English Language and Composition</td>
<td>3</td>
<td>A2</td>
<td>1A</td>
<td>A1 (3)</td>
<td></td>
</tr>
<tr>
<td>AP English Literature and Composition</td>
<td>6</td>
<td>A2 + C2</td>
<td>1A/3B</td>
<td>A1 + C (6)</td>
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<td>Course</td>
<td>Units</td>
<td>GE Course Code</td>
<td>GE Breadth</td>
<td>GE Completion Code</td>
<td>GE Completion Notes</td>
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<td>AP Environmental Science 5</td>
<td>4</td>
<td>B2 + B3</td>
<td>F09</td>
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<tr>
<td>AP Environmental Science 5</td>
<td>4</td>
<td>B1 + B3</td>
<td>5A + lab</td>
<td>B2 (4)</td>
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<tr>
<td>AP European History</td>
<td>3</td>
<td>C2 or D6</td>
<td>3B/4F</td>
<td>D2 (3)</td>
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<tr>
<td>AP French Language</td>
<td>6</td>
<td>C2</td>
<td>F09</td>
<td>n/a</td>
<td></td>
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<tr>
<td>AP French Language</td>
<td>3</td>
<td>C2</td>
<td>F11</td>
<td>6A+3B C (3)</td>
<td></td>
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<tr>
<td>AP French Language and Culture</td>
<td>3</td>
<td>C2</td>
<td></td>
<td></td>
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<tr>
<td>AP French Literature</td>
<td>3</td>
<td>C2</td>
<td>F09</td>
<td>6A+3B C (3)</td>
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<tr>
<td>AP German Language</td>
<td>6</td>
<td>C2</td>
<td>F09</td>
<td>n/a C (6)</td>
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<td>AP German Language</td>
<td>3</td>
<td>C2</td>
<td>F11</td>
<td>6A+3B C (3)</td>
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<tr>
<td>AP German Language and Culture</td>
<td>3</td>
<td>C2</td>
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<tr>
<td>AP Human Geography</td>
<td>3</td>
<td>D5</td>
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<td>4E D1 (3)</td>
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<tr>
<td>AP Italian Language and Culture</td>
<td>3</td>
<td>C2</td>
<td>F10c</td>
<td>6A+3B C (3)</td>
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<tr>
<td>AP Japanese Language and Culture</td>
<td>3</td>
<td>C2</td>
<td></td>
<td>6A+3B C (3)</td>
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</tr>
<tr>
<td>AP Latin Literature</td>
<td>3</td>
<td>C2</td>
<td>F09</td>
<td>n/a C (3)</td>
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<tr>
<td>AP Latin</td>
<td>3</td>
<td>C2</td>
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<td></td>
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<tr>
<td>AP Latin: Vergil</td>
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<td>C2</td>
<td>F12</td>
<td>6A+3B C (3)</td>
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<tr>
<td>AP Macroeconomics</td>
<td>3</td>
<td>D2</td>
<td></td>
<td>4B D1 (3)</td>
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<tr>
<td>AP Microeconomics</td>
<td>3</td>
<td>D2</td>
<td></td>
<td>4B D1 (3)</td>
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<tr>
<td>AP Music Theory</td>
<td>3</td>
<td>C1</td>
<td>F09</td>
<td>n/a C (3)</td>
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<tr>
<td>AP Physics 1 6</td>
<td>4</td>
<td>B1 + B3</td>
<td></td>
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<tr>
<td>AP Physics 2 6</td>
<td>4</td>
<td>B1 + B3</td>
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<tr>
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<td>B1 + B3</td>
<td>F09</td>
<td>n/a B1 (6)</td>
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<td>F16 F13</td>
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<tr>
<td>AP Physics C (electricity/magnetism)</td>
<td>4</td>
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<td>5A + lab B1 (4)</td>
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<td>AP Physics C (mechanics)</td>
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<tr>
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<td>4I D1 (3)</td>
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<tr>
<td>AP Seminar</td>
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<td>n/a</td>
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<td></td>
<td></td>
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<tr>
<td>AP Spanish Language</td>
<td>6</td>
<td>C2</td>
<td>F09</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>AP Spanish Language and Culture</td>
<td>3</td>
<td>C2</td>
<td></td>
<td>6A+3B C (3)</td>
<td></td>
</tr>
<tr>
<td>AP Spanish Literature</td>
<td>6</td>
<td>C2</td>
<td>F09</td>
<td>n/a</td>
<td></td>
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<tr>
<td>AP Spanish Literature and Culture</td>
<td>3</td>
<td>C2</td>
<td></td>
<td>6A+3B C (3)</td>
<td></td>
</tr>
<tr>
<td>AP Statistics</td>
<td>3</td>
<td>B4</td>
<td></td>
<td>2A A2 (3)</td>
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<tr>
<td>AP Studio Art - 2D Design</td>
<td>0</td>
<td>n/a</td>
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<tr>
<td>AP Studio Art - 3D Design</td>
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<td>n/a</td>
<td></td>
<td>n/a</td>
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</tr>
<tr>
<td>AP Studio Art - Drawing</td>
<td>0</td>
<td>n/a</td>
<td></td>
<td>n/a</td>
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<tr>
<td>AP U.S. Government &amp; Politics</td>
<td>3</td>
<td>D8 + US-2</td>
<td></td>
<td>4H D2 (3)</td>
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<tr>
<td>AP U.S. History</td>
<td>3</td>
<td>(C2 or D6) + US-1</td>
<td>3B/4F²</td>
<td>D2 (3)</td>
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<tr>
<td>AP World History</td>
<td>3</td>
<td>C2 or D6</td>
<td></td>
<td>3B/4F² D2 (3)</td>
<td></td>
</tr>
</tbody>
</table>

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

4 If a student passes more than one AP exam in calculus or computer science, only one examination may be applied to the baccalaureate.

5 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.

6 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.

ENGLISH: Language/Composition and Literature/Composition: Maximum Credit 8 quarter/5.3 semester units for both English Lang Comp and Lit/Comp.
MATH: Calculus AB/AB Subscore and Calculus BC: 8 quarter/5.3 semester units maximum for all exams; 4 quarter/2.7 semester units max between AB and AB subscore.
PHYSICS: Physics B, Physics C Mechanics and Physics C electricity/magnetism: 8 quarter/5.3 semester units maximum for all three physics exams.
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. Currently, Merced College has four approved AA-/AS-T Degrees: Administration of Justice, Communication Studies, Mathematics, and Psychology.

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.
ASSOCIATE DEGREES FOR TRANSFER
2015-2016

Associate Degree for Transfer
A Degree with a Guarantee.°

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/.

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
- Anthropology
- Business Administration
- Communication Studies
- Computer Science
- Early Childhood Education
- Elementary Teacher Education
- English
- Geology
- History
- Kinesiology
- Mathematics
- Music
- Philosophy
- Physics
- Psychology
- Spanish
- Studio Arts
- Theatre Arts

Additional majors are being developed. Please see a counselor and www.mccd.edu for more information.
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/PHIL-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
GEOL-01, 02, 03
PHSC-01, 01L
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, 22
PLSC-10
PSYC-15
B3 Laboratory Activity
ANTH 01
ASTR 01L
BIOL 01, 02, 04A, 04B, 16, 18, 20, 32
CHEM 02A, 02B, 04A, 04B
GEOG 01L
GEOL 01, 02, 03
PHSC 01L
PHYS 02A, 02B, 04A, 04B, 04C
PLSC 10
SOIL 10
B4 Mathematics/Quantitative Reasoning [AP, IB & CLEP accepted]
CPSC-07+
MATH-02, 02H, 04A, 04B, 04C, 06, 07+, 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
ARTD-40A, 40B
DRAM-01, 08
ENGL-14, 15
MUSG-10, 11, 13, 14
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
GERM-01, 02, 03, 04
HIST-04A, 04B, 05, 09A, 09B, 17A, 17AH, 17B, 17BH
HUMG-01, 02
HUM-01, 01H, 02, 02H, 15, 21
JPN-01A, 01B, 02
PHIL-01, 01H, 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
ECON-01, 02
GEOG-02
HIST-04A, 04B, 05, 17A, 17AH, 17B, 17BH, 22, 23, 29
HUM-15
POSC-01, 02
PSYC-01A, 01AH, 15, 22, 23, 25, 36
SOC-01

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, 02D, 02G, 02I, 02K
CLDV-01, 02, 09+
GUID-30
HLTH-10
NUTR-10
PSYC-09+, 22, 23
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

Conditions:
• 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.
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]**

<table>
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<th>Course</th>
<th>Requirement</th>
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<tr>
<td>ENGL-01A</td>
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</table>

**Group B: Critical Thinking**

ENGL/HIL-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-07 (same as 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]**

<table>
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<tbody>
<tr>
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<td>ENGL-14</td>
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<td>MUSG-10, 11, 13, 14</td>
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**3B. Humanities [AP & IB accepted]**

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<td>HUM-01+, 01H+, 02+, 02H+, 15*</td>
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<td>HMNG-02*</td>
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<td>PHIL-01+, 01H+, 03, 04, 05, 15</td>
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<td>SPAN-02**, 03*, 04*, 10**, 11**</td>
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</tbody>
</table>

**AREA 4: Social & Behavioral Sciences [AP & IB accepted]**

A minimum of three courses (9 semester units) is required from at least two disciplines

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<tr>
<td>POSC-01, 02</td>
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<tr>
<td>PSYC-01A+, 01AH+, 15, 22, 23, 25, 36</td>
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<tr>
<td>SOC-01</td>
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</table>

**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]**

<table>
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<tr>
<th>Course</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>ARCH-01</td>
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<tr>
<td>ASTR-01</td>
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<tr>
<td>CHEM-02A+, 02B+,04A, 04B</td>
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<td>GEOG-01</td>
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<td>GEOL-01, 02*, 03</td>
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<td>PHSC-01*</td>
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<tr>
<td>PHYS-02A+, 02B+, 04A+, 04B+, 04C+, 10+</td>
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<td>SOIL-10</td>
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</table>

**5B. Biological Science [AP & IB accepted]**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ANTH-01</td>
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<tr>
<td>BIOL-01*, 02, 04A, 04B, 06, 16, 18, 20, 32</td>
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<td>PSYC-15</td>
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**5C. Laboratory [AP & IB accepted]**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ANTH-01</td>
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<tr>
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<td>BIOL-01+, 02, 04A, 04B, 16, 18, 20, 32L</td>
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<td>CHEM-02A, 02B, 04A, 04B</td>
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</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>HMNG-01, 02</td>
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<tr>
<td>JPNS-01B, 02</td>
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<tr>
<td>SPAN-01+, 02**, 03*, 04*, 10**, 11**</td>
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</tbody>
</table>

*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

06-11-15
## UC TCA COURSES 2014-2015

### 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 2013-14 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 1998 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.

#### 2015-2016 CATALOG

<table>
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<td>ENGL-07 (UC-H)</td>
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<td>BIOL-32</td>
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<td>BUS-18A</td>
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University of California Transfer Course Agreement

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)
  ○ CHEM-02A No credit for CHEM-2A if taken after CHEM -4A
  + CHEM-02B No credit for CHEM-2B if taken after CHEM -12A
**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
**GERM-01 Corresponds to two years of high school study
*HLTH-10 and HLTH-15 combined: maximum credit, one course
**HIST-21, 22, 23, 24: Any or all of these courses 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, one course
**MATH-20A and MATH -20B combined: maximum credit, one course
*PHOT-10B AND PHOT-11A combined: maximum credit, one course
**PHOT-10B AND PHOT-11A combined: maximum credit, one course
*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
  ○SPAN-02 and SPAN-11 combined: maximum credit, one course

03-11-15
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 limit 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.
## COURSES RELATED IN CONTENT CONTINUED

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*Fundamentals of Photography*

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- PHOTO-31+
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- PHOTO-57A+
- PHOTO-57B+
- PHOTO-10A+
- PHOTO-10AR+
- PHOTO-10BL+
- PHOTO-11A
- PHOTO-30+

06-17-15
ENGLISH AS A SECOND LANGUAGE AND PRE-COLLEGE ENGLISH SEQUENCE 2015-2016

ENGL-01A (4 units)
College Composition and Reading

ENGL-85 (5 units)
Foundations in Academic Literacy

READ-81 (4 units)
Foundations in Reading III

ENGL-84 (5 units)
Foundations in Writing III

READ-80 (4 units)
Foundations in Reading II

ENGL-83 (5 units)
Foundations in Writing II

ESL-92B (5 units)
ESL Reading and Writing 2

ESL-96 (3 units)
High-Intermediate ESL Grammar I

ENGL-90 (4 units)
Foundations in Reading and Writing I

ESL-92A (5 units)
ESL Reading and Writing 1

ESL-95 (3 units)
Intermediate ESL Grammar

ESL-98 (3 units)
ESL Pronunciation and Speaking

NON-CREDIT ESL

- Degree applicable courses
- Transferable
- Meets the English Competency requirements

- Intermediate Non-Degree applicable basic skills courses
- Non Transferable
- Does not meet the English Competency requirements

- Non degree applicable basic skills courses
- Non Transferable
- Does not meet the English Competency requirements
- Suggested concurrent enrollment
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) are hosted at Merced Community 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-motherloderht.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.
Accounting
Allied Health, Business, and Public Safety

DEGREE
A.A. - Accounting

CERTIFICATE
Accounting

Gainful Employment Disclosure

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
Making good decisions is critical for success in any business enterprise. Accounting plays a vital role in providing information needed to make knowledgeable financial decisions. The information supplied by accounting is in the form of quantitative data, primarily financial in nature, and relates to specific economic entities. An economic entity may be an individual, a business enterprise, or a nonprofit organization. Every entity, regardless of its size or purpose, must have a way to keep track of its economic activities and to measure how well it is accomplishing its goals. Accounting provides the means for tracking activities and measuring results.

Without accounting information, many important financial decisions would be made blindly. Investors, for example, would have no way to distinguish between a profitable company and one that is on the verge of failure: bankers could not evaluate the riskiness of potential loans; managers would have no basis for controlling costs, setting prices, or controlling the company’s resources; and government would have no basis for taxing income.

Thus, accounting is a service activity designed to accumulate, measure, and communicate financial information to various decision makers, such as investors, creditors, and managers.

Career Opportunities
Many career opportunities are available in accounting requiring varying amounts of education and experience. Listed below are some of the common accounting positions:

- Accounting Clerk
- General Bookkeeper
- Junior Accountant
- Accountant
- Public Accountant
- Private Accountant
- Not-for-profit Accountant
- Auditor

Highlights
Great Job Opportunities
Better understanding of business

DEGREE (10/07)
A.A. - Accounting (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-charge 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.

Core:

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Plus six units from the following:

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Suggested electives include:

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2015-2016 CATALOG  •  Accounting  •  55
CERTIFICATE
Accounting (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.

Core: Units
ACTG-04A Financial Accounting ................................................. 4
ACTG-04B Managerial Accounting ................................................. 4
ACTG-31 Computerized Accounting ............................................. 2
ACTG-51 Applied Accounting ...................................................... 4
BUS-10 Introduction to Business .................................................. 3
BUS-18A Business Law ................................................................. 4
CPSC-30 Computer Applications ................................................... 3

Plus six units from the following:
ACTG-52 Payroll Records and Accounting ..................................... 3
ACTG-53 Fundamentals of Income Tax Accounting ............................................. 3

30

Recommended Sequence: A.A. - Accounting (05000.AA)

Fall 1
ACTG-51 Applied Accounting ...................................................... 4
BUS-10 Introduction to Business .................................................. 3
CPSC-30 Computer Applications ................................................... 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

ACCOUNTING (ACTG)

ACTG-04A FINANCIAL ACCOUNTING
(C-ID ACCT 110)
4 units: 4 hours lecture.
Advisories: ACTG-51; ENGL-85.
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
(C-ID ACCT 120)
4 units: 4 hours lecture.
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
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: ACTG-04A or ACTG-51. Advisories: CPSC-30; ENGL-85.
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
4 units: 4 hours lecture.
Prerequisite: MATH-80. Advisories: MATH-81; READ-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
3 units: 3 hours lecture.
This course acquaints the student with various phases of the Fair Labor Standards Act (FLSA), Social Security Act, and other laws relating to the payment of wages and salaries. Basic payroll accounting systems and procedures as well as the timekeeping methods used to record time worked are described. Computerized accounting systems and pertinent tax forms are also explored. (2/07)

ACTG-53 FUNDAMENTALS OF INCOME TAX ACCOUNTING
3 units: 3 hours lecture.
Advisories: ACTG-51 or ACTG-04A; ENGL-85.
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)
Addiction Studies
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A. - Addiction Studies

CERTIFICATE
Addiction Studies

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Addiction Studies Program is designed to provide students with the knowledge and skills required to begin the certification process for and work in California drug treatment settings. It also provides opportunities for general knowledge about addiction and addiction treatment. The program leads to an Associate’s Degree in Addictions Studies or a Certificate of Achievement.

Career Opportunities
With sufficient hours of clinical practice and successful completion of the CATC examination entry level employment as a certified addiction counselor in addiction treatment practice in the public and private sector may be available.

Highlights
Understanding of the addiction process
Acquiring and practice of counseling skills

Note to transfer students
Many four year institutions do not offer a specialized major in this field. Seek the assistance of a guidance counselor if you plan to transfer.

Coordinator
Joel Murphy (209) 381-6595

DEGREE (2/14)
A.A. - Addiction Studies (21050.AA)

The Associate in Arts Degree in Addiction Studies, which is fully accredited by the California Association for Alcohol and Drug Educators (CAADE), 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. Compare the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems.
B. Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.
C. Differentiate among the established diagnostic criteria for substances use disorders and describe treatment modalities and placement criteria within the continuum of care.
D. Examine the diverse cultures and incorporate the relevant needs of culturally diverse groups, as well as people with disabilities, into clinical practice.
E. Demonstrate the ability to apply legal and ethical responsibilities of a drug and alcohol counselor appropriately.

Core:

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Total Units
24
CERTIFICATE (2/14)
Addiction Studies (21050.CT)

A fully accredited CAADE Certificate of Achievement will be awarded upon the satisfactory completion of the 36-unit curriculum listed below plus an additional six units from the following electives with a 2.0 GPA or higher in each class.

Program Student Learning Outcomes
A. Compare the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems.

B. Recognize the social, political, economic, and cultural context within which addiction and substance abuse exist, including risk and resiliency factors that characterize individuals and groups and their living environments.

C. Differentiate among the established diagnostic criteria for substances use disorders and describe treatment modalities and placement criteria within the continuum of care.

D. Examine the diverse cultures and incorporate the relevant needs of culturally diverse groups, as well as people with disabilities, into clinical practice.

E. Demonstrate the ability to apply legal and ethical responsibilities of a drug and alcohol counselor appropriately.

Core:

- ADST-41  INTRODUCTION TO ADDICTION STUDIES 3 units: 3 hours lecture.
- ADST-42B  INTRODUCTION TO ADDICTION COUNSELING SKILLS 3 units: 3 hours lecture. One-way corequisite: ADST-41. Advisory: ENGL-85.

ADST-41  INTRODUCTION TO ADDICTION STUDIES
3 units: 3 hours lecture.
Advisory: ENGL-85.
This is an introductory course which provides information on myths, theory, identification of, and the functions of family and social setting in addiction and recovery. Treatment, recovery, and relapse prevention models will be presented. (2/09)

ADST-42A  SCREENING ASSESSMENTS AND TREATMENT PLANNING
This course is designed to give the student an introduction to counseling skills of screening, clinical evaluation, assessment, and treatment planning. (2/14)

ADST-42B  INTRODUCTION TO ADDICTION COUNSELING SKILLS
This course is oriented to counseling the alcoholic/chemically dependent client. Course work is designed to give the student an introduction to counseling skills and classroom experience in applying basic counseling skills with individuals and groups. (2/14)

ADST-43  PROFESSIONAL RESPONSIBILITIES AND ETHICAL PRACTICE
This course focuses on professional responsibilities in addiction counseling. Awareness of state and federal laws and regulations, and the code of conduct governing the behavior of alcohol and drug counselors are examined. Effective approaches and the examination of legal, ethical, and moral responsibilities and referral practices of the alcohol/drug counselor will also be presented. (2/14)

ADST-44  PHARMACOLOGY OF SUBSTANCE ABUSE
3 units: 3 hours lecture. Advisory: ENGL-85.
This course provides a basic understanding and working knowledge of the classifications of drugs based on their effects on behavior, emotions, perceptions, consciousness, the metabolism of drugs, and neurotransmitter theory. The political, social, and cultural issues will be briefly explored. (2/14)

ADST-45  LEADERSHIP AND COUNSELING IN ADDICTION GROUPS
This course is an introduction to the dynamics of group counseling with clients with substance use disorders. 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. (2/14)

ADST-46  CO-OCCLUDING DISORDERS
3 units: 3 hours lecture. Advisory ENGL-85.
This course focuses on assessing mental disorders associated with an addiction. Skills in recognizing co-occurring disorders, treatment planning, case management, appropriate scope of practice and utilization of community resources will be examined. (2/14)

ADST-47  FAMILY SYSTEMS AND PREVENTION EDUCATION
This course presents basic concepts that provide the foundation upon which homeostasis is maintained within the family. Emphasis will be placed upon the multi-generational transmission process, family dynamics, and codependency, while also addressing prevention efforts to minimize maladaptive family behaviors. (11/13)

ADST-49A-ZZ  SPECIAL TOPICS IN ADDICTION STUDIES
0.5 - 4 units: 0.5-4 hours lecture. Advisory: ENGL-85.
This course is designed to address special topics in addiction studies to meet the current needs of students. The course will allow pre-service and in-service personnel to maintain the most current education and training standards in the field. (05/09)
Administrative Office Management

ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY

DEGREES
A.A. - Administrative Medical Office Professional
A.A. - Administrative Office Professional

CERTIFICATES
Administrative Medical Office Professional
Administrative Office Professional

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Administrative Office Management program provides training in the office and technology skills required by administrative office professionals, such as: document preparation, storage and retrieval with an emphasis on electronic record keeping; integrated computer software applications; organization and scheduling; Internet/Intranet communications and research; customer service and public relations. Our program is versatile – train for the Degree, a Certificate or simply update/refresh skills that you may already have.

Career Opportunities
- Office Assistant
- Administrative Assistant
- Data Entry Specialist
- Customer Service Representative
- Receptionist
- Medical Assistant
- Front Desk Coordinator
- Public Relations Office Assistant
- Advertising Assistant
- Medical Transcriber

Highlights
Versatile program with online offerings
Most current computer applications and workplace/customer service skills

DEGREE (11/09)
A.A. - Administrative Medical Office Professional (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. The student will develop the necessary skills to perform medical office responsibilities in a professional environment

Core:

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Medical Office

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DEGREE (11/09)
A.A. - Administrative Office Professional (05008.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. The student will develop the necessary skills to perform administrative responsibilities in an office environment

Core:

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Administrative Office Professional

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CERTIFICATE  [11/09]
Administrative Medical Office Professional (05007.CT)

A Certificate of Achievement will be awarded upon the successful completion of the 22-unit core plus the program option listed below.

Program Student Learning Outcomes
A. The student will develop the necessary skills to perform medical office responsibilities in a professional environment.

Core: Units
AOM-50B  Keyboarding and Document Formatting ................. 3
AOM-51  Keyboarding/Word Processing ...................... 3
AOM-52A  Keyboarding Speed and Accuracy .................. 1
AOM-56  Office Procedures .................................. 3
AOM-60  Business English .................................. 3
BUS-43  Business Communication ............................. 3
CPSC-30  Computer Applications ............................... 3
MGMT-50  Management Series ................................ 3

Medical Office
ALLH-67  Medical Terminology .................................. 3
AOM-53  Advanced Computer Applications .................... 3
AOM-58  Web Site Development ................................ 1
AOM-59  Medical Coding & Billing .............................. 3

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CERTIFICATE  [11/09]
Administrative Office Professional (05008.CT)

A Certificate of Achievement will be awarded upon the successful completion of the 22-unit core plus the program option listed below.

Program Student Learning Outcomes
A. The student will develop the necessary skills to perform administrative responsibilities in an office environment.

Core: Units
AOM-50B  Keyboarding and Document Formatting ................. 3
AOM-51  Keyboarding/Word Processing ...................... 3
AOM-52A  Keyboarding Speed and Accuracy .................. 1
AOM-56  Office Procedures .................................. 3
AOM-60  Business English .................................. 3
BUS-43  Business Communication ............................. 3
CPSC-30  Computer Applications ............................... 3
MGMT-50  Management Series ................................ 3

Administrative Office Professional
AOM-53  Advanced Computer Applications .................... 3
AOM-58  Web Site Development ................................ 1

26

Recommended Sequence: A.A. - Administrative Medical Office Professional (05007.AA); A.A. - Administrative Office Professional (05008.AA)

Administrative Office Program
Fall 1
AOM-50B  Keyboarding and Document Formatting ................. 3
AOM-56  Office Procedures .................................. 3
AOM-60  Business English .................................. 3

Spring 1
AOM-51  Keyboarding/Word Processing ...................... 3
AOM-52A  Keyboarding Speed and Accuracy .................. 1
BUS-43  Business Communication ............................. 3
CPSC-30  Computer Applications ............................... 3
MGMT-50  Management Series ................................ 3

Fall 2
AOM-53  Advanced Computer Applications .................... 3
AOM-58  Web Site Development ................................ 1
MGMT-50  Management Series ................................ 3

Classes interchangeable between semesters
ADMINISTRATIVE OFFICE MANAGEMENT (AOM)

AOM-50A KEYBOARDING
1 unit: .5 hour lecture, 1.5 hours lab.
Advisories: READ-81, ENGL-84.
This course includes development of basic computerized keyboarding techniques by touch, and speed and accuracy. (11/06)

AOM-50B KEYBOARDING AND DOCUMENT FORMATTING
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84.
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. (11/06)

AOM-51 KEYBOARDING/WORD PROCESSING
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: AOM-50B (25 wpm, 95% accuracy). Advisories: READ-81, ENGL-84.
This course provides instruction and review of computerized keyboarding using word processing software; emphasis is placed on formatting memorandums, business letters, business forms, legal and medical documents, tables, and reports, as well as keyboarding with speed and accuracy. (2/11)

AOM-52A KEYBOARDING SPEED AND ACCURACY
1 unit: .5 hour lecture, 1.5 hours lab.
Advisories: Know the qwerty enhanced keyboard and be able to key at least 20 wpm with 85% accuracy; READ-81, ENGL-84.
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. (2/13)

AOM-53 ADVANCED COMPUTER APPLICATIONS
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: CPSC-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. (11/09)

AOM-56 OFFICE PROCEDURES
3 units: 3 hours lecture.
Advisories: READ-81, ENGL-84.
Students will learn the skills, strategies, and techniques needed to perform the common office procedures employed in any business. (11/08)

AOM-58 WEB SITE DEVELOPMENT
[CILC area B,F]
1 unit: 1 hour lecture.
Advisories: CPSC-30.
This is an introductory course in the planning, design and creation of a web site. (3/11)

AOM-59 MEDICAL CODING & BILLING
3 Units: 3 hours lecture.
Advisory: ALLH-67.
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, and a basic understanding of legal and regulatory considerations. (11/13)

AOM-60 BUSINESS ENGLISH
3 units: 3 hours lecture.
Agriculture
CAREER AND TECHNICAL EDUCATION

DEGREES
A.A. - General Agriculture
A.S. - General Agriculture: Advanced

CERTIFICATES
Agricultural Chemicals
General Agriculture

Gainful Employment Disclosure Metrics
Gainful Employment provides students with information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The General Agriculture major is tailor made for students wishing to explore this diverse industry with a multitude of classes offered. A broad general agricultural background provides students with entry level opportunities and skills along with the ability to transfer to a college or university and continue their studies in a wide variety of agricultural fields.

Career Opportunities
A major in General Agriculture opens many doors for students in this area such as Agricultural Education, Agricultural Banking and Finance, Self-Employment in Agriculture, Wholesale and Retail Sales, Equipment Service and Sales, Legislative/Administrative Services, Field Service Representative, and Pest Control Advisor.

DEGREE
A.A. - General Agriculture (01050.AA)

The Associate in Arts Degree is available upon satisfactory completion of the graduation requirements in addition to the General Agriculture Core and nine 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.

DEAN
JAMES ANDERSEN

COUNSELING
(209) 384-6314

PHONE
(209) 384-6250

AREA OFFICE
AG-OFFICE

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>AGBS-18</td>
<td>Agricultural Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>AGRI-10</td>
<td>Agriculture, Environment, and Society</td>
<td>3</td>
</tr>
<tr>
<td>ANSC-10</td>
<td>Elements of Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>LAND-11</td>
<td>Elements of Landscape Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>MECH-31</td>
<td>Equipment Safety</td>
<td>1</td>
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Plus nine units from three of the five following areas:

Agriculture Business

<table>
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<tr>
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<tbody>
<tr>
<td>AGBS-10</td>
<td>Introduction to Agriculture Business</td>
<td>3</td>
</tr>
<tr>
<td>AGBS-12</td>
<td>Agricultural Accounting</td>
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<td>AGBS-17</td>
<td>Agricultural Sales and Communication</td>
<td>3</td>
</tr>
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<td>AGBS-30</td>
<td>Agricultural Leadership</td>
<td>2</td>
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Animal Science

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<tr>
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<tr>
<td>ANSC-13</td>
<td>Animal Disease and Parasite Control</td>
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<td>Elements of Animal Nutrition</td>
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<td>Fitting, Showing, and Merchandising Livestock</td>
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Crop Science/Plant Science/Soil Science

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<td>Economic Entomology</td>
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<td>SOIL-11</td>
<td>Fertilizers and Soil Amendments</td>
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Landscape Horticulture

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<td>LAND-10A</td>
<td>Plant Identification and Usage: Fall</td>
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<td>LAND-12</td>
<td>Landscape Design</td>
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<td>Landscape Construction and Installation</td>
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<td>LAND-16</td>
<td>Plant Propagation</td>
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Mechanized Agriculture

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<td>MECH-06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding</td>
<td>3</td>
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<td>MECH-10</td>
<td>Agricultural and Industrial Technical Skills</td>
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<td>Compact Power Equipment</td>
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Suggested agriculture courses to meet General Education Breadth Requirements:

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<tbody>
<tr>
<td>AGBS-11*</td>
<td>(Area D) Agricultural Economics</td>
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<tr>
<td>PLSC-10*</td>
<td>(Area B) Elements of Plant Science</td>
<td>3</td>
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*Transfer students should consult with their counselor regarding General Education Breadth Requirements.
### 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.

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Plus 18 units from three of the five following areas:

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

**General Agriculture**  (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.

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**Plus 24 units from the following areas:**

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**Animal Science**

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**Landscape Horticulture**

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<tbody>
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**Mechanized Agriculture**

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<tr>
<th>Course</th>
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<tr>
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<td>MECH-15</td>
<td>3</td>
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<tr>
<td>MECH-35</td>
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**CERTIFICATE**

**Agricultural Chemicals**  (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.

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**AGRICULTURE (AGRI)**

**AGRI-10 AGRICULTURE, ENVIRONMENT, AND SOCIETY**

(CSU breadth area D)

3 units: 3 hours lecture.

**Advisories:** AGBS-18; ENGL-85; 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. (10/12)
Program Description

With a raw product value in excess of three billion dollars, agriculture is Merced County's number one industry and is the county's largest employer. Production agriculture employs a fifth of the county's residents. When you include food processing, agriculture employs about a third of the workforce. Dollar-wise, Merced is the fifth most important ag county in the state and the nation.

Agriculture is a vital component to our local, state and national economies and offers many exciting employment opportunities. The Agriculture Business program is designed to prepare students for immediate employment in Agribusiness and transfer to four-year colleges/universities to pursue advanced degrees in agriculture.

Career Opportunities

The USDA projects that nearly half of all career opportunities for college graduates in agriculture will be in Agriculture Business and Management with Sales and Service occupations as the primary source of jobs in Agribusiness. Priority occupations include Credit Analysts, Food Marketing Managers, Information Systems Managers, Financial Planners, Land Use Planners, Renewable Energy Economists, Retail Sales Managers, and Human Resource Specialists in Agribusiness. Management jobs will continue to shift from production and manufacturing to the services sector of the economy. A growing number of managerial jobs will be found in environmental compliance and restoration ecology.

Gainful Employment Disclosure Metrics

Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Gainful Employment Disclosure Information

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.

Core:

<table>
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<tr>
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<tr>
<td>ANSC-14</td>
<td>Elements of Animal Nutrition</td>
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<td>CROP-10</td>
<td>Elements of Cereal Grain Production</td>
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</tr>
<tr>
<td>CROP-12</td>
<td>Commercial Vegetable and Garden Production</td>
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</tr>
<tr>
<td>CROP-13</td>
<td>Forage Crops</td>
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</tr>
<tr>
<td>LAND-11</td>
<td>Elements of Landscape Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>LAND-16</td>
<td>Plant Propagation</td>
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<tr>
<td>PLSC-10</td>
<td>Elements of Plant Science</td>
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</tr>
<tr>
<td>SOIL-10</td>
<td>Soil Science</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Major Total: .......................................................... 25 units
Completion of MCCD-GE Breadth: ........................................ 23 units
Electives (as needed to reach 60 units): ........................... 12 units

TOTAL UNITS: .................................................................. 60 units
Suggested agriculture courses to meet General Education Breadth Requirement:
AGBS 11  Agricultural Economics ......................... 3
ANSC 10  Elements of Animal Science .................... 3
or
PLSC-10  Elements of Plant Science ....................... 3
and
SOIL-10  Soil Science ........................................ 3

Recommended Sequence: A.S. - Agriculture Business (01000.AS)

Fall 1
AGBS-10  Introduction to Agriculture Business ............ 3
AGBS-18  Agricultural Computer Applications .............. 3

Spring 1
AGBS-17  Agricultural Sales and Communication .......... 3
MECH-31  Equipment Safety .................................. 1

Fall 2
AGBS-11  Agricultural Economics ......................... 3
AGBS-13  Agricultural Marketing ........................... 3

Spring 2
AGBS-12  Agricultural Accounting .......................... 3

CERTIFICATE
Agriculture Business (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.

Core: 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

Plus 15 units from these electives: ......................... 15
AGBS-14  Farm Management (3)
AGBS-31A  Agricultural Ambassadors - Introduction (2)
AGBS-31B  Agricultural Ambassadors - Recruitment (2)
AGBS-31C  Agricultural Ambassadors - Public Relations (2)
AGRI-10  Agriculture, Environment, & Society (3)
ANSC-10  Elements of Animal Science (3)
ANSC-13  Animal Diseases and Parasite Control (3)
ANSC-14  Elements of Animal Nutrition (3)
CROP-10  Elements of Cereal Grain Production (3)

Recommended Sequence: Certificate Agriculture Business (01000.CT)

Fall 1
AGBS-10  Introduction to Agriculture Business ............ 3
AGBS-11  Agricultural Economics ........................... 3
AGBS-13  Agricultural Marketing ........................... 3
AGBS-18  Agricultural Computer Applications .............. 3
Electives ...................................................... 9

Spring 1
AGBS-12  Agricultural Accounting .......................... 3
AGBS-17  Agricultural Sales and Communication .......... 3
MECH-31  Equipment Safety .................................. 1
Electives ...................................................... 6

AGRICULTURE BUSINESS (AGBS)

AGBS-10  INTRODUCTION TO AGRICULTURE BUSINESS
3 units: 3 hours lecture.
Advisories: ENGL-85; MATH-80.
This course is a survey of the broad scope of agriculture business. It
serves as an 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 an agricultural enterprise are stressed as they
relate to the decision-making process. (11/13)

AGBS-11  AGRICULTURAL ECONOMICS
(CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
Advisories: ENGL-85; MATH-81.
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  
3 units: 3 hours lecture.  
Advisory: ENGL-85; MATH-80.  
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  
(C-ID AG - AB 108) [CILC areas A,B,C,D,E,F,G]  
3 units: 2 hours lecture, 3 hours lab.  
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-20 AGRICULTURAL LEADERSHIP  
2 units: 2 hours lecture.  
Advisories: READ-81, ENGL-84.  
This course presents leadership theory as well as self-management, communication and interpersonal skills necessary in developing managerial abilities and leadership qualities, while facilitating teamwork within the agricultural industry. Included are group dynamics and human interactions associated with private, governmental, and non-profit agricultural enterprises. Practical experience will be gained through participation in a number of parliamentary, facilitative, and administrative activities with varying degrees of diversity between semesters. (1/13)

AGBS-30A ELEMENTS OF AGRICULTURAL LEADERSHIP  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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  
2 units: 2 hours lecture.  
Advisory: ENGL-84; READ-81.  
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-70 A-Z SPECIAL TOPICS IN AGRICULTURE BUSINESS  
0.5 - 4 units: 0-4 hours lecture. 0-12 hours lab.  
Advisories: ENGL-85; MATH-81 or MATH-8.  
This course is the study of basic principles, processes, and theories of the special topic being presented during the semester. (12/06)
Web site
www.mccd.edu/alliedhealth/

Medical Terminology (ALLH-67) is a prerequisite to the Vocational Nursing, Diagnostic Radiologic Technology and Diagnostic Medical Sonography Program. This course is offered during the spring and fall semesters for 18 weeks and summer session for 6 weeks.

Reference the current Schedule of Classes for course offerings.

For full information and description of programs that require ALLH courses, see:

Nursing, Assistant

**ALLIED HEALTH (ALLH)**

**ALLH-60 NURSE ASSISTANT**
5.5 units: 3 hours lecture, 7.5 hours lab.
Limitation on enrollment: Orientation workshop; CPR card - Module A/C; negative TB screening test within past 6 months or negative chest x-ray within past year; DOJ fingerprint clearance; Penal Code Violations clearance. Advisories: READ-80, ENGL-84.
The course provides clinical instruction and practice of basic nursing skills required of nursing assistants employed in skilled nursing facilities and extended care facilities. The course emphasizes care of the older adult client, assistance with the activities of daily living, bathing, dressing, exercise movement, eating, eliminating safety measures, cardiopulmonary resuscitation and rehabilitation techniques. Meets California Department of Public Health requirements for eligibility to take the Nursing Assistant Certification examination. (10/06)

**ALLH-67 MEDICAL TERMINOLOGY**
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course is a study of general medical terminology — diagnostic, operative, and symptomatic terms related to body systems — with emphasis on proper spelling and pronunciation. (10/03)
AMERICAN SIGN LANGUAGE (ASLG)

ASLG-01 BEGINNING AMERICAN SIGN LANGUAGE
3 units: 3 hours lecture.
Prerequisite/Advisory: None.
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
3 units: 3 hours lecture.
Prerequisite: 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. (9/07)

ASLG-03 ADVANCED AMERICAN SIGN LANGUAGE
3 units: 3 hours lecture.
Prerequisite: ASLG-02.
This course provides advanced practice in understanding and signing American Sign Language and insights in 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 advanced conversational skills. (9/12)
Animal Science
CAREER AND TECHNICAL EDUCATION

DEGREES
A.S. - Animal Science

CERTIFICATE
Animal Science

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Animal Science curriculum at Merced College is designed to meet the need for trained personnel in a broad range of occupational opportunities involved with or related to the Animal Science field.

Career Opportunities
Upon completion of an Animal Science Certificate of Achievement, graduates will find many opportunities in the Beef Cattle, Dairy Cattle, Horses, Sheep, Swine, and Poultry industries, as well as many different areas in Agribusiness such as sales and marketing.

DEGREE (2/14)
A.S. - Animal Science (01100.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.

Core:

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<tr>
<td>AGBS-18</td>
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<tr>
<td>ANSC-10</td>
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<td>ANSC-17</td>
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<td>ANSC-18</td>
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<td>ANSC-19</td>
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<tr>
<td>DAIR-10</td>
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<td>Plus 8 units from the following electives:</td>
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<td>Including any courses above not used (3-8)</td>
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</tbody>
</table>

Total Units 30

* Course can be repeated.
CERTIFICATE (2/14)

Animal Science (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.

Core: 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 ...................................... 1

Three unit animal production course from the following list: ............ 3
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
Including any courses above, not already used. (3-12)
AGBS-12 Agricultural Accounting (3)
ANSC-30 Fitting, Showing, and Merchandising Livestock (1.5)
MECH-12 Agriculture Equipment - Fall (3)
WELD-06 Fundamentals of Oxy-Fuel Welding & Shielded Metal Arc Welding (3)

Total Units ............................................................. 36

Recommended Sequence: A.S. - Animal Science (01100.AS)

Fall 1
AGBS-18 Agricultural Computer Applications .................. 3
ANSC-10 Elements of Animal Science .............................. 3
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
ANSC-16 Horse Husbandry ................................... 3
ANSC-17 Beef Production .................................. 3
ANSC-18 Sheep and Meat Goat Science .................. 3
ANSC-19 Swine Production ................................ 3

Fall 2
ANSC-13 Animal Disease and Parasite Control ................. 3
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 2
ANSC-12 Livestock Breeding and Selection ...................... 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

Recommended Sequence: Certificate - Animal Science (01100.CT)

Fall 1
AGBS-12 Agricultural Accounting ................................. 3
AGBS-18 Agricultural Computer Applications .................. 3
ANSC-10 Elements of Animal Science .............................. 3
ANSC-13 Animal Disease and Parasite Control ................. 3
ANSC-30 Fitting, Showing, and Merchandising Livestock ........ 1.5
MECH-12 Agriculture Equipment - Fall (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 1
ANSC-12 Livestock Breeding and Selection ...................... 3
ANSC-14 Elements of Animal Nutrition ........................... 3
ANSC-30 Fitting, Showing, and Merchandising Livestock ........ 1.5
CROP-13 Forage Crops ........................................... 3
MECH-06 Fundamentals of Oxy-Fuel Welding & Shielded Metal Arc Welding (3)
MECH-31 Equipment Safety ...................................... 1
ANIMAL SCIENCE (ANSC)

ANSC-10 ELEMENTS OF ANIMAL SCIENCE
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
This course is a survey of the livestock industry, supply of animal products, and their uses in animal production. There is a special emphasis on the origin, characteristics, adaptation, and contributions of farm animals to the agriculture industry. The student will analyze the economic trends and career opportunities in animal agriculture. Field trips will be required. (12/06)

ANSC-12 LIVESTOCK BREEDING AND SELECTION
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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. (12/06)

ANSC-13 ANIMAL DISEASE AND PARASITE CONTROL
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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. (12/06)

ANSC-14 ELEMENTS OF ANIMAL NUTRITION
3 units: 2 hours lecture; 3 hours lab.  
Advisories: ENGL-85; MATH-80.  
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. (2/15)

ANSC-16 HORSE HUSBANDRY
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This is a course in intermediate western riding which will enable a person to give a creditable performance in a standard AHSA or AQHA horse show. (2/14)

ANSC-17 BEEF PRODUCTION
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This is a class in intermediate western riding which will enable a person to give a creditable performance in a standard AHSA or AQHA horse show. (2/14)

ANSC-18 SHEEP AND MEAT GOAT SCIENCE
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This course is a survey of the sheep and meat goat industry including management of commercial, purebred and small farm flocks; selecting, feeding, breeding and basic care of the herd animals plus the marketing and economics of lambs, wool, and kids. (2/14)

ANSC-19 SWINE PRODUCTION
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This is a study of the principles and practices of purebred and commercial pork production throughout California, the United States, and the world. Emphasis will be placed on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing, and record keeping to ensure scientifically-based management decisions and consumer product acceptance. (12/06)

ANSC-30 FITTING, SHOWING, AND MERCHANDISING LIVESTOCK
1.5 units: 1 hours lecture, 1.5 hours lab.  
Advisory: ENGL-85.  
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)
2 units: 1 hour lecture, 3 hours lab.  
Advisories: ENGL-85. (Note: Check with instructor for supplies needed.)
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)

ANSC-41 INTERMEDIATE HORSEMANSHIP (WESTERN)
2 units: 1 hour lecture, 3 hours lab.  
Prerequisite: ANSC-40. Advisories: ENGL-85. (Note: Check with instructor for supplies needed.)
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)

ANSC-49 ANIMAL SCIENCE: PROBLEMS
2 units: 6 hours lab.  
Advisory: ENGL-85.  
This course will involve supervised study and practices involving special problems in Animal Science. The areas covered in this course should be areas that are not covered in other Animal Science courses. Emphasis will be placed on the needs and interests of the students. (3/07)

ANSC-70AA-ZZ SPECIAL TOPICS IN ANIMAL SCIENCE
0.5 - 4 units: 0-4 hours lecture, 0-12 hours lab.  
Advisories: READ-81, ENGL-84.  
This course is the study of basic principles, processes, and theories of the special topic being presented during the semester. (1/07)

DAIRY HUSBANDRY (DAIR)

DAIR-10 ELEMENTS OF DAIRY
3 units: 2 hours lecture, 3 hours lab.  
Advisories: ENGL-85.  
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)
DEGREE
A.A.-T. - Anthropology

Program Description
The Anthropology curriculum is designed to meet the lower division requirements of most universities offering a major in Anthropology. Students that complete an AA-T in Anthropology from Merced College will be prepared for upper division course work in Anthropology at a California State University.

DEGREE (5/14)
A.A.-T. - Anthropology (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. 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).

<table>
<thead>
<tr>
<th>Core</th>
<th>Units</th>
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<tbody>
<tr>
<td>ANTH-01</td>
<td>Introduction to Biological Anthropology</td>
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<tr>
<td>ANTH-02</td>
<td>Socio-cultural Anthropology</td>
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<td>ARCH-01</td>
<td>Introduction to Archaeology</td>
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<td>ARCH-01L</td>
<td>Field Archaeology</td>
</tr>
<tr>
<td>List A: Select 3 units</td>
<td></td>
</tr>
<tr>
<td>GEOG-01</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>GEOG-02</td>
<td>World Geography</td>
</tr>
<tr>
<td>MATH-10 or PSYC-05</td>
<td>Elementary Statistics or Introduction to Statistics in Psychology</td>
</tr>
</tbody>
</table>

SOIL-10 Soil Science (3)
List B: 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: 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 Introduction to East Asian Civilization: China (3)
HIST-09B Introduction to East Asian Civilization: Japan (3)
HIST-22 History of Minorities - Black Emphasis (3)
HIST-23 The History of Hispanic-Americans in the Southwest US (3)
HUM-15 Comparative Cultures (3)
PHIL-15 Comparative Religions (3)
SOC-01 Introduction to Sociology (3)

Total Units toward the Major: 20-22
Total Units that may be double counted: 12-15
General Education (CSU-GE or IGETC) Units: 37-39
Elective (CSU Transferable) Units: 12-18
Total Degree Units: 60
ANTHROPOLOGY (ANTH)

ANTH-01 INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY
(CSU breadth area B2/B3) (IGETC area 5B/5C)
4 units: 3 hours lecture, 3 hours lab.
Advisory: ENGL-01A.
This survey of physical anthropology deals with the study of man's biological heritage and physical variability. The fossil evidence and theories of early man's development will be covered. Students will have the opportunity to study man's behavioral adaptability through contact with authentic stone tools made by our prehistoric ancestors. Human genetics, racial variation, primatology, paleoanthropology, forensic anthropology, and current bioethical issues will also be discussed. The philosophy of science and the scientific method serve as the foundation of this course. The laboratory portion of the course will include exercises in human variation, genetics, skeletal analysis, and primate behavior. (5/13)

ANTH-02 SOCIOCULTURAL ANTHROPOLOGY
(C-ID ANTH 120) (CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Advisories: ENGL-85.
This course is an introduction to the study of human culture and the concepts, theories, and methods used in the comparative study of socio-cultural 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
(CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Advisories: ENGL-85.
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)

ARCHAEOLOGY (ARCH)

ARCH-01 INTRODUCTION TO ARCHAEOLOGY
(CSU breadth area B1) (IGETC area 5A)
3 units: 3 hours lecture.
Advisories: ENGL-01A.
This class examines the historical, theoretical and methodological development of Archaeology and the role that scientific inquiry plays in understanding the past. Research design, survey and excavation methodology, stratigraphic analysis, dating techniques, lithic source assessment as well as artifact analysis and interpretation will be addressed. Cultural resource management and archaeological ethics will be discussed. Artifacts from around the world are used in class to illustrate archaeological concepts. (11/14)

ARCH-01L FIELD ARCHAEOLOGY
1 unit: 3 hours lab.
Advisories: ENGL-85.
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
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

Program Description
The study of art will enrich the student’s experience of the world and encourage the student to draw upon creative resources. An education in art can lead to professional or vocational careers, as well as enhance abilities in other fields. The Art Department offers a foundation in theoretical and practical skills, and the opportunity to work in a wide variety of specific art media.

The Art Program provides lower division undergraduate transfer classes, professional preparation, personal development, general interest, and general education, as well as an Associate in Arts degree.

Career Opportunities
Some careers may require more than two years of college study.
- Advertising
- Animator
- Arts Administrator
- Art Critic I Writer
- Art Gallery/ Museum - Staff, Manager, Director, Curator
- Art Historian
- Art Instructor
- Art Therapist
- Cartoonist
- Ceramist / Potter
- Film and Story Board Illustrator
- Graphic Designer
- Illustrator
- Painter
- Printmaker
- Photographer
- Sculptor
- Designer
- Digital Media Artist
- Color Consultant
- Fashion Design
- Floral Design
- Furniture Design
- Interior Design
- Jewelry Design
- Landscape Design
- Product Design
- Sign Painter
- Set and Lighting Design - for TV, Film or Web
- Stage Design
- Television
- Textile Design
- Typographer
- Web Design

DEGREE
A.A. - Art
A.A.-T - Studio Arts

A.A.-T. - Studio Arts (10550.AAT)
The Associate in Arts in Studio Arts for Transfer 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 for 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).
**Required Core:***

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-02</td>
<td>Art History: Renaissance through 20th Century</td>
<td>3</td>
</tr>
<tr>
<td>ART-12A</td>
<td>Sculpture: 3-D Foundations</td>
<td></td>
</tr>
<tr>
<td>ART-15</td>
<td>Design: 2-D Foundations</td>
<td>3</td>
</tr>
<tr>
<td>ART-24A</td>
<td>Drawing I</td>
<td></td>
</tr>
</tbody>
</table>

List A: Select a minimum of 3 units.

- ART-01  Art History: Ancient Through Gothic (3)
- ART-06  Art of the 20th Century (3)

List B: Select a minimum of 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-23A  Introduction to Painting (3)
- ART-24B  Intermediate Drawing (3)
- or
- ART-26A  Introduction to Figure Drawing (3)

- ART-29A  Introduction to Watercolor Painting (3)
- ARTD-40A  Introduction to Digital Art (3)
- ARTD-41A  Introduction to Graphic Design (3)
- PHOT-10A  Introduction to Photography (3)

**Total Units toward the Major:** 24

**Total Units that may be double counted:** -3-6

**General Education (CSU-GE or IGETC) Units:** 37-39

**Elective (CSU Transferable) Units:** 2-5

**Total Degree Units:** 60

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**DEGREE (5/14)**

A.A. - Art \{10110.AA\}

For an Associate in Arts Degree in Art, students must meet the graduation requirements and complete the following courses.

**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 their area of emphasis: painting, print making, sculpture, ceramics, photography, etc.

C. Identify, distinguish and assess individual styles as applied to various media.

D. Build upon their appreciation and understanding of the various multicultural and philosophical patterns of traditional and contemporary art throughout history.

**Core:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-12A</td>
<td>Sculpture: 3-D Foundations</td>
<td>3</td>
</tr>
<tr>
<td>ART-15</td>
<td>Design: 2-D Foundations</td>
<td>3</td>
</tr>
<tr>
<td>ART-23A</td>
<td>Introduction to Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART-24A</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART-26A</td>
<td>Introduction to Figure Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus 6 units from the following Art History courses:

- ART-01  Art History: Ancient Through Gothic (3)
- ART-02  Art History: Renaissance Through 20th Century (3)
- ART-06  Art of the 20th Century (3)

Plus 9 units from the following courses:

- ART-01  Art History: Ancient Through Gothic (3)
- ART-02  Art History: Renaissance Through 20th Century (3)
- ART-06  Art of the 20th Century (3)
- 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  Watercolor Painting II (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)
- PHOT-10A  Basic Photography (3)
- PHOT-11A  Introduction to the Digital Camera (3)

**Total Units** 30
### ART (ART)

**ART-01 ART HISTORY: ANTIQUE THROUGH GOTHIC**  
(CSU breadth area C1) (IGETC area 3A)  
3 units: 3 hours lecture.  
Prerequisite: ENGL-85. Advisory: 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**  
(CSU breadth area C1) (IGETC area 3A)  
3 units: 3 hours lecture.  
Prerequisite: ENGL-85. Advisory: ENGL-01A.  
This course is a survey that examines the historical context 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 ART OF THE 20TH CENTURY**  
(CSU breadth area C1)  
3 units: 3 hours lecture.  
Prerequisite: ENGL-85. Advisory: ENGL-01A.  
This course is a survey of the prominent artists and art movements from Impressionism through Post-Modernism 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 visual arts. (4/10)

**ART-12A SCULPTURE: 3-D FOUNDATIONS**  
(C-ID ARTS 101)  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This course is an intro 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**  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: 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**  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-01A.  
This is a foundation course for the study of the Visual Arts. Lectures and studio projects explore and analyze concepts and theories related to the elements and principles of design, including: line, shape, iconography, value, color, texture, space, time, and motion, compositional substructures, unity, variety, balance, emphasis, rhythm, scale and proportion. 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. (11/12)

**ART-17A INTRODUCTION TO CERAMICS**  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
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**  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: ART-17A. Advisory: ENGL-85.  
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**  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ART-24A; ENGL-85.  
This course is an introduction to the basic materials, equipment and fundamental printmaking processes including relief (lino-cut 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**  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: ART-20A. Advisory: ENGL-85.  
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**  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This course is an introduction to painting materials, concepts, and processes of construction problems. Students pursue projects of individual interest. (2/14)

**ART elective**  
3 units: 3 hours lecture.  
(Choice of ART-01, 02, 06)
ART-23B  INTERMEDIATE PAINTING
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: ART-23A. Advisory: ENGL-85.
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
3 units: 2 hours lecture, 3 hours lab.
Prerequisite/Advisory: None.
This course is an introduction to the principles, theories, and techniques of drawing and composition. Students will explore foundation-level concepts while surveying materials used in drawing as an art form, as well as the history of their development. (1/05)

ART-24B  INTERMEDIATE DRAWING
(C-ID ARTS 205)
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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
(C-ID ARTS 200)
3 units: 2 hours lecture, 3 hours lab.
Advisory: ENGL-85.
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
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: ART-26A. Advisory: ENGL-85.
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
3 units: 2 hours lecture, 3 hours lab.
This course is an introduction to the principles, elements, and practices of painting in the watercolor 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-29B  INTERMEDIATE WATERCOLOR PAINTING
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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)

ARTD-45A  MULTIMEDIA I: INTRODUCTION TO WEB DESIGN AND ANIMATION
3 units: 2 hours lecture, 3 hours lab.
Limitation on enrollment: Limited to the number of licenses available.
Advisories: AOM-50A; ART-24A; ENGL-01A.
This studio course imparts a thorough foundation in creative Adobe Flash digital media production for the web. Indispensable basic typographic, color, illustration, animation, inter-activity, layout, and sound design concepts feature strongly in the class. The course's basic flash and new HTML 5 web technology techniques prepare students for producing imaginative web sites and multimedia projects. (10/14)

ART-48  A-ZZ  ADVANCED SPECIAL PROBLEMS IN ART
3 units: 2 hours lecture, 3 hours lab.
Limitation 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)
ASTRONOMY (ASTR)

ASTR-01  PRINCIPLES OF ASTRONOMY
(CSU breadth area B1) (IGETC area 5A)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
(CSU breadth area B1/B3) (IGETC area 5C)
1 unit: 3 hours lab.
One-way corequisite: ASTR-01. Advisories: ENGL-85; 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)

ATHL-01A INTERCOLLEGIATE BASEBALL
3 units: 10 hours lab.
Limitation 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 competitive baseball. This course may be repeated three times. (2/11)

ATHL-01B INTERCOLLEGIATE BASKETBALL
1.5-3 units: 5-10 hours lab.
Limitation on enrollment: This is a varsity team sport requiring coach’s or academic athletic advisor’s approval. Advisory: KINE-13.
This course teaches theory, practice and game performance of competitive basketball. This course may be repeated three times. (5/10)

ATHL-01D INTERCOLLEGIATE FOOTBALL
3 units: 10 hours lab.
Limitation 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
3 units: 10 hours lab.
Limitation 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. (5/10)

ATHL-01I INTERCOLLEGIATE TRACK AND FIELD
3 units: 10 hours lab.
Limitation 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
3 units: 10 hours lab.
Limitation 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
3 units: 180 hours lab TBA.
Limitation on enrollment: This is a varsity team sport requiring coach’s or academic athletic advisor’s approval. Advisory: 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
3 units: 10 hours lab.
Limitation 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. (5/10)

ATHL-02A OFF-SEASON CONDITIONING FOR BASEBALL
(CSU breadth area E)
1-3 units: 3-9 hours lab.
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of baseball. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate baseball competition and may be repeated to meet requirements for CCCAA eligibility. (11/13)

ATHL-02B OFF-SEASON CONDITIONING FOR BASKETBALL
(CSU breadth area E)
1-3 units: 3-9 hours lab.
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of basketball. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate basketball competition and may be repeated to meet requirements for CCCAA eligibility. (2/14)

ATHL-02D OFF-SEASON CONDITIONING FOR FOOTBALL
(CSU breadth area E)
1-3 units: 3-9 hours lab.
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of football. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate football competition and may be repeated to meet requirements for CCCAA eligibility. (2/14)

ATHL-02G OFF-SEASON CONDITIONING FOR WATER POLO
(CSU breadth area E)
1-3 units: 3-9 hours lab.
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of water polo. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate water polo competition and may be repeated to meet requirements for CCCAA eligibility. (2/14)
ATHL-02I  OFF-SEASON CONDITIONING FOR TRACK AND FIELD  
(CSU breadth area E)  
1-3 units: 3-9 hours lab.  
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of track and field. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate track and field competition and may be repeated to meet requirements for CCCAA eligibility. (2/14) 

ATHL-02K  OFF-SEASON CONDITIONING FOR SOFTBALL  
(CSU breadth area E)  
1-3 units: 3-9 hours lab.  
Limitation 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 sports performance and reduce risk of injury for the off-season intercollegiate athlete in the sport of softball. Course content will include: sport specific skill development, sport specific strength training, cardiovascular conditioning, agility work, plyometrics, speed training, and flexibility exercises. This course is designed to prepare students for intercollegiate softball competition and may be repeated to meet requirements for CCCAA eligibility. (2/14) 

ATHL-03  ATHLETIC CONDITIONING  
.5-2 units: 1.5-6 hours lab.  
Limitation on enrollment: This is varsity athletic team conditioning course that requires coach’s or academic athletic adviser’s signature. 
Advisory: 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  
.5-1 units: 1.5-3 hours lab.  
Limitation 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. (2/14) 

ATHL-36A  THEORY AND ANALYSIS OF FOOTBALL  
1 unit: 1 hour lecture.  
Advisory: ENGL-85. 
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  
1 unit: 1 hour lecture.  
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)
Automotive Technology
CAREER AND TECHNICAL EDUCATION

DEGREES
A.A. - Master Auto Technology
A.A. - Automotive Technology

CERTIFICATES
Body and Fender
Engine Performance
Master Auto Technology
Suspension and Brakes
Transmissions

Gainful Employment Disclosure Metrics
Gainful Employment provides students with information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Merced College Automotive Technology program provides students with skills required for efficient diagnosis, maintenance and repair of current automobiles and automobile systems. The program is recognized and certified by the National Automotive Technicians Education Foundation (NATEF) as an Automotive Service Excellence (ASE) program. The automotive program instructors are ASE certified. The Merced College Automotive program is also certified by the California Bureau of Automotive Repair (BAR) to teach the Basic and Enhanced Clean Air Car Courses.

Merced College Automotive Technology offers students training in theory and practice in all automotive systems. Upon successful completion of the program, students are qualified for placement as technicians in the automotive repair industry. Students may apply units earned by successful completion of Automotive Technology courses to one or more specific certificates and/or an Associate of Arts Degree in Automotive Technology.

Career Opportunities
- Automotive Service Technicians
- Automotive Line Technicians (mid-level)
- Automotive Master Technicians
- Assistant Service Managers
- Service Managers
- Parts Specialist
- Field Technical Specialists
- Director of Fixed Operations
- General Managers

Automotive Service Excellence
Merced College is ASE certified in the following automotive areas:
- Engine Repair
- Transmissions and Transaxles
- Drivetrains and Axles
- Suspension and Steering
- Brake Systems
- Electrical/Electronic Systems
- Heating and Air Conditioning
- Engine Performance

Highlights
Merced College also offers weekend smog update classes certified by the Bureau of Automotive Repair for smog technicians. Contact the Career Technical Education secretary or automotive instructors for more information and dates of update classes.

Aaron Gregory
(209) 386-6677
B.A.R. Certified Instructor
T-10 Coordinator

NATEF
National Automotive Technicians Education Foundation
DEGREE (12/11)
A.A. - Automotive Technology (09000.AA)

For an Associate in Arts Degree in Automotive Technology, students must meet the graduate requirements and complete one of the following options.

Program Student Learning Outcomes
A. Inspect, diagnose, disassemble, repair, replace and service components/systems in student’s area of specialization.
B. Work safely and responsibly within all shop safety and environmental guidelines and standards.
C. Demonstrate competency in accessing and applying technical service information.

<table>
<thead>
<tr>
<th>Body and Fender Option</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>AUTO-04 Automotive Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>AUTO-32 Wheel Alignment and Suspension</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-50 Auto Body Repair and Painting</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-51 Advanced Auto Body Repair and Refinishing</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-63 Basic Automotive Electronics for Technicians</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-66 Automotive Parts and Service Advising</td>
<td>3</td>
</tr>
<tr>
<td>WELD-06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding</td>
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<tr>
<td>AUTO-42 Automotive Electrical Systems</td>
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<tr>
<td>AUTO-43 Automotive Fuel Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-47 Engine Performance</td>
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<tr>
<td>AUTO-48B Special Problems in Engine Performance</td>
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<tr>
<td>AUTO-63 Basic Automotive Electronics for Technicians</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-66 Automotive Parts and Service Advising</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suspension and Brakes Option</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO-04 Automotive Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>AUTO-32 Wheel Alignment and Suspension</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-33 Automotive Brake Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-63 Basic Automotive Electronics for Technicians</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-66 Automotive Parts and Service Advising</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<table>
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<th>Transmissions Option</th>
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</thead>
<tbody>
<tr>
<td>AUTO-04 Automotive Mechanics</td>
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</tr>
<tr>
<td>AUTO-36 Automotive Manual Transmissions and Drive Trains</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-46 Automatic Transmissions</td>
<td>4</td>
</tr>
<tr>
<td>AUTO-63 Basic Automotive Electronics for Technicians</td>
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<tr>
<td>AUTO-66 Automotive Parts and Service Advising</td>
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<tr>
<td><strong>Total</strong></td>
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</table>

Students must also complete the following requirements:
1. Pass two ASE certifications tests from Area A-1 to A-8
2. Pass a Refrigerant Recovery and Recycling Certification test offered by one of the following: ASE, Mobile Air Conditioning Society, or International Mobile Air Conditioning Association.

CERTIFICATE (12/09)

Body and Fender (09001.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. Inspect, diagnose, disassemble, repair, replace and service components/systems in student’s area of specialization.
B. Work safely and responsibly within all shop safety and environmental guidelines and standards.
C. Demonstrate competency in accessing and applying technical service information.

<table>
<thead>
<tr>
<th>Core:</th>
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<tbody>
<tr>
<td>AUTO-04 Automotive Mechanics</td>
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<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>
CERTIFICATE (12/11)
Engine Performance (09002.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. Inspect, diagnose, disassemble, repair, replace and service components/systems in student’s area of specialization.
B. Work safely and responsibly within all shop safety and environmental guidelines and standards.
C. Demonstrate competency in accessing and applying technical service information.

Core:   Units
AUTO-04 Automotive Mechanics                      3
AUTO-42 Automotive Electrical Systems                4
AUTO-43 Automotive Fuel Systems                      4
AUTO-47 Engine Performance                           2
AUTO-48B Special Problems in Engine Performance      2
AUTO-55 Automotive Emissions Level 1 and 2 Training  5
AUTO-63 Basic Automotive Electronics for Technicians 4
AUTO-66 Automotive Parts and Service Advising        3

TOTAL: 27

CERTIFICATE (2/13)
Master Auto Technology (09003.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. Demonstrate the ability to repair and service automotive systems in the student’s area of specialization.
B. Work safely and responsibly within all shop safety and environmental guidelines and standards.
C. Demonstrate competency in accessing and applying technical service information.

Core:   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 systems                          4
AUTO-46 Automatic Transmissions                    4
AUTO-47 Engine Performance                          2
AUTO-55 Automotive Emissions Level 1 and 2 Training 5
AUTO-63 Basic Automotive Electronics for Technicians 4
AUTO-66 Automotive Parts and Service Advising       3

TOTAL: 18

CERTIFICATE (12/09)
Suspension and Brakes (09004.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. Inspect, diagnose, disassemble, repair, replace and service components/systems in student’s area of specialization
B. Work safely and responsibly within all shop safety and environmental guidelines and standards.
C. Demonstrate competency in accessing and applying technical service information.

Core:   Units
AUTO-04 Automotive Mechanics                      3
AUTO-32 Automotive Brake Systems                   4
AUTO-46 Automatic Transmissions                    4
AUTO-63 Basic Automotive Electronics for Technicians 4
AUTO-66 Automotive Parts and Service Advising       3

TOTAL: 18

Recommended Sequence:
A.A. - Automotive Technology (09000.AA)
Body and Fender (09001.CL)
Engine Performance (09002.CL)
Suspension and Brakes (09004.CL)
Transmissions (09006.CL)

Automotive Program Sequence of Courses can be found at the web address below:
http://www.mccd.edu/academics/divisions/it/auto/index.html

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### AUTOMOTIVE TECHNOLOGY (AUTO)

#### AUTO-04 AUTOMOTIVE MECHANICS
- **3 units:** 3 hours lecture.
- **Advisories:** ENGL-85; 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-32 WHEEL ALIGNMENT AND SUSPENSION
- **4 units:** 3 hours lecture, 3 hours lab.
- **Advisories:** AUTO-04, AUTO-63; ENGL-85; 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
- **4 units:** 3 hours lecture, 3 hours lab.
- **Advisories:** AUTO-04, AUTO-63; ENGL-85; 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
- **4 units:** 3 hours lecture, 3 hours lab.
- **Advisories:** AUTO-04; ENGL-85; 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
- **4 units:** 2 hours lecture, 6 hours lab.
- **One-way corequisite:** AUTO-04. **Advisories:** ENGL-85; 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
- **4 units:** 3 hours lecture, 3 hours lab.
- **Prerequisite:** AUTO-63. **Advisories:** AUTO-04; ENGL-85; 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
- **4 units:** 3 hours lecture, 3 hours lab.
- **One-way corequisite:** AUTO-04, AUTO-63. **Advisories:** AUTO-42; ENGL-85; MATH-80 or MATH-85.
- This course covers the testing and service of automotive fuel systems, including fuel injection systems, electronic engine controls, and emission controls. (2/13)

#### AUTO-44 AUTOMOTIVE AIR CONDITIONING, HEATING SYSTEM, COOLING SYSTEM
- **4 units:** 3 hours lecture, 3 hours lab.
- **Advisories:** AUTO-04; ENGL-85; 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
- **4 units:** 2 hours lecture, 6 hours lab.
- **Advisories:** AUTO-04, AUTO-63; ENGL-85; 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
- **2 units:** 1 hours lecture, 3 hours lab.
- **Prerequisites:** AUTO-42, AUTO-43. **Advisories:** ENGL-85; 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-48A SPECIAL PROBLEMS IN AUTOMOTIVE TRANSMISSIONS AND DRIVE TRAINS
- **2 units:** 6 hours lab.
- **Prerequisites:** AUTO-36, or AUTO-46 and AUTO-63. **Advisories:** ENGL-85; MATH-80 or MATH-85.
- This course is designed to permit the student to gain additional hands on experience in areas covered in the objectives of AUTO-36 or AUTO-46. This course will help prepare the student for employment in the automotive repair industry with entry-level skills. AUTO-36 is the prerequisite if the student’s emphasis will be on manual transmissions and AUTO-46 and AUTO-62 will be the prerequisites if the student’s emphasis will be on automatic transmissions. (1/13)

#### AUTO-48B SPECIAL PROBLEMS IN ENGINE PERFORMANCE
- **2 units:** 6 hours lab.
- **Prerequisite:** AUTO-47. **Advisories:** ENGL-85.
- This course is designed to permit the student to gain additional hands on experience in areas covered in the objectives of AUTO-47. This course will help prepare the student for employment in the automotive repair industry with entry level skills. (2/13)

#### AUTO-48C SPECIAL PROBLEMS IN AUTOMOTIVE ENGINES
- **2 units:** 6 hours lab.
- **Prerequisite:** AUTO-41. **Advisories:** ENGL-85.
- This course is designed to permit the student to gain additional hands on experience in areas covered in the objectives of AUTO-41. This course will help prepare the student for employment in the automotive repair industry with entry level skills. (2/13)
AUTO-48D SPECIAL PROBLEMS IN AUTOMOTIVE SUSPENSIONS
2 units: 6 hours lab.
Prerequisite: AUTO-32, AUTO-63. Advisories: ENGL-85; MATH-80 or MATH-85.
This course is designed to permit the student to gain additional hands on experience in areas covered in the objectives of AUTO-32. The course will help prepare the students for employment in the trade with entry-level skills. (11/13)

AUTO-48E SPECIAL PROBLEMS IN AUTOMOTIVE BRAKES
2 units: 6 hours lab.
Prerequisites: AUTO-33, AUTO-63. Advisories: ENGL-85; MATH-80 or MATH-85.
This course is designed to permit the student to gain additional hands on experience in areas covered in the objectives of AUTO-33. This course will help prepare the student for employment in the automotive repair industry with entry level skills. (11/13)

AUTO-48F SPECIAL PROBLEMS IN AUTO BODY REPAIR AND PAINTING
1.5-2.0 units: 4.5-6 hours lab.
Prerequisite: AUTO-50. Advisories: WELD/MECH-06, ENGL-85; 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
4 units: 2 hours lecture, 6 hours lab.
Advisories: ENGL-85; 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
4 units: 2 hours lecture, 6 hours lab.
Prerequisite: AUTO-50. Advisories: ENGL-85; 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
5 units: 4.5 hours lecture, 1.5 hours lab.
Prerequisite: AUTO-47. Advisories: ENGL-85; 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-63 BASIC AUTOMOTIVE ELECTRONICS FOR TECHNICIANS
4 units: 3 hours lecture, 3 hours lab.
Advisories: MATH-80 or MATH-85; ENGL-85.
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)
Program Description
The student majoring in biological science is generally preparing for transfer
to a four-year institution and a career in research, teaching, lab technology,
one of the health care professions, or related fields. Math requirements
for biology majors vary widely. Investigate the math requirements of the
four-year schools to which the student intends to apply and design an
educational plan accordingly.

Program Student Learning Outcomes
A. Organize, analyze and interpret observations and predictions about
   the natural world using the scientific method.
B. Identify and describe cellular and multicellular processes and
   structures and relate them to their functions.
C. Analyze patterns and mechanisms of genetics from the molecular to
   the population level.
D. Recognize the ecological relationships between organisms and their
   environment and the environmental impact of population growth.
E. Explain principles and mechanisms of evolution and recognize the
   resulting major groups of organisms as they are arranged in currently
   recognized taxa.
F. Develop an awareness of the careers and professions available in
   the biological sciences and are prepared to transfer to appropriate
   schools.

Core:

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<tr>
<th>Course</th>
<th>Title</th>
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<td>Diversity of Life: Morphology and Physiology</td>
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<td>CHEM-04B</td>
<td>General Chemistry II</td>
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<tr>
<td>CHEM-12A</td>
<td>Organic Chemistry I</td>
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<tr>
<td>BIOL-04A</td>
<td>Fundamentals of Biology: The Cell and Evolution</td>
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<tr>
<td>BIOL-06</td>
<td>Environmental Science</td>
<td>3</td>
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<tr>
<td>BIOL-09</td>
<td>Introduction to Genetics</td>
<td>3</td>
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<tr>
<td>BIOL-20</td>
<td>Microbiology</td>
<td>4</td>
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<tr>
<td>BIOL-32</td>
<td>Introduction to Biotechnology</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>CHEM-12B</td>
<td>Organic Chemistry II</td>
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<td>MATH-04A</td>
<td>Calculus I</td>
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<td>CPSC-14</td>
<td>C++ Programming</td>
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<td>PHYS-02A</td>
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<td>PHYS-02B</td>
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Relevant to the question:

**BIOLOGY (BIOL)**

**BIOI-01 GENERAL BIOLOGY FOR NON-MAJORS**
(CSU breadth area B2/B3) (IGETC area 5B/5C)
4 units: 3 hours lecture, 3 hours lab.
Limitation on enrollment: This course is not open to students having a C or better in BIOI-04A. Prerequisite: ENGL-85.
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**
(CSU breadth area B2/B3) (IGETC area 5B/5C)
4 units: 3 hours lecture, 3 hours lab.
Limitation on enrollment: This course is not open to students having a C or better in BIOI-04A. Prerequisite: ENGL-85.
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**
(CSU breadth area B2/B3) (IGETC area 5B/5C)
5 units: 3 hours lecture, 6 hours lab.
Prerequisites: CHEM-04A; MATH-C. Advisories: BIOL-01 or BIOL-02; ENGL-85.
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. (2/14)

**BIOI-04B DIVERSITY OF LIFE: MORPHOLOGY AND PHYSIOLOGY**
(CSU breadth area B2/B3) (IGETC area 5B/5C)
5 units: 3 hours lecture, 6 hours lab.
Prerequisite: BIOI-04A. Advisories: BIOI-01 or BIOI-02; ENGL-85.
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. (5/09)

**BIOI-06 ENVIRONMENTAL SCIENCE**
(CSU breadth area B2) (IGETC area 5B)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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**
(CSU breadth area B2)
3 units: 3 hours lecture.
Prerequisite: BIOI-01 or BIOI-02 or BIOI-04A. Advisory: ENGL-85.
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 explored include genetic engineering. (2/09)
BIOL-16  GENERAL HUMAN ANATOMY  
(C-ID BIOL 110B) (CSU breadth area B2/B3) (IGETC area 5B/5C)  
4 units: 2 hours lecture, 6 hours lab.  
Prerequisite: BIOL-01 or BIOL-02 or BIOL-04A; ENGL-85.  
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  
(CSU breadth area B2/B3) (IGETC area 5B/5C)  
4 units: 3 hours lecture, 3 hours lab.  
Prerequisites: BIOL-01 or BIOL-02 or BIOL-04A or BIOL-16; CHEM-02A; ENGL-85; MATH-C.  
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. (2/14)

BIOL-20  MICROBIOLOGY  
(CSU breadth area B2/B3) (IGETC area 5B/5C)  
4 units: 2 hours lecture, 6 hours lab.  
Prerequisite: BIOL-01 or BIOL-02 or BIOL-04A; ENGL-85. Advisories: CHEM-02A.  
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. (1/15)

BIOL-32  INTRODUCTION TO BIOTECHNOLOGY  
(CSU breadth area B2/B3) [CILC areas C,F]  
4 units: 4 hours lecture.  
Advisories: ENGL-01A; MATH-81.  
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. (2/13)

BIOL-32L  INTRODUCTION TO BIOTECHNOLOGY LAB  
2 units: 6 hours lab.  
This lab is the required partner to BIOL-32 for students pursuing the Biotechnology A.S. or certificate degrees. (2/13)

BIOL-33  BIOTECHNOLOGY II: ADVANCED LABORATORY TECHNIQUES AND THEORY  
4 units: 2 hours lecture, 6 hours lab.  
Prerequisite: BIOL-09, BIOL-32. Advisories: BIOL-20; ENGL-85; MATH-81.  
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 (4/12)

BIOL-50  SURVEY OF ANATOMY AND PHYSIOLOGY  
3 units: 3 hours lecture.  
Prerequisite: ENGL-85.  
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)
Biotechnology
MATH, SCIENCE AND ENGINEERING

DEGREE
A.S. - Biotechnology-Industry

CERTIFICATE
Biotechnology

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Biotechnology A.S. Industry degree is intended to prepare students for employment in the field of biotechnology. This would include but may not be limited to working as a lab technician, in research or agricultural biotechnology.

Career Opportunities
Biology/Biotechnology lab technician, research lab technician, biomanufacturing technician.

<table>
<thead>
<tr>
<th>Core Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL-09 Introduction to Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL-32 Introduction to Biotechnology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL-32L Introduction to Biotechnology Lab</td>
<td>2</td>
</tr>
<tr>
<td>BIOL-33 Biotechnology II: Advanced Laboratory Techniques</td>
<td>4</td>
</tr>
<tr>
<td>CHEM-02B Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>BIOL-04B Diversity of Life: Morphology and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>BIOL-06 Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>BIOL-16 General Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BIOL-18 Principles of Physiology</td>
<td>4</td>
</tr>
<tr>
<td>CPSC-01 Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>or CPSC-30 Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>PLSC-10 Elements of Plant Science</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Major Total: 27 units
Completion of MCCD-GE Breadth pattern: 23 units
Double Counting: -3 units
Electives: 13 units
TOTAL UNITS: 60 units
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.

Core: Units
BIOL-09 Introduction to Genetics 3
BIOL-32 Introduction to Biotechnology 4
BIOL-32L Introduction to Biotechnology Lab 2
BIOL-33 Biotechnology II: Advanced Laboratory Techniques 4
CHEM-02B Introductory Chemistry 4

Total Units 17

Suggested Sequence: A.S. - Biotechnology-Industry (CTE) (04135.AS) and Certificate Biotechnology (04130.CB)

Additional units can be taken as breadth or elective courses.

Fall 1
BIOL-01
or BIOL-04A
CHEM-02A
or CHEM-04A
BIOL-09

Spring 2
BIOL-04B
CHEM-02B
or CHEM-04B

Fall 2
BIOL-20
BIOL-32

Spring 2
BIOL-33

General Biology for Non-Majors 4
Fundamentals Of Biology: The Cell And Evolution 4
Introductory Chemistry 4
General Chemistry I 5
Introduction to Genetics 3
Diversity of Life: Morphology and Physiology 5
Introductory Chemistry: Introduction to Organic & Biochemistry 4
General Chemistry II 5
Microbiology 4
Introductory to Biotechnology 4
Biotechnology II: Advanced Laboratory Techniques 4
The American economy offers ever-increasing opportunities in business careers and Merced College provides training in a variety of business fields. The suggested courses of study prepare the student for immediate employment in business.

The Business Administration program is designed to prepare students who plan to transfer to a four-year college or university to earn a Bachelor in Arts or Science Degree. Students take classes to complete general education requirements and combine business classes in accounting, computer science, and business law to complete the General Business program. Upon transferring to a four-year college or university, students may choose a concentration in areas such as accounting, business, education, executive secretarial administration, finance, management information, marketing, and real estate.

Highlights:
Career training and retraining. Lower division courses for students planning to transfer to four-year colleges and universities. Short, intensive programs for those who wish to specialize in one area with immediate employment in mind.

Program Description
Gainful Employment Disclosure Information
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

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.

Core:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTG-04A</td>
<td>Fundamentals of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>ACTG-04B</td>
<td>Fundamentals of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS-18A</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td>ECON-01</td>
<td>Introduction to Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
</tbody>
</table>

List A: Select 1 of the following:
<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-10</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH-15</td>
<td>Finite Mathematics</td>
<td>3</td>
</tr>
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List B: Select 2 of the following:
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTG-04A</td>
<td>Fundamentals of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CPS-01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional courses toward IGETC or CSU GE certification and transferable electives ........................................... 38-40
Total Units ................................................................................................................................. 60
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 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.

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.

Core:  
Units
ACTG-51  Applied Accounting ........................................... 4
AOM-50B  Keyboarding and Document Formatting .................. 3
BUS-10   Introduction to Business ....................................... 4
BUS-18A  Business Law ..................................................... 3
BUS-35   Money Management ............................................ 3
CPSC-30  Computer Applications ....................................... 3
ECON-02  Introduction to Macroeconomics ............................ 3

Suggested electives include:
BUS-43   Business Communication ..................................... 3
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

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.

CERTIFICATE
General Business (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.

Core:  
Units
ACTG-51  Applied Accounting ........................................... 4
AOM-50B  Keyboarding and Document Formatting .................. 3
BUS-10   Introduction to Business ....................................... 4
BUS-18A  Business Law ..................................................... 3
BUS-35   Money Management ............................................ 3
CPSC-30  Computer Applications ....................................... 3
ECON-02  Introduction to Macroeconomics ............................ 3

Suggested electives include:
BUS-43   Business Communication ..................................... 3
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

Plus 7 additional units in this area of study ............................ 7

30
### Recommended Sequence: A.A. - General Business (05150.AA)

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ACTG-51</td>
<td>Applied Accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>AOM-50B</td>
<td>Keyboarding and Document Formatting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>BUS-35</td>
<td>Money Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CPSC-30</td>
<td>Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>Summer</td>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BUS-35</td>
<td>Money Management</td>
<td>3</td>
</tr>
<tr>
<td>Fall</td>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CPSC-01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>Spring</td>
<td>BUS-18A</td>
<td>Business Law</td>
<td>4</td>
</tr>
</tbody>
</table>

**Suggested electives:**
- BUS-43: Principles of Management
- MGMT-31: Principles of Management
- MGMT-37: Small Business Entrepreneurship
- MKTG-30: Principles of Marketing
- MKTG-31: Retailing and E-Commerce
- MKTG-33: Advertising

### Recommended Sequence: Certificate General Business (05150.CT)

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ACTG-51</td>
<td>Applied Accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>AOM-50B</td>
<td>Keyboarding and Document Formatting</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>BUS-35</td>
<td>Money Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CPSC-30</td>
<td>Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>Summer</td>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>BUS-35</td>
<td>Money Management</td>
<td>3</td>
</tr>
<tr>
<td>Fall</td>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
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<tr>
<td></td>
<td>CPSC-01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>Spring</td>
<td>BUS-18A</td>
<td>Business Law</td>
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</table>

**Suggested electives:**
- BUS-43: Principles of Management
- MGMT-31: Principles of Management
- MGMT-37: Small Business Entrepreneurship
- MKTG-30: Principles of Marketing
- MKTG-31: Retailing and E-Commerce
- MKTG-33: Advertising

### Recommended Sequence: A.S.-T - Business Administration (05100.AST)

<table>
<thead>
<tr>
<th>Term</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Fall</td>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ACTG-04A</td>
<td>Fundamentals of Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CPSC-01</td>
<td>Introduction to Computer Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>Fall</td>
<td>ACTG-04B</td>
<td>Fundamentals of Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>ECON-01</td>
<td>Introduction to Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH-15</td>
<td>Finite Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Spring</td>
<td>BUS-18A</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MATH-10</td>
<td>Elementary Statistics</td>
<td>3</td>
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</table>

**Suggested electives:**
- BUS-43: Principles of Management
- MGMT-31: Principles of Management
- MGMT-37: Small Business Entrepreneurship
- MKTG-30: Principles of Marketing
- MKTG-31: Retailing and E-Commerce
- MKTG-33: Advertising

### BUSINESS (BUS)

#### BUS-10 INTRODUCTION TO BUSINESS
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85.
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
(C-ID BUS 125)
4 units: 4 hours lecture.
Advisories: BUS-10; ENGL-85.
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. (1/09)

#### BUS-35 MONEY MANAGEMENT
3 units: 3 hours lecture.
Advisories: ENGL-85; MATH-80.
This course offers instruction in basic financial, career and life planning. Areas of study include income distribution; occupational earnings; wise buying; credit and borrowing; liability, health, life and disability insurance; housing; savings and investments; taxes; and retirement and estate planning. (11/13)

#### BUS-43 BUSINESS COMMUNICATION
3 units: 3 hours lecture.
Advisory: AOM-50B or CPSC-30; AOM-60 or ENGL-85.
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. (3/12)

#### BUS-49A-ZZ SPECIAL TOPICS IN BUSINESS
.5-3 units: .5 -3 hours lecture.
Advisory: ENGL-85
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)
Chemistry
MATH, SCIENCE AND ENGINEERING

DEGREE
A.S. - Chemistry

Program Description
The following Chemistry curriculum is designed for students planning to transfer to a four-year university. It is assumed that the student has completed two years of a foreign language, one year of chemistry, and math through pre-calculus in high school.

DEGREE (2/14)
A.S. - Chemistry (19100.AS)

The Associate in Science degree in Chemistry 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 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.

Core: Units
CHEM-04A General Chemistry I ................................. 5
CHEM-04B General Chemistry II .................................. 5
CHEM-12A Organic Chemistry I .................................. 5
CHEM-12B Organic Chemistry II ................................ 5
PHYS-02B General Physics II ..................................... 4
PHYS-04B Physics II .................................................. 4
Seven units from the following: ................................ 7
MATH-04A Calculus I (4)
MATH-04B Calculus II (4)
MATH-04C Multivariable Calculus (4)
MATH-06 Elementary Differential Equations (3)
CPSC-14 C++ Programming (3)
or
ENGR-14 C++ Programming (3)

Total Units 31

Suggested Sequence: A.S. - Chemistry (19100.AS)

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. The prerequisite for MATH-04A is MATH-02; the following sequence assumes that MATH-02 has been taken by the student. Additional units can be taken as breadth or elective courses.

Fall 1
CHEM-04A General Chemistry I ..................................... 5
MATH-04A Calculus I .................................................. 4

Spring 1
CHEM-04B General Chemistry II ................................... 5
MATH-04B Calculus II .................................................. 4
PHYS-04A Physics I .................................................... 4

Fall 2
CHEM-12A Organic Chemistry I ..................................... 5
MATH-04C Multivariable Calculus .................................. 4
PHYS-04B Physics II .................................................... 4

Spring 2
CHEM-12B Organic Chemistry II ................................... 5

CHEMISTRY (CHEM)

CHEM-02A INTRODUCTORY CHEMISTRY
(CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: MATH-C. Advisories: ENGL-85.
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. (2/14)

CHEM-02B INTRODUCTORY CHEMISTRY: INTRODUCTION TO ORGANIC AND BIOCHEMISTRY
(CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: CHEM-02A; MATH-C. Advisories: ENGL-85; 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. (2/15)
CHEM-04A  GENERAL CHEMISTRY I
(CSU breadth area B1/B3)  (IGETC area 5A/5C)  (C-ID CHEM 120S)
5 units: 3 hours lecture, 6 hours lab.
Prerequisites: CHEM-02A; MATH-C. Advisory: ENGL-85.
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. (2/14)

CHEM-04B  GENERAL CHEMISTRY II
(CSU breadth areas B1/B3)  (IGETC area 5A/5C)  (C-ID CHEM 120S)
5 units: 3 hours lecture, 6 hours lab.
Prerequisite: CHEM-04A. Advisory: ENGL-85.
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
(C-ID CHEM 150)
5 units: 3 hours lecture, 6 hours lab.
Prerequisite: CHEM-04B. Advisory: ENGL-85.
This course is a study of the theory and practice of organic chemistry examining bonding, structure, stereochemistry, nomenclature, properties, and reactions of the 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. 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. (5/09)

CHEM-12B  ORGANIC CHEMISTRY II
(C-ID CHEM 160S)
5 units: 3 hours lecture, 6 hours lab.
Prerequisite: CHEM-12A. Advisory: ENGL-85.
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 pre-professional preparation. (5/09)
Child Development
ENGLISH, BASIC SKILLS AND CHILD DEVELOPMENT

DEGREE
A.S.-T. - Early Childhood Education
A.A. - Child Development

CERTIFICATES
Child Development: Early Intervention Assistant Specialization
Child Development: Families In Crisis Specialization
Child Development: Infant/Toddler Care Specialization
Child Development: School Age Care Specialization

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Merced College Child Development Department offers students classes and training to meet California requirements for credentials and licenses, as well as an Associate of Arts in Child Development (AA) degree and an Associate of Science in Early Childhood Education for Transfer (AS-T in ECE) degree. Preparation includes transfer level courses with several that meet general education requirements and Certificates of Achievement. Throughout all courses, students are trained culturally sensitive and family-focused perspectives that emphasize the value of individual differences in your children. The Child Development Department works closely with many community programs to meet the specific needs of the early care and education workforce.

Students are strongly encouraged to transfer to a 4-year college or university. In several courses, students are given information about pursuing their bachelor, masters, and doctorate degrees. In particular classes, information, materials, and workshops on the California Teaching Credential Child Development Permit Matrix are shared. The permit matrix covers entry level positions through a master’s degree option. To increase the likelihood that students will transfer, students are required to develop an education plan with a counselor. Increasing numbers of our students are transferring to pursue degrees in child development, liberal studies, and other related fields.

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For an Associate in Science in Early Childhood Education for Transfer (AS-T in ECE):
- 60 semester CSU-transferable units.
- The California State University-General Education-Breadth pattern (CSU GE-Breadth); OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- A minimum of 18 semester units in the major or area of emphasis as determined by the community college district.
- Obtained of a minimum grade point average (GPA) of 2.0.
- 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).

For an Associate in Arts in Child Development (AA):
- 60 semester degree-applicable units.
- Complete the associate breath requirements consisting of 23 units.
- A minimum of 18 semester units in the major or area of emphasis as determined by the community college district.
- Obtained of a minimum grade point average (GPA) of 2.0.
- Earn a grade of C or better in all courses required for the major or area of emphasis.
- Fulfill the following competency requirements:
  - Reading and Writing Competency:
    - Grade C or better in ENGL-01A or the equivalent
  - Math Competency:
    - Grade C or better in MATH-C or the equivalent
  - Computer and Information Literacy:
    - Grade C or better in courses in which meet all 7 requirements.

Career Opportunities
There are many opportunities for employment in the field of Early Childhood Education. People with training in child development can:
- Work with infants, toddlers, preschoolers, and school-aged children in positions including teacher assistants, teachers, directors, and program coordinators.
- Open a small child care business, a licensed family child care home or a private child care center.
- Become “in-home” child care providers who are hired by parents to do child care for children in the child’s home setting.
- Become a foster parent.
- Work as a teacher’s aide in elementary school programs.
- Transfer to a four-year college or university in fields related to children, schools and families, such as elementary school teachers, social workers, parent educators, special education teachers and early intervention specialists.

Highlights
“Averaging thirty graduates per year,” the Child Development program is one of the largest career technical programs at Merced College. Child Development Certificate and Associate degree requirements are offered on both the Merced Campus and Los Banos Campus. For the convenience of the students, six of the eight required core courses are offered online. In addition, Merced College participates in three programs to assist students in their success: California Early Childhood Mentor Program (CECMt), Child Development Training Consortium (CDTC), and Temporary Assistance for Needy Families—Child Development Careers Program (TANF-CDC). Please call the Child Development Department at (209) 384-6150 for additional information.
DEGREE (12/12)
A.S.-T. - Early Childhood Education (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.

Core: 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

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DEGREE (12/07)
A.A. - Child Development (13010.AA)
For an Associate in Arts in Child Development, students must meet the graduation requirements and complete the following 24 unit courses listed below.

Program Student Learning Outcomes
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.

Core: 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

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CERTIFICATE (12/07)
Child Development: Early Intervention Assistant Specialization (13015.CT)
In addition to the 24 unit core of classes, students must take the following 8 units of classes designated below to complete a 32 unit certificate of Achievement.

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.

Core: 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

Early Intervention Assistant option:
CLDV-11 Introduction to Early Intervention..........................3
CLDV-37 Supervising Adults in ECE Settings..........................2
CLDV-38 Children with Special Needs..........................3

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CERTIFICATE (12/07)
Child Development: Families In Crisis Specialization (13020.CT)
In addition to the 24 unit core of classes, students must take the following 8 units of 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.

Core: 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

Families in Crisis option:
CLDV-33 Working Effectively with Families..........................1
CLDV-37 Supervising Adults in ECE Settings..........................2
CLDV-54 Sexual Development of Young Children..........................1
CLDV-57 Child Abuse & Neglect...................................1
CRIM-33 Violence in the Family..........................3

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CERTIFICATE (12/07)
Child Development: Infant/Toddler Care Specialization (13025.CT)
In addition to the 24 unit core of classes, students must take the following 8 units of classes designated below to complete a 32 unit certificate of Achievement.

Program Student Learning Outcomes
A. Distinguish and apply infant/toddler caregiving principles and infant/toddler education practices.
B. Design environments and curriculum for infant/toddler caregiving settings (including inclusive care) that support learning and building strong, positive and respectful relationships with children and families.
C. Distinguish the professional practices of adults and staff in infant/toddler caregiving settings.

Core:  

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Infant/Toddler Care option:

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<td>CLDV-37</td>
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Suggested Sequence: Child Development

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 Supervising Adults in ECE Settings

Spring 1
- CLDV-37 Supervising Adults in ECE Settings
- CLDV-33 Working Effectively with Families
- CLDV-54 Sexual Development of Young Children
- CLDV-56 School-Age Development
- CLDV-56L School-Age Development Lab
- CLDV-57 Child Abuse & Neglect

Fall 2
- CLDV-37 Supervising Adults in ECE Settings
- CLDV-38 Children with Special Needs
- CLDV-30D School-Age Curriculum

Spring 2
- CLDV-37 Supervising Adults in ECE Settings
- CLDV-35 Infant/Toddler Development
- CLDV-35L Infant and Toddler Practicum
CHILD DEVELOPMENT (CLDV)

CLDV-01 CHILD GROWTH AND DEVELOPMENT
(C-ID CDEV 100) (CSU breadth area D/E) (IGETC area 4)
3 units: 3 hours lecture.
Prerequisite: ENGL-085.
This introductory course examines the major physical, psychosocial, and cognitive/linguistic 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
(C-ID CDEV 110) (CSU breadth area D/E) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-01A.
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. (3/12)

CLDV-03 PRINCIPLES AND PRACTICES OF TEACHING YOUNG CHILDREN
(C-ID ECE 120)
3 units: 3 hours lecture.
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
(C-ID ECE 200)
3 units: 2 hours lecture, 3 hours lab.
Limitation on enrollment: Students must have a negative result on a TB test within the past four years. Prerequisite: CLDV-01. One-way corequisite: CLDV-03. Advisory: 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. (4/12)

CLDV-05 HEALTH, SAFETY AND NUTRITION
(C-ID ECE 220)
3 units: 3 hours lecture.
Advisory: ENGL-01A.
Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development. (12/11)

CLDV-06 TEACHING IN A DIVERSE SOCIETY
(C-ID ECE 230)
3 units: 3 hours lecture.
Advisory: ENGL-01A.
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. (10/11)

CLDV-07 INTRODUCTION TO CURRICULUM FOR THE YOUNG CHILD
(C-ID ECE 130)
3 units: 3 hours lecture.
One-way corequisite: CLDV-03. Advisory: ENGL-01A.
This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher’s role in supporting development and engagement for all young children. This course provides strategies for developmentally-appropriate practice based on observation and assessments across the curriculum, including 1) academic content areas, 2) play, art, and creativity, and 3) development of social-emotional, communication, and cognitive skills. (11/11)

CLDV-07L PRACTICUM
(C-ID ECE 210)
3 units: 1 hour lecture, 6 hours lab.
Limitation on enrollment: Students must have a negative result on a TB test within the past four years. Prerequisite: CLDV-01; CLDV-02; CLDV-03, CLDV-07.
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 students teachers design, implement and evaluate experiences that promote positive development and learning for all young children. (10/12)

CLDV-09 HUMAN DEVELOPMENT (ALSO: PSYC-09)
(CSU breadth area E)
3 units: 3 hours lecture.
Advisory: ENGL-01A.
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-11 INTRODUCTION TO EARLY INTERVENTION
3 units: 2 hours lecture, 3 hours lab.
Limitation on enrollment: Students must have a negative result on a TB test within the past four years. Prerequisites: CLDV-01, CLDV-03. Advisory: ENGL-85.
This course is designed to satisfy requirements for the Early Intervention Assistant Certificate of Achievement. The student will study young children with special needs within the early intervention and inclusive child care setting. The student will explore contemporary theories and intervention strategies as an Early Intervention Assistant. Family relationships, special education systems, grief and stressors will be examined. (11/13)

CLDV-30C INFANT/TODDLER CURRICULUM
2 units: 2 hours lecture.
Advisories: CLDV-35; ENGL-85.
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
2 units: 2 hours lecture.
Advisories: CLDV-01; ENGL-85.
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-33 WORKING EFFECTIVELY WITH FAMILIES
1 unit: 1 hour lecture.
Advisory: ENGL-85.
This is a course designed for students who are interested in working with families in school settings, K-3rd grade. Students will examine the diversity of families, effective home-school-community relationships and effective teacher-family communication. (5/13)

CLDV-34A ADMINISTRATION AND SUPERVISION OF ECE PROGRAMS: PART A
3 units: 3 hours lecture.
Advisory: ENGL-01A.
This class is designed to introduce students to the basic skills necessary to become administrators in child development centers. Focus will be placed on the role of the administrator, types of centers, development of a center philosophy, staff selection and personnel policies. (5/13)

CLDV-34B ADMINISTRATION AND SUPERVISION OF ECE PROGRAMS: PART B
3 units: 3 hours lecture.
Advisory: ENGL-01A.
This class is designed to give students an in-depth look at administration problems of child development centers. Emphasis will be placed on fiscal management policy-making, operational maintenance, health and safety, food and nutrition services and maintaining quality. (5/13)

CLDV-35 INFANT AND TODDLER DEVELOPMENT
2 units: 2 hours lecture.
Advisory: ENGL-85.
This course is the study of the development of children from birth to age three. This will include growth and development, health and nutrition needs, social and emotional needs, and cognitive and language development. Focus will be on caring giving, education, curriculum, and developmentally appropriate programs/environments for infants and toddlers. Adult relationships with families, parents, and staff will also be studied. (11/09)

CLDV-35L INFANT AND TODDLER PRACTICUM
2 units: 6 hours lab.
Limitation on enrollment: Students must have a negative result on a TB test within the past four years. One-way corequisite: CLDV-35.
This laboratory experience offers students the opportunity to work with infants and toddlers in programs in a supervised early childhood program with children from birth up to three years. (10/13)

CLDV-37 SUPERVISING ADULTS IN ECE SETTINGS
2 units: 2 hours lecture.
Advisory: ENGL-85.
This course is a study of the methods and principles of supporting and supervising adults in early childhood settings, emphasizing the role of experienced teachers who mentor new teachers. Required for entry into the Mentor Teacher program. This course also meets the Adult Supervision course requirement for the California Child Development Permit and certificates of achievement at Merced College. (2/10)

CLDV-38 CHILDREN WITH SPECIAL NEEDS
3 units: 3 hours lecture.
Advisories: CLDV-01; ENGL-85.
This course provides teachers the knowledge and skills to work with children with special needs. Students will be introduced to the principles of typical and atypical development, the assessment and identification of children with exceptionalities, the developmentally appropriate practices in the inclusive setting, and the inter/multidisciplinary approach to early intervention practices. (11/13)

CLDV-54 SEXUAL DEVELOPMENT OF YOUNG CHILDREN
1 unit: 1 hour lecture.
Prerequisite: CLDV-01. Advisory: ENGL-85.
This course offers students knowledge about healthy sexual development of young children from infancy to age 12. It addresses concerns such as teaching body parts, gender roles, playing doctor, and preparing for puberty. (3/12)

CLDV-56 SCHOOL-AGE DEVELOPMENT
2 units: 2 hours lecture.
Prerequisite: 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
2 units: 6 hours lab.
Limitation on Enrollment: Students must have a negative result on a TB test within the past four years. One-way corequisite: CLDV-56.
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
1 unit: 1 hour lecture.
Advisory: CLDV-01; ENGL-85
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-70A-ZZ SPECIAL TOPICS IN CHILD DEVELOPMENT
1-3 units: 1-3 hours lecture, 0-9 hours lab.
Prerequisite/advisory: None.
This is a course designed to address special topics in Child Development to meet current needs of students. Specific classes will be offered to help them cope with the rapidly-changing environment and its effect on everyday living. (12/04)
Communication Studies
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A.-T. - Communication Studies

Program Description
The Communication Studies curriculum is designed to assist students from all majors in developing communication skills. Those students interested in majoring in communication studies, with possible emphasis in public speaking, small group discussion, interpersonal communication, intercultural communication, or oral interpretation, should consult the catalog of the college to which they plan to transfer for these and other options.

Mission Statement
The mission of the Communication Studies A.A.-T degree program is to prepare students for employment and/or for the pursuit of an advanced degree in communication studies or other similar areas by educating them in the fundamental concepts, knowledge, and skills of communication.

Career Opportunities in Communication Studies
This degree prepares students for careers requiring communication skills, whether it be small group, interpersonal, public speaking, or intercultural.

DEGREE [4/11]
A.A.-T. - Communication Studies (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, 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. The 18 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. 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.

Core:

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<tr>
<td>COMM-01H</td>
<td>3</td>
</tr>
<tr>
<td>COMM-02*</td>
<td>3</td>
</tr>
<tr>
<td>COMM-04</td>
<td>3</td>
</tr>
<tr>
<td>COMM-05</td>
<td>3</td>
</tr>
<tr>
<td>COMM-30</td>
<td>3</td>
</tr>
</tbody>
</table>

plus three units from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH-02</td>
<td>3</td>
</tr>
<tr>
<td>ENGL-13</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-01A</td>
<td>3</td>
</tr>
<tr>
<td>SOC-01</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units toward the major........................................... 18

Additional courses toward CSU Breadth or IGETC certification and transferable electives: .......................................... 42

Total Units ........................................................................ 60

*Offered in the spring semester only.
COMMUNICATION STUDIES (COMM)

COMM-01 FUNDAMENTALS OF SPEECH
(C-ID COMM 110) (CSU breadth area A1)
(IGETC area 1C-CSU only)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
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
(C-ID COMM 110) (CSU breadth area A1)
(IGETC area 1C - CSU only)
3 units: 3 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program. See the college catalog for a description of admission requirements.
Prerequisite: ENGL-85.
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)
(C-ID COMM 170)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
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
(C-ID COMM 140) (CSU breadth area A1) (IGETC area 1C - CSU only)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
This is a course 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
(C-ID COMM 130) (CSU breadth area A1)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
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
(C-ID COMM 150) (CSU breadth area D) (IGETC area 4) [CILC areas D]
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
This course is designed to examine the basic concepts, principles, and their application to communication between persons from different minority, ethnic, and co-cultural backgrounds within the United States and in the international arena through the scope of interpersonal communication skills. This class will assist in the understanding and evaluation of barriers to communicating with people from other cultures, which include ethnocentrism, prejudice, and lack of awareness. (10/07)
DEGREE (12/12)
A.S.-T. - Computer Science (07200.AS-T)

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.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC-06</td>
<td></td>
</tr>
<tr>
<td>CPSC-14/ENGR-14</td>
<td></td>
</tr>
<tr>
<td>CPSC-39</td>
<td>Unit 3</td>
</tr>
<tr>
<td>CPSC-42</td>
<td></td>
</tr>
<tr>
<td>CPSC-07/MATH-07</td>
<td>Unit 3</td>
</tr>
<tr>
<td>MATH-04A</td>
<td>Unit 4</td>
</tr>
<tr>
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<td>Unit 4</td>
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<tr>
<td>PHYS-04A</td>
<td>Unit 4</td>
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<tr>
<td>PHYS-04B</td>
<td>Unit 4</td>
</tr>
</tbody>
</table>

29

Additional courses toward IGETC certification and transferable electives ........................................ 31

Total Units ........................................................................................................... 60
DEGREE (2/09)
A.S. - Management Information Systems (07300.AS)

For an Associate in Science Degree in Management Information Systems, students must meet the graduation requirements and complete the following required courses.

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.

<table>
<thead>
<tr>
<th>Core:</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ACTG-04A</td>
<td></td>
</tr>
<tr>
<td>ACTG-04B</td>
<td></td>
</tr>
<tr>
<td>BUS-18A</td>
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</tr>
<tr>
<td>CPSC-01</td>
<td></td>
</tr>
<tr>
<td>CPSC-05A</td>
<td></td>
</tr>
<tr>
<td>CPSC-06</td>
<td></td>
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<tr>
<td>ECON-02</td>
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<tr>
<td>MATH-10</td>
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<td>Plus at least three units from the following courses:</td>
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</tr>
<tr>
<td>MATH-04A</td>
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<tr>
<td>MATH-15</td>
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</table>

Care should be taken in selecting courses appropriate to meet the student’s professional and intended transfer institution requirements.

A.S.-T. - Computer Science (07200.AS-T)

<table>
<thead>
<tr>
<th>Fall 1</th>
<th>Units</th>
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<tbody>
<tr>
<td>CPSC-06 or CPSC-14</td>
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<tr>
<td>MATH-04A</td>
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<td>3 GE classes</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CPSC-39</td>
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<tr>
<td>MATH-04B</td>
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<tr>
<td>3 GE classes</td>
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<table>
<thead>
<tr>
<th>Fall 2</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CPSC-42</td>
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<tr>
<td>PHYS-04A</td>
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<tr>
<td>2 GE classes</td>
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<table>
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<tbody>
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<td>CPSC-07 or MATH-07</td>
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<tr>
<td>Discrete Structures</td>
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</tr>
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<tbody>
<tr>
<td>CPSC-05A</td>
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<td>BUS-18A</td>
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<tr>
<td>ACTG-04B</td>
<td></td>
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<tr>
<td>MATH-04A</td>
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<table>
<thead>
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<th>Units</th>
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<tbody>
<tr>
<td>ECON-02</td>
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<tr>
<td>CPSC-06</td>
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A.S. - Management Information Systems (07300.AS)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CPSC-01 or MATH-10</td>
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<tr>
<td>MATH-10</td>
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</table>

<table>
<thead>
<tr>
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<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTG-04A</td>
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</tr>
<tr>
<td>MATH-15 and/or MATH-04A</td>
<td></td>
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<tr>
<td></td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>Fall 2</th>
<th>Units</th>
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<tbody>
<tr>
<td>CPSC-05A</td>
<td></td>
</tr>
<tr>
<td>BUS-18A</td>
<td></td>
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<tr>
<td>ACTG-04B</td>
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</table>

<table>
<thead>
<tr>
<th>Spring 2</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON-02</td>
<td></td>
</tr>
<tr>
<td>CPSC-06</td>
<td></td>
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</tbody>
</table>

2015-2016 CATALOG • Computer Science • 105
COMPUTER SCIENCE (CPSC)

CPSC-01 INTRODUCTION TO COMPUTER INFORMATION SYSTEMS  
(C-ID ITIS 120) [CILC areas A,B,C,D,E,F,G]  
4 units: 3 hours lecture, 3 hours lab.  
Advisories: ENGL-85; 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  
[CILC areas A,B,F]  
3 units: 2 hours lecture, 3 hours lab.  
Advisory ENGL-85.  
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  
(C-ID COMP 122)  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: MATH C. Advisories: CPSC-01; ENGL-01A.  
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. (12/12)

CPSC-07 DISCRETE STRUCTURES (ALSO: MATH-07)  
(CSU breadth area B4) (C-ID COMP 152)  
3 units: 2.5 hours lecture, 1.5 hours lab.  
Prerequisite: CPSC-06 or ENGR-14 or CPSC-14; MATH-02 or MATH-02H.  
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. (11/13)

CPSC-14 C++ PROGRAMMING (ALSO: ENGR-14)  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: MATH-C. Advisory: 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++. (12/13)

CPSC-30 COMPUTER APPLICATIONS  
[CILC areas A,B,C,D,E,F]  
3 units: 2 hours lecture, 3 hours lab.  
Advisories: AOM-50A or AOM-50B (keyboard at a minimum of 20 GWAM); READ-81, ENGL-84; 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. Also included will be accessing information through the intranet, Internet and World Wide Web and telecommunications. This course meets the Computer and Information Literacy Competency (CILC) the A-F requirements for graduation. (See the current schedule or catalog.) (2/07)

CPSC-39 PROGRAMMING CONCEPTS AND METHODOLOGY II  
(C-ID COMP 132)  
4 units: 3 hours lecture, 3 hours lab.  
Prerequisite: CPSC-06 or ENGR-14 or CPSC-14. Advisory: ENGL-01A.  
This course is a continuation course in Computer Science which introduces further aspects of software design and implementation. Abstract data types, fundamental data structures and associated algorithms: lists, stacks, queues and trees. Students will be expected to design, implement, test and analyze a number of programs. (12/12)

CPSC-40A NETWORKING FOR HOME AND SMALL BUSINESSES  
(ALSO: ELCT-40A)  
[CILC areas A,C,E]  
3 units: 2 hours lecture, 3 hours lab.  
Advisories: ELCT-51A; ENGL-85; MATH-80 or MATH-85.  
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. (2/13)

CPSC-40B WORKING AT A SMALL-TO-MEDIUM BUSINESS OR ISP  
(ALSO: ELCT-40B)  
[CILC areas A,C,E]  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: 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. (5/13)

CPSC-42 COMPUTER ARCHITECTURE AND ORGANIZATION  
(C-ID COMP 142) [CILC areas A,B]  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisites: CPSC-06 or ENGR-14 or CPSC-14. Advisories: ENGL-85.  
The organization and behavior of real computer systems at the assembly-language level. The mapping of statements and constructs in a high-level language onto sequences of machine instructions is studied, as well as the internal representation of simple data types and structures. Numerical computation is examined, noting the various data representation errors and potential procedural errors. (12/12)

CPSC-49A-ZZ SPECIAL TOPICS IN COMPUTER STUDIES  
0.5 - 3 units: 0.5 - 3 hours lecture, 0 - 6 hours lab.  
Advisory: ENGL-85.  
These series of courses are designed to provide opportunities for students to further develop their computing skills. Students may petition, through the Office of Admissions and Records, to retake the course as the topics change. (2/14)
Cooperative Education

ENGLISH, BASIC SKILLS AND CHILD DEVELOPMENT

COOPERATIVE EDUCATION (COOP)

COOP-41A  COOPERATIVE EDUCATION IN (SUBJECT)
1-4 units: 1-4 hours weekly.
Advisory: 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)
1-4 units: 1-4 hours weekly.
Prerequisite: COOP-41A. Advisory: ENGL-85.
See COOP-41A above. (11/13)

COOP-41C  COOPERATIVE EDUCATION IN (SUBJECT)
1-4 units: 1-4 hours weekly.
Prerequisite: COOP-41B. Advisory: ENGL-85.
See COOP-41A above. (11/13)

COOP-41D  COOPERATIVE EDUCATION IN (SUBJECT)
1-4 units: 1-4 hours weekly.
Prerequisite: COOP-41C. Advisory: ENGL-85.
See COOP-41A above. (11/13)
Corrections
ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY

DEGREE
A.A. - Corrections (Discontinued effective Summer 2016)

CERTIFICATE
Corrections (Discontinued effective Summer 2016)

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Corrections program is multifaceted to serve the educational needs of both the pre-service and correctional professional. The program also provides educational opportunities for individuals interested in learning about the correctional aspects of the criminal justice system. In addition to an Associate’s degree and a Certificate of Achievement, an Adult Correctional Officer Core Academy, which meets the requirements of the State of California Board of Corrections, and Standards and Training for Corrections, is offered to qualified individuals.

Career Opportunities
The demand for qualified men and women in the corrections field is present today more than ever before. Today’s practitioners need to be able to deal with traditional functions and with the complex social issues of modern society. Professional opportunities in corrections and related fields for men and women may be found on the federal, state, local, and private levels. Each agency provides unique career opportunities for the trained recruit or advancing professional.

Highlights
Understanding correctional processes and inmate rights
Acquiring knowledge and skills for professional practice
Opportunity for qualified students to tour local institutions

Note to Transfer Students
Many four year institutions do not offer a specialized major in this field. Seek assistance of a guidance counselor if you plan to transfer.

For an Associate in Arts Degree in Corrections, students must complete the graduation requirements and the course work listed below with a 2.0 GPA or higher in each class.

Program Student Learning Outcomes
A. Demonstrate and understanding of the fundamental principles, laws, and processes related to the American judicial system and the constitutional rights of inmates.
B. Demonstrate an understanding of the issues and procedures related to safety and security management in institutions.
C. Demonstrate an understanding of the nature and role of custodial care of the correctional client.
D. Demonstrate an understanding of the basic structure and functions of correctional institutions.
E. Demonstrate critical thinking skills, effective written and oral communication skills.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIM-11</td>
<td>Introduction to Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CORR-42</td>
<td>Control and Supervision in Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CORR-43</td>
<td>Correctional Interviewing</td>
<td>3</td>
</tr>
<tr>
<td>CORR-44</td>
<td>Legal Aspects of Corrections</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-04</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-10</td>
<td>Writing for Criminal Justice</td>
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Plus six units from the following electives:

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<tr>
<td>CRIM-06</td>
<td>Introduction to Evidence</td>
<td>3</td>
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<tr>
<td>CRIM-08</td>
<td>Introduction to Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-30</td>
<td>Juvenile Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-33</td>
<td>Family Violence</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-35</td>
<td>Narcotics</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-37</td>
<td>Communication and Ethics in Law Enforcement</td>
<td>3</td>
</tr>
</tbody>
</table>

24
A Certificate of Achievement in Corrections can be obtained by completion of the following classes with a 2.0 GPA or higher.

Program Student Learning Outcomes
A. Demonstrate an understanding of the fundamental principles, laws, and processes related to the American judicial system and the constitutional rights of inmates.
B. Demonstrate an understanding of the issues and procedures related to safety and security management in institutions.
C. Demonstrate an understanding of the nature and role of custodial care of the correctional client.
D. Demonstrate an understanding of the basic structure and functions of correctional institutions.
E. Demonstrate critical thinking skills, effective written and oral communication skills.

Core:  Units
CRIM-11  Introduction to Corrections.........................3
CROR-42  Control and Supervision in Corrections...............3
CROR-43  Correctional Interviewing and Counseling.........3
CROR-44  Legal Aspects of Corrections....................3
CRIM-04  Criminal Law........................................3
CRIM-10  Writing for Criminal Justice.......................3

Plus 17 units from the following electives:
CROR-06  Introduction to Evidence..........................3
CROR-08  Introduction to Investigation....................3
CROR-30  Juvenile Procedures................................3
CROR-33  Family Violence....................................3
CROR-35  Narcotics...........................................3
CROR-37  Communication and Ethics in Law Enforcement 35

Recommended Sequence: A.A. - Corrections (21100.AA)
Recommended Sequence: Certificate - Corrections (21100.CT)

Fall 1
CROR-11  Introduction to Corrections.........................3
CRIM-04  Criminal Law........................................3
CRIM-10  Writing for Criminal Justice.......................3
CROR-42  Control and Supervision in Corrections...............3
CROR-43  Correctional Interviewing and Counseling.........3
CROR-44  Legal Aspects of Corrections....................3

Spring 1
CROR-11  Introduction to Corrections.........................3
CRIM-04  Criminal Law........................................3
CRIM-10  Writing for Criminal Justice.......................3
CROR-42  Control and Supervision in Corrections...............3
CROR-43  Correctional Interviewing and Counseling.........3
CROR-44  Legal Aspects of Corrections....................3

Suggested electives:
CROR-06  Introduction to Evidence..........................3
CROR-30  Juvenile Procedures................................3
CROR-33  Violence in the Family................................3
CROR-35  Narcotics...........................................3
CROR-37  Communication and Ethics in Law Enforcement 35

CORRECTIONS (CORR)
COROR-42  CONTROL & SUPERVISION IN CORRECTIONS
3 units: 3 hours lecture.
Advisories: CROR-11 or CROR-01 or CROR-02; ENGL-01A.
This course offers an overview of supervision of inmates in the local, state, and federal correctional institutions. The issues of control in a continuum from institutional daily living through crisis situations will be introduced and discussed. The course will emphasize the role played by the offender and the correctional worker. Topics will include inmate subculture, violence, and effects of crowding on inmates and staff, and coping techniques for correctional officers in a hostile prison environment. The causes and effects of abusive tactics will also be discussed. (2/13)

COROR-43  CORRECTIONAL INTERVIEWING AND COUNSELING
3 units: 3 hours lecture.
Advisories: Prior completion or concurrent enrollment in CROR-11 or current employment as a peace officer in the field of corrections; ENGL-01A.
This class provides an overview of the techniques available to practitioners in Corrections in counseling and interviewing. The student will learn the use of appropriate techniques and theories in confidence building which may be used by the correctional employee in client interviews and counseling. This is a basic course for students planning to enter or who are already employed within the Correctional Science field. (2/13)

COROR-44  LEGAL ASPECTS OF CORRECTIONS
3 units: 3 hours lecture.
One-way corequisite: CROR-11. Advisories: ENGL-85; or current employment as a correctional officer.
This course provides students with an awareness of the historical framework, concepts, and precedents that guide correctional practice. Course material will broaden the individual's perspective of the corrections environment, the civil rights of prisoners, responsibilities, and liabilities of corrections officials. (2/10)

COROR-49A-ZZ  SPECIAL TOPICS IN CORRECTIONS
0.5 - 7 units: 0.5 - 7 hours lecture.
Advisory: ENGL-85.
This is a course designed to address special topics in corrections to meet the current needs of students. The course will allow pre-service and in-service personnel to maintain the most current training standards in the field. (5/09)
### Criminal Justice

**ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY**

| DEGREE | A.S.-T. - Administration of Justice  
| A.A. - Criminal Justice |
|---|---|

<table>
<thead>
<tr>
<th>CERTIFICATE</th>
<th>Criminal Justice</th>
</tr>
</thead>
</table>

#### Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

#### Program Description
The Criminal Justice program is multifaceted and serves the educational needs of both pre-service and law enforcement professionals as well as individuals interested in learning about the field. The program leads to an Associate’s Degree in Criminal Justice, and transfer to Baccalaureate degree programs and or a Certificate of Achievement. Additionally, the first two of three modules of the Modular Police Academy are offered to qualified students. These courses meet the State of California, Commission on Peace Officers Standards and Training (POST) requirements.

#### Career Opportunities
The demand for qualified men and women in the criminal justice field is present today more than ever before. Today’s practitioners need to be able to deal with traditional law enforcement functions, and the complex social issues of our diverse society. Professional opportunities in law enforcement and related fields may be found on the federal, state, and local level as well as in the private sector and industry. Each agency or private entity provides unique career opportunities for the trained recruit. Many related career fields such as criminologist, fingerprint analyst, communications specialists, crime analyst, researcher, and educator are available.

#### Highlights
- Academic and hands on experiences

### DEGREE (12/11)

A.S.-T. - Administration of Justice (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 (AS-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 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. Compare and evaluate diverse and competing arguments currently and historically in the justice system and interfacing components.

C. Identify and communicate criminal justice concepts and principals effectively verbally and in writing.

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.
The Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIM-02</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-04</td>
<td>3</td>
</tr>
</tbody>
</table>

LIST A
Select two courses from List A ........................................... 6

CRIM-03  Criminal Procedures (3)
CRIM-05  Community & 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
Select two courses from List B ........................................... 6

MATH-10  Elementary Statistics (3)
PSYC-01A Introduction to Psychology (3)
SOC-01  Introduction to Sociology (3)

Total Units toward the Major ........................................... 18

Additional courses toward CSU Breadth or IGETC certification and transferable electives ....... 42

DEGREE TOTAL ......................................................... 60

DEGREE (5/08)
A.A. - Criminal Justice (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. Recognize at the entry level the social, political, economic, and cultural context within the criminal justice system and responsibilities to the community.
C. Demonstrate at the entry level critical thinking skills, the ability to analyze and solve problems using logical and creative methods.
D. Demonstrate at the entry level effective written, verbal and nonverbal communication skills.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIM-01  Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-02  Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-03  Criminal Procedures</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-04  Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-05  Community &amp; Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-06  Introduction to Evidence</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-10  Writing for Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-35  Narcotics</td>
<td>3</td>
</tr>
<tr>
<td>CRIM-37  Communication and Ethics in Law Enforcement</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus three units from the following electives:

CRIM-08  Introduction to Investigation ........................................... 3
CRIM-30  Juvenile Procedures ...................................................... 3
CRIM-33  Violence in the Family .................................................... 3
CRIM-35  Narcotics ................................................................. 3
CRIM-42C Reserve Officer Module Level 3 ................................. 7
CRIM-42D Reserve Officer Module Level 2 .................................. 10
CRIM-49A-ZZ Special Problems in Criminal Justice .......................... ½ - 3

CERTIFICATE
Criminal Justice (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. Recognize at the entry level the social, political, economic, and cultural context within the criminal justice system and responsibilities to the community.
C. Demonstrate at the entry level critical thinking skills, the ability to analyze and solve problems using logical and creative methods.
D. Demonstrate at the entry level effective written, verbal and nonverbal communication skills.
Merced College

P.O.S.T. Modular Training

The first two of three modules of the Modular Police Academy are offered for qualified students. These courses meet the State of California, Commission on Peace Officers Standards and Training (POST) requirements.

CRIM 42C Reserve Officer Module Level 3 .................................. 7
CRIM 42D Reserve Officer Module Level 2 .................................. 10

Recommended Sequence for Criminal Justice

A.A. - Criminal Justice (21150.AA)

Fall 1
CRIM-01 Criminology .................................................... 3
or 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-10 Writing for Criminal Justice ......................... 3
CRIM-37 Communication and Ethics in Law Enforcement ... 3

Suggested electives:
CRIM-08 Introduction to Investigation ......................... 3
CRIM-33 Family Violence .............................................. 3
CRIM-42C Reserve Officer Module Level 3 ....................... 7

Spring 1
CRIM-01 Criminology .................................................... 3
or 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

Suggested electives:
CRIM-30 Juvenile Procedures ....................................... 3
CRIM-33 Family Violence .............................................. 3
CRIM-35 Narcotics ....................................................... 3
CRIM-42D Reserve Officer Module Level 2 ....................... 10

Recommended Sequence: Certificate - Criminal Justice (21150.CT)

Fall 1
CRIM-01 Criminology .................................................... 3
or 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-08 Introduction to Investigation ......................... 3
CRIM-10 Writing for Criminal Justice ......................... 3
CRIM-37 Communication and Ethics in Law Enforcement ... 3

Suggested electives:
CRIM-33 Family Violence .............................................. 3

Spring 2
CRIM-01 Criminology .................................................... 3
or CRIM-02 Introduction to Criminal Justice .................. 3
CRIM-03 Criminal Procedures ........................................ 3

Criminal Justice (CRIM)

CRIM-01 CRIMINOLOGY (CSU breadth area D)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
This course is an analysis of the nature and patterning of criminality and theories of criminal behavior. Crime control policies are critically examined regarding linkages among 1) social conflicts and inequalities, 2) criminal laws and enforcement practices, and 3) social deviance. (11/14)

CRIM-02 INTRODUCTION TO CRIMINAL JUSTICE
(C-ID AJ 110) 3 units: 3 hours lecture.
Prerequisite: ENGL-85.
This course pertains to the history and philosophy of criminal justice in America. The course will emphasize the three major components of the system: court, corrections, law enforcement, and will then examine the role of each. (11/14)

CRIM-03 CRIMINAL PROCEDURES
(C-ID AJ 122) 3 units: 3 hours lecture.
Prerequisite: CRIM-01 or CRIM-02; ENGL-85.
This course covers the examination of due process from pre-arrest through trial and appeal. The history of due process and precedent will be examined through statutory law and interpretations of law reflected in court decisions with particular focus upon the impact of interpretations of Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments. (12/11)

CRIM-04 CRIMINAL LAW
(C-ID AJ 120) 3 units: 3 hours lecture.
Prerequisite: ENGL-85. One-way corequisite: CRIM-01 or CRIM-02.
This course offers an analysis of the doctrines of criminal liability in the United States and the classification of crimes against persons, property, morals, and public welfare. Special emphasis is placed on the classification of crime, the elements of crime, the definitions of common and statutory law, and the nature of acceptable evidence. This course utilizes legal precedents and case studies to introduce students to criminal law. The completion of this course offers a foundation upon which upper-division criminal justice courses will build. The course will also include some limited discussion of prosecution and defense decision making, criminal culpability, and defenses to crime. (12/11)

CRIM-05 COMMUNITY AND HUMAN RELATIONS
(C-ID AJ 160) 3 units: 3 hours lecture.
One-way corequisite: CRIM-01 or CRIM-02. Advisory: ENGL-85.
This course covers the relationship of criminal justice agents and the community; causal and symptomatic aspects of community understanding; lack of cooperation and mistrust; study of behavioral causes; and ways to develop and maintain amicable relationships within a diverse multicultural population. (12/11)
CRIM-06 INTRODUCTION TO EVIDENCE  
(C-ID AJ 124)  
3 units: 3 hours lecture.  
One-way corequisite: CRIM-01 or CRIM-02. Advisory: ENGL-85.  
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. (12/11)

CRIM-08 INTRODUCTION TO INVESTIGATION  
(C-ID AJ 140)  
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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. (12/11)

CRIM-10 WRITING FOR CRIMINAL JUSTICE  
3 units: 3 hours lecture.  
Prerequisite: 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  
(C-ID AJ 200)  
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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  
(C-ID AJ 220)  
3 units: 3 hours lecture.  
One-way corequisite: CRIM-01 or CRIM-02 or CRIM-11. Advisory: ENGL-85.  
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. (12/11)

CRIM-33 VIOLENCE IN THE FAMILY  
3 units: 3 hours lecture.  
Advisory: CRIM-02; ENGL-85.  
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  
3 units: 3 hours lecture.  
Advisories: CRIM-02; ENGL-85.  
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  
3 units: 3 hours lecture.  
Advisories: ENGL-85; CRIM-02 or current employment as a law enforcement officer.  
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 3  
[CILC area D]  
7 units: 108 total hours lecture, 54 total hours lab.  
Limitation 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. Advisory: ENGL-85.  
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 2  
[CILC area D]  
10 units: 162 total hours lecture, 54 total hours lab.  
Limitation 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. The 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. 2 Students must possess a valid California Drivers' License. Prerequisite: CRIM-42C. Advisory: ENGL-85.  
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 discrimination issues. Students missing more than 5% of class time will not be allowed to complete the class (POST regulations). (1/13)

CRIM-49A ZZ SPECIAL TOPICS IN CRIMINAL JUSTICE  
0.5 - 5 units: 0.5-8 hours lecture, 0-4 hours lab.  
Advisory: ENGL-85.  
This is a course designed to address special topics in criminal justice to meet the current needs of students. The course will allow pre-service and in-service personnel to maintain the most current training standards in the field. (12/09)
Crop Science
CAREER AND TECHNICAL EDUCATION

DEGREES
A.A. - Crop Science
A.S. - Crop Science

CERTIFICATE
Crop Science

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Crop Science program at Merced College is designed to meet the need for trained personnel in a broad range of occupational opportunities involved with or related to producing crops.

The Merced College Crop Science Program maintains 240 acres of cropland which serve as a laboratory for Crop Science students. Equipment and methods used in the program are of the latest type and follow current trends and practices in crop-oriented production areas. Students take an active part in the farming operations by planning individual as well as group projects. The student not only gains the theoretical knowledge associated with production, but also experiences "hands-on" practical application.

Students of the Merced College Agriculture Division are raising a wide variety of crops including alfalfa, wheat, barley, corn, oats, almonds, and pasture. The operation also includes the raising of onion seed stock crops.

Career Opportunities
Only two out of ten Crop Science graduates are involved with the actual production end of Crop Science. They work as self-employed farmers or in the farming, ranching, or dairy environment. The remaining eight graduates find positions in crop-related occupations such as crop processing and marketing, commodity sales, agriculture chemical sales, irrigation district, U.S. Department of Agriculture, and banking and corporate holdings in Agriculture Management. These jobs are open to people from both urban and rural areas who have gathered their expertise through education in Crop Science.

DEGREE
A.A. - Crop Science (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. With an emphasis on general education, properly plant different varieties of plants and analyze soil conditions and type for testing.
B. With an emphasis on general education, 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 general education, 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 general, faced with either a hypothetical or actual problems dealing with plantings and soil conditions and the appropriate references, determine a solution to the problem.

Core:

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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
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<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></td>
<td></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>
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<tr>
<td>MECH-31</td>
<td>Equipment Safety</td>
<td>1</td>
</tr>
</tbody>
</table>

Recommended Sequence: A.A. - Crop Science (01150.AA)

Fall 1
- CROP-10: Elements of Cereal Grain Production 3 units
- SOIL-10: Soil Science 3 units

Spring 1
- CROP-12: Commercial Vegetable and Garden Production 3 units

Fall 2
- SOIL-11: Fertilizers and Soil Amendments 3 units

Spring 2
- CROP-13: Forage Crops 3 units
- PLSC-12: Weeds 3 units
DEGREE
A.S. - Crop Science  (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.

Core: 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 ..................................................4
PLSC-13 Economic Entomology ...........................................3
LAND-16 Plant Propagation .................................................3

30

CERTIFICATE
Crop Science  (01150.CT)

A Certificate of Achievement 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.

Core: 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 18 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 ..................................................4
PLSC-13 Economic Entomology ...........................................3
LAND-16 Plant Propagation .................................................3

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Recommended Sequence: A.S. - Crop Science  (01150.AS)

Fall 1
CROP-10 Elements of Cereal Grain Production.........................3
PLSC-13 Economic Entomology ...........................................3

Spring 1
CROP-12 Commercial Vegetable and Garden Production...........3
SOIL-10 Soil Science .........................................................3

Fall 2
FPRO-13 Fruit Tree Maintenance ........................................3
SOIL-11 Fertilizers and Soil Amendments..............................3

Spring 2
CROP-13 Forage Crops .......................................................3
PLSC-12 Weeds ..................................................................3

Recommended Sequence: Certificate Crop Science  (01150.CT)

Fall 1
CROP-10 Elements of Cereal Grain Production.........................3
PLSC-13 Economic Entomology ...........................................3

Spring 1
CROP-12 Commercial Vegetable and Garden Production...........3
SOIL-10 Soil Science .........................................................3

Fall 2
FPRO-13 Fruit Tree Maintenance ........................................3
SOIL-11 Fertilizers and Soil Amendments..............................3

Spring 2
CROP-13 Forage Crops .......................................................3
PLSC-12 Weeds ..................................................................3
PLSC-10 ELEMENTS OF CEREAL GRAIN PRODUCTION
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80 or MATH-85.
This is a study of production principles, which include botany, taxonomy, soil tillage, fertilization, variety and seed selection, pest management, harvest, processing, storage, and marketing for important fiber, food, and cereal crops in California. Covered crops will include cotton, sugar beets, wheat, rice, barley, sorghum, corn, oats, safflower, legumes for seed, and potatoes. A field trip to a major production area is required. (2/13)

CROP-12 COMMERCIAL VEGETABLE AND GARDEN PRODUCTION
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80 or MATH-85.
This course is a study of vegetable production covering the botany, cultural production, harvesting, processing, growth characteristics, fertility, pests, and marketing of the major warm season and cool season vegetable crops in California. A field trip into a major vegetable production region is required. (2/13)

CROP-13 FORAGE CROPS
3 units: 2 hours lecture, 3 hours lab.
Advisory: ENGL-85; MATH-80 or MATH-85.
This course will cover production, harvesting, and utilization of principal California forage crops. The importance of forage crops as a supplement to livestock enterprises will also be covered. The use of forage crops as soil amendments, and irrigated and range pastures will be discussed. (2/14)

FRUIT PRODUCTION (FPRO)
FPRO-13 FRUIT TREE MAINTENANCE
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (2/13)

PLANT SCIENCE (PLSC)
PLSC-10 ELEMENTS OF PLANT SCIENCE
(CSU breadth area B2/B3) (IGETC area 5B/5C)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 3 hours lecture.
Advisory: ENGL-85; 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
3 units: 3 hours lecture.
Advisories: ENGL-85; 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)

SOIL SCIENCE (SOIL)
SOIL-10 SOIL SCIENCE
(CSU breadth area B1/B3) (IGETC area 5A/5C)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80 or MATH-85.
This course provides a basic knowledge of the physical, chemical, and 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
3 units: 3 hours lecture.
Advisories: ENGL-85; 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)
CSU General Education (CSU-GE-Breadth)

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.

Dairy Husbandry (See Animal Science)

CAREER AND TECHNICAL EDUCATION

DEAN
JAMES ANDERSEN
PHONE
(209) 384-6250
AREA OFFICE
AG-OFFICE

COUNSELING
(209) 384-6314
COOPERATIVE WORK EXPERIENCE
(209) 384-6364
Diesel Equipment Technology
CAREER AND TECHNICAL EDUCATION

DEGREES
A.S. - Diesel Equipment Technology

CERTIFICATE
Diesel Equipment Technology

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Diesel Equipment Technology program at Merced College is designed to meet the need for trained mechanics in all phases of the diesel equipment industry.

This program is based on “hands-on” skill development with course time divided into two segments, 30% classroom sessions and 70% working in a shop atmosphere, while under the supervision of factory trained instructors. Instructional areas include the trucking industry, bus repair, agricultural equipment, construction equipment, and industrial power. Students obtain skills used throughout the entire diesel equipment field in repair and maintenance of equipment. The sequence of courses within the diesel equipment Technology Program encompass all phases of technical training to insure the success of both experienced and graduating technicians.

Merced College has a spacious shop, equipped with the latest model agriculture equipment and vehicles currently being used in the industry. Since the right tools are essential to proper training, Merced College provides students with state-of-the-art tools required for the repair of most complex machinery. The college also maintains a large inventory of equipment and training aids to allow students maximum “hands-on” experience on both vintage as well as the most current equipment on the market.

Career Opportunities
Employment opportunities for the Diesel Equipment Technician trainee are excellent. A recent survey of the Diesel Equipment Industry in Merced County has shown a need for 125 truck and bus mechanics and 75 agricultural and industrial equipment mechanics per year. In addition, there are jobs available in diesel fuel system shops, hydraulic shops, maintenance shops, and various other related industries.

Graduates from this program have been successfully placed on jobs locally, statewide, and nationally. The following are popular occupations: Diesel Truck Technician, Agriculture Equipment Technician, Field Service Technician, Marine Diesel Technician, Diesel Fuel Specialist, Electrical Specialist, Parts Person, Heavy Equipment Technician, Bus Mechanic, Industrial Equipment Technician, Service Manager, Hydraulic Specialist, Diesel Equipment Sales, and Air Conditioning Specialists.

As of 2015-2016 CATALOG, the Associate in Science Degree in Diesel Equipment Technology is available upon satisfactory completion of the graduation requirements and completion of 36-38 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 if the path of repair was correct by testing and/or completing a work order/report.

RECOMMENDED SEQUENCE:

Fall 1
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-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
MECH-51: Truck Brake and Chassis ............................ 4
WELD-06: Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ................. 3

Spring 1
MECH-23: Diesel Fuel Systems Diagnostics ..................... 2
MECH-24: Power Trains ........................................ 4
MECH-32: Applied Electrical and Hydraulic Service ........... 3
MECH-33: Power Equipment Air Conditioning ................. 2
MECH-51: Truck Brake and Chassis ............................ 4

Fall 2
MECH-06: Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding .................. 3
MECH-33: Power Equipment Air Conditioning ................. 2
MECH-51: Truck Brake and Chassis ............................ 4
**CERTIFICATE (2/13)**

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

A Certificate of Achievement in Diesel Equipment Technology will be awarded upon successful completion of 36-38 units from the major requirements listed below with a minimum grade of 2.0 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 if the path of repair was correct by testing and/or completing a work order/report.

<table>
<thead>
<tr>
<th>Core:</th>
<th>Units</th>
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<tbody>
<tr>
<td>MECH-21</td>
<td>Hydraulics ..................................................3</td>
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<tr>
<td>MECH-22A</td>
<td>Diesel Engines .............................................4</td>
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<td>Diesel Fuel Systems Diagnostics .........................2</td>
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<tr>
<td>WELD-06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ..................................................3</td>
</tr>
</tbody>
</table>

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

Total Units .......................................................36-38

Recommended Sequence:

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

<table>
<thead>
<tr>
<th>Fall Semester Courses</th>
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<tr>
<td>MECH-31 Equipment Safety ................................................1</td>
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<table>
<thead>
<tr>
<th>Spring Semester Courses</th>
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<tbody>
<tr>
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<tr>
<td>MECH-27 Applied Diesel Technical Skills ........................2</td>
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<tr>
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<td>MECH-51 Truck Brakes and Chassis ...................................4</td>
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<tr>
<td>Total Units .......................................................36</td>
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</table>
**Digital Art**

**FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES**

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**DIGITAL ART (ARTD)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Lectures</th>
<th>Labs</th>
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<tr>
<td>ARTD-40A</td>
<td>INTRODUCTION TO DIGITAL ART</td>
<td>3</td>
<td>2 hours</td>
<td>3 hours</td>
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<tr>
<td>ARTD-40B</td>
<td>INTERMEDIATE DIGITAL ART</td>
<td>3</td>
<td>2 hours</td>
<td>3 hours</td>
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<td></td>
<td>(CSU breadth area C1) (IGETC area 3A) [CILC area A,B,D,E,G]</td>
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</tbody>
</table>

**ARTD-41A** INTRODUCTION TO GRAPHIC DESIGN

- [CILC area A,B,D,E,G]
- 3 units: 2 hours lecture, 3 hours lab.
- Advisory: AOM-50A; ENGL-85.

**ARTD-41B** INTERMEDIATE GRAPHIC DESIGN

- [CILC area A,B,D,E,G]
- Prerequisite: ARTD-41A. Advisory: AOM-50A; ENGL-85.

**ARTD-42A** INTRODUCTION TO MOTION GRAPHICS

- [CILC area A,B,D,E,G]
- 3 units: 2 hours lecture, 3 hours lab.
- Advisory: AOM-50A; ENGL-85.

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The studio survey 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)

This studio course continues to develop 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 structure. (10/14)

This course provides an introduction to graphic design and the visual communication arts. Emphasizing basic design elements, aesthetic problem analysis, conceptual thinking, layout, typography, visualization, and print production, students grasp the essential tenets of envisioning visual identity strategies. Digital workflow methods prove beneficial to creating sound compositional approaches and designs that visually inform and communicate to a mass audience. (10/14)

The course promotes creative thinking in intermediate level graphic design and the visual communication arts. Emphasizing the further development of design principles, computer software knowledge, and visuals and typography, students grasp essential standard tenets of visual identity strategies. Students will spend considerable time producing visual projects on the computer and on the drawing board. (10/14)

This course involves innovative thinking in introductory graphics on a time line. 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. (10/14)
Drafting Technology
CAREER AND TECHNICAL EDUCATION

DEGREE
A.A. - CAD Draftsman - Architectural
A.A. - CAD Draftsman - Mechanical

CERTIFICATES
CAD Drafting - Architectural Design
CAD Drafting - Mechanical Design
CAD Draftsman - Architectural
CAD Draftsman - Mechanical
CAD Operator

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Drafting Technology program is designed to guide students to a practical understanding and application of design principles and technology. The program is broken into two tracts, Mechanical and Architectural, which focus on their respective industries. Students start by learning how to read prints and draw using 2D CAD systems, they then advance through 3D CAD, design and documentation practices, and specialized courses depending on their emphasis. Upon Completion of either of the Design Certificates students will have taken a project from concept through design and documentation to a finished state. Students will produce prototypes/models of their designs using rapid production methods that include 3D printers, and a CNC Mill.

Career Opportunities
CAD operator, detailer, draftsman, product designer, drafting technician, engineering assistant, home designer

The Drafting Technology program can also be used as a stepping off point for students wishing to pursue Bachelors’ degrees in Industrial Technology, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Construction Management, Architectural Engineering, and Architecture.

Contact
James Thornburgh
(209) 384-6171
james.thornburgh@mccd.edu
www.mccd.edu/drafting

DEGREE (2/11)
A.A. - CAD Draftsman - Architectural (09101.AA)

The CAD Draftsman - Architectural A. A. 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 Associates in Arts Degree in CAD Draftsman - Architectural is available upon successful completion of the graduation requirements and completing the 18 unit core and 3-4 units from the electives list.

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.

Core: Units
DRFT-04A Fundamentals of Computer-Aided Drafting ........... 3
DRFT-04B Introduction to 3D ........................................ 3
DRFT-41 Civil Drafting .................................................. 3
DRFT-42A Architectural Drafting - AutoCAD .................. 3
DRFT-42B Architectural Drafting - 3D .............................. 3
DRFT-44 Print Reading and Sketching ............................. 3

plus 3 units from the following courses:
CPSC-01 Introduction to Computer Information Systems .......... 4
CPSC-30 Computer Applications ..................................... 3

21-22
The CAD Draftsman - Mechanical A.A. 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. An Associates in Arts Degree in CAD Draftsman - Mechanical is available upon successful completion of the graduation requirements and completing 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

Core:
- DRFT-04A: Fundamentals of Computer-Aided Drafting
- DRFT-04B: Introduction to 3D
- DRFT-04C: Computer-Aided Drafting - AutoCAD
- DRFT-05: Technical Graphics
- DRFT-25: Descriptive Geometry
- DRFT-44: Print Reading and Sketching

plus 3 units from the following courses:
- CPSC-01: Introduction to Computer Information Systems
- CPSC-30: Computer Applications

21-22 units

CERTIFICATE (2/11)
CAD Draftsman - Mechanical (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

Core:
- DRFT-04A: Fundamentals of Computer-Aided Drafting
- DRFT-04B: Introduction to 3D
- DRFT-04C: Computer-Aided Drafting (AutoCAD)
- DRFT-05: Technical Graphics
- DRFT-25: Descriptive Geometry
- DRFT-44: Print Reading and Sketching

plus 3 units from the following courses:
- CPSC-01: Introduction to Computer Information Systems
- CPSC-30: Computer Applications

21-22 units

Recommended Sequence: CAD Draftsman - Mechanical (09102.CL)

Fall Semester
- DRFT-04B: Introduction to 3D
- DRFT-04C: Introduction to Parametric Modeling
- DRFT-06: Production Methods
- DRFT-44: Print Reading and Sketching
- INDT-38: Industrial Technology Computer Applications and Literacy
- CPSC-30: Computer Applications

Spring Semester
- DRFT-04A: Fundamentals of Computer Aided Drafting
- DRFT-04D: Advanced Parametric Modeling
- DRFT-05: Technical Graphics
- DRFT-10: Rendering and Animation
- DRFT-25: Descriptive Geometry
- DRFT-35: Capstone Design Project

Total Units: 33
CERTIFICATE (2/11)
CAD Drafting - Architectural Design (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.

Core: 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-AutoCAD......................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:
CPSC-01 Introduction to Computer Information Systems...........4
CPSC-30 Computer Applications.....................................3

plus 3 units from the following courses:
INDT-32 Building Construction Concepts..........................3
INDT-49 Electrical Codes & Ordinances...........................3

33-34

CERTIFICATE (2/11)
CAD Drafting - Mechanical Design (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 the associated drawings, and documentation needed to manufacture the product.

Core: 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 units from the following courses:
CPSC-01 Introduction to Computer Information Systems...........4
CPSC-30 Computer Applications.....................................3

33-34

CERTIFICATE (2/11)
CAD Operator (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.

Core: Units
DRFT-04A Fundamentals of Computer-Aided Drafting..............3
DRFT-04B Introduction to 3D........................................3
DRFT-48B Special Problems in CAD Software Modifications...3

plus 3 units from the following courses:
CPSC-01 Introduction to Computer Information Systems...........4
CPSC-30 Computer Applications.....................................3

12-13

Recommended Sequence: Mechanical Design
Fall 1
DRFT-04C Introduction to Parametric Modeling....................3
DRFT-44 Print Reading and Sketching...............................3
Computers (CPSC-01 or CPSC-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

Recommended Sequence: Architectural
Fall 1
DRFT-04A Fundamentals of Computer-Aided Drafting..............3
DRFT-44 Print Reading and Sketching...............................3
Computers (CPSC-01 or CPSC-30)...................................3 or 4

Spring 1
DRFT-04B Introduction to 3D........................................3
DRFT-42A Architectural Drafting - AutoCAD......................3

Fall 2
DRFT-41 Civil Drafting...............................................3
DRFT-42B Special Problems in CAD Software Modification...3
DRFT-43 Sustainable Architecture..................................3

Spring 2
DRFT-10 Rendering and Animation................................3
DRFT-35 Capstone Design Project..................................3
DRAFTING TECHNOLOGY (DRFT)

DRFT-04A FUNDAMENTALS OF COMPUTER-AIDED DRAFTING
3 units: 2 hours lecture, 3 hours lab.
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
3 units: 2 hours lecture, 3 hours lab.
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
3 units: 2 hours lecture, 3 hours lab.
Advisory: 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
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: DRFT-04C.
This course covers 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
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: DRFT-04A or DRFT-04C. Advisories: ENGL-84; MATH-80 or MATH-85; READ-81.
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-06 PRODUCTION METHODS
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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
3 units: 2 hours lecture, 3 hours lab.
Advisory: 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
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: DRFT-04A, DRFT-05. Advisory: 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
3 units: 2 hours lecture, 3 hours lab.
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
3 units: 2 hours lecture, 3 hours lab.
Limitation on enrollment: Limited to available software licenses at the facilities. Prerequisite: 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. (2/11)

DRFT-42A ARCHITECTURAL DRAFTING - AUTOCAD
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: DRFT-04A.
This course covers the drafting techniques used in the preparation of working drawings for building construction, with special emphasis on house planning, house construction, and building codes and regulations. The course includes the drawing of a short set of house plans, floor plan, plot plan, elevation, and perspective. (2/14)

DRFT-42B ARCHITECTURAL DRAFTING -- 3D
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: DRFT-42A.
This course uses REVIT, and covers the techniques used in the making of working drawings for building construction. The program used creates a 3-D drawing of a house. A detailed cutting list and bill of materials is also generated relative to the drawings. There will be special emphasis on a complete set of house plans adequate for bidding purposes. Also included will be sections, details, interior elevations, foundation plan, heating and air conditioning, specification, and a model. (2/14)

DRFT-43 SUSTAINABLE ARCHITECTURE
3 units: 2 hours lecture, 3 hours lab.
One-way corequisite: DRFT-42B.
This course uses Revit. Students will learn how the sustainable movement has influenced architecture. This course will cover CalGreen, LEED, and sustainable building methods. Students will learn how to use Revit to create the documentation needed. (2/14)

DRFT-44 PRINT READING AND SKETCHING
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; MATH-80 or MATH-85.
This course is for technical students and other personnel who must be skilled in reading industrial prints. The student will become familiar with industrial prints, industry standards, and current practices. There will be a basic coverage of sketching as it applies to the communication skills of reading prints. (2/14)

DRFT-48A SPECIAL PROBLEMS - ARCHITECTURAL DRAFTING
2 units: 6 hours lab.
Prerequisite: DRFT-42B.
This course is designed to allow the student to gain experience in those areas not covered in the objectives of DRFT-42B. The course will help prepare the student for employment in the architectural trade with necessary computer-aided drafting skills. Techniques and information needed for employment in the trade occupations will receive special emphasis. (1/02)
DRFT-48B  SPECIAL PROBLEMS IN CAD SOFTWARE
MODIFICATION
3 units: 9 hours lab.
Prerequisites: DRFT-04A.
This course is designed to permit the student to experience those topics not covered in the objectives of DRFT-04ABC. This course will teach students how to customize the AutoCAD interface. Topics covered will be editing the Ribbon, Aliases, Macros, and AutoLisp, and the use of profiles. (2/11)

DRFT-48C  SPECIAL PROBLEMS IN CAD - TODAY’S TECHNOLOGY
2 units: 6 hours lab.
Prerequisites: DRFT-04C, DRFT-05.
This course is designed to permit the student to experience those areas not normally covered in the objectives of DRFT-04ABC and DRFT-05. The course will help prepare the student for employment in the trade with entry-level skills. Techniques and information needed for employment in the trade occupations will receive special attention. (1/02)

DRFT-59  BASIC DRAFTING
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; MATH-80 or MATH-85.
This course covers principles of mechanical drawing and drafting. It is designed to help students communicate through sketching and drawing. The communication is covered as a presentation of ideas through drawings. (2/14)
Drama
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A.-T. - Theatre Arts
A.A. - Theatre Arts

Career Opportunities
- Artistic Director for Community/Non-Profit/Professional Theatre
- Casting Agent
- Drama Therapy
- Entertainment Law
- Film Director
- Film Industry Technicians
- High School Theatre Teacher
- Literary Manager/Dramaturg
- Makeup Designer or Artist
- Playwright
- Producer
- Production Assistant
- Professional Actor
- Professional Costume Designer, First Hand, Costume Shop Manager
- Professional Director
- Professional Entertainment Agent
- Professional Lighting Designer
- Professional Scenic Designer, Scenic Artist, Stage Technician
- Properties Designer or Technician
- Sales
- Sound or Lighting Technician
- Stage Manager
- Theatre Instructor or Professor
- Video Game Industry

A.A.-T. - Theatre Arts (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 that 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 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 within the CSU system.
B. Demonstrate high artistic standards and professional responsibility with regard to acting or technical proficiency, rehearsal preparation and live performance.
C. Employ foundational skills in stagecraft - including a basic understanding of technical terminology, tools, properties construction, costume construction and light and sound board operation.
D. Compare and contrast diverse artistic styles, different genres, varied cultural performance histories and their origins.
E. Demonstrate an understanding and working knowledge of how to produce a play on the stage, including an appreciation of all theatre occupations - playwriting, directing, acting, design and technical production.

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).

Core: Required Core (9 units):

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAM-01 Introduction to Theater</td>
<td>3</td>
</tr>
<tr>
<td>DRAM-08 Theatre History I: Ancient to Romanticism</td>
<td>3</td>
</tr>
<tr>
<td>DRAM-02 Rehearsal &amp; Performance</td>
<td>2</td>
</tr>
<tr>
<td>DRAM-02L Rehearsal &amp; Performance Lab</td>
<td>1</td>
</tr>
<tr>
<td>DRAM-12 Acting I</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>9</td>
</tr>
<tr>
<td>DRAM-02L Rehearsal &amp; Performance Lab (up to 3)</td>
<td></td>
</tr>
<tr>
<td>DRAM-13 Acting II (3)</td>
<td></td>
</tr>
<tr>
<td>DRAM-15 Stagecraft (3)</td>
<td></td>
</tr>
<tr>
<td>DRAM-16 Introduction to Costume Design and Construction (3)</td>
<td></td>
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<tr>
<td>DRAM-23 Script Analysis: Plays in Performance (3)</td>
<td></td>
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</tbody>
</table>

Total Units toward the Major: 38-40
Total Units that may be double counted: 6
General Education (CSU-GE or IGETC) Units: 38-40
Elective (CSU Transferable) Units: 6
Total Degree Units: 60

COOPERATIVE WORK EXPERIENCE
http://www.mccd.edu/thearts/
**DEGREE**

A.A. - Theatre Arts (10600.AA)

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.

Core:

<table>
<thead>
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<tr>
<td>DRAM-01 Introduction to Theater</td>
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</tr>
<tr>
<td>DRAM-02 Rehearsal and Performance</td>
<td>8</td>
</tr>
<tr>
<td>DRAM-02L Rehearsal and Performance Lab</td>
<td>4</td>
</tr>
<tr>
<td>DRAM-08 Theatre History: Ancient to Romanticism</td>
<td>3</td>
</tr>
<tr>
<td>DRAM-12 Acting I</td>
<td>3</td>
</tr>
<tr>
<td>DRAM-15 Stagecraft</td>
<td>3</td>
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<tr>
<td>Plus six units from the following electives:</td>
<td>6</td>
</tr>
<tr>
<td>DRAM-13 Acting II</td>
<td></td>
</tr>
<tr>
<td>DRAM-14 Acting III: Advanced Scene Study</td>
<td></td>
</tr>
<tr>
<td>DRAM-16 Introduction to Costume Design and</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>DRAM-23 Script Analysis: Plays in Performance</td>
<td>3</td>
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<tr>
<td>Total units</td>
<td>30</td>
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</table>

Recommened units: A.A. - Theatre Arts (10600.AA)

**Fall 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>DRAM-02 Rehearsal and Performance</td>
<td>2</td>
</tr>
<tr>
<td>DRAM-02L Rehearsal and Performance Lab</td>
<td>1</td>
</tr>
<tr>
<td>DRAM-12 Acting I</td>
<td>3</td>
</tr>
<tr>
<td>DRAM-08 Theatre History: Ancient to Romanticism</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>DRAM-08 Theatre History: Ancient to Romanticism</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fall 2**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAM-02 Rehearsal and Performance</td>
<td>2</td>
</tr>
<tr>
<td>DRAM-02L Rehearsal and Performance Lab</td>
<td>1</td>
</tr>
<tr>
<td>DRAM-15 Stagecraft</td>
<td>3</td>
</tr>
</tbody>
</table>

**Spring 2**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAM Elective(s)</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended Sequence**

**DRAMA (DRAM)**

**DRAM-01 INTRODUCTION TO THEATER**

(C-ID THTR 111) (CSU breadth area C1/C2) (IGETC area 3B)

3 units: 3 hours lecture.

Advisory: ENGL-85.

This course is an introduction to the art of theater that delves into the nature of theatrical presentation, elements of dramatic structure, and the contributions of the playwright, actor, director, designer, technician, and audience. (3/12)

**DRAM-02 REHEARSAL AND PERFORMANCE**

(C-ID THTR 191)

2 units: 1 hour lecture, 3 hours lab.

Limitation on enrollment: Enrollment by audition or interview, instructor signature required. One-way corequisite: DRAM-02L. Advisory: ENGL-85.

This course focuses on preparing students for the practical application of rehearsal techniques, play promotion, and production towards public performance using a different work or genre for each subsequent offering. Stage management, direction, rehearsal procedures, and marketing skills are stressed. Because a different work or genre is explored in each subsequent offering, the course may be repeated three times. (5/14)

**DRAM-02L REHEARSAL AND PERFORMANCE LAB**

(C-ID THTR 192)

1 unit: 54 hours lab by arrangement.

Limitation on enrollment: Enrollment by audition or interview, instructor signature required. Advisory: ENGL-85.

This course is the lab only portion of Rehearsal and Performance in which students put into practice learned technical skills in technical rehearsal and public performance of a college production. This course is intended for stage running crew and additional actor in minor roles only. This course may be repeated three times. This course is available for 54 hours of “To Be Arranged” a semester. (1/13)

**DRAM-04 ACTOR’S WORKSHOP**

2 units: 2 hours lecture.

Limitation on enrollment: Enrollment by audition or interview, instructor signature required. One-way corequisite: DRAM-04L. Advisory: ENGL-85.

This course is an individual examination of basic acting techniques as applied to laboratory scenes and commencing in actual public performance. Critical evaluation, demonstration, and written reviews are required. (1/13)

**DRAM-04L ACTOR’S WORKSHOP LAB**

1 unit: 3 hours lab.

Limitation on enrollment: Enrollment by audition or interview, instructor signature required. Advisory: ENGL-85.

This course focuses on practical application in technical rehearsals and public performance of rehearsal skills, promotion, production skills and performance techniques begun in Actor’s Workshop. (1/13)

**DRAM-08 THEATRE HISTORY: ANCIENT TO ROMANTICISM**

(C-ID THTR 113)

(CSU breadth area C1) (IGETC area 3A)

3 units: 3 hours lecture.

Prerequisite: ENGL-01A.

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. (10/12)
DRAM-12 ACTING I  
(C-ID THTR 151)  
3 units: 2 hours lecture, 3 hours lab  
Advisory: 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  
(C-ID THTR 152)  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: DRAM-12. Advisory: 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  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: 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  
(C-ID THTR 171)  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-01A.  
This course is a study of the physical aspects of stagecraft, including makeup, set construction, scenic artistry, lighting, costing, 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  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
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  
(C-ID THTR 114)  
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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  
0.5 - 2 units: 0 - 2 hours lecture, 0 - 6 hours lab.  
Advisory: ENGL-85.  
This is a course covering a variety of topics of current interest to students of art. Different topics will be emphasized each time the course is offered. Sections of this course may vary in unit value depending on subject matter, meeting time, and format. Each letter may be taken only once. (2/01)
ECONOMICS (ECON)

ECON-01 INTRODUCTION TO MICROECONOMICS
(CSU breadth area D) (IGETC area 4) (C-ID ECON 201)
3 units: 3 hours lecture.
Prerequisite: ENGL-85; MATH-81. Advisories: ENGL-01A.
ECON-01 is an introductory course in microeconomic theories including maximization, benefit verses 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, market outcomes, and the role of government in the market. (5/13)

ECON-02 INTRODUCTION TO MACROECONOMICS
(CSU breadth area D) (IGETC area 4) (C-ID ECON 202)
3 units: 3 hours lecture.
Prerequisite: AGBS-11 or ECON-01; ENGL-85; MATH-81. Advisories: ENGL-01A.
ECON-02 is an introductory course in macroeconomic theories including the determination of income, output, employment, and prices in the economy; the monetary system; governmental fiscal, monetary, and income policies; economic growth; international trade; and economic development. (11/13)
**Electricity-Electronics**

**CAREER AND TECHNICAL EDUCATION**

**DEGREES**
- A.A. - Computer and Networking Technology
- A.A. - Electrical Technology
- A.A. - Electronics Technician
- A.A. - Instrumentation and Process Control Technology
- A.A. - Mechatronics/Automated Systems Technician

**CERTIFICATES**
- Computer and Networking Technology
- Electronics Technician
- Industrial Electrical Technician
- Instrumentation and Process Control Technology
- Mechatronics/Automated Systems Technician

**Gainful Employment Disclosure Metrics**
Gainful Employment provides students information useful in determining which school to attend for 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 address: [Merced College Gainful Employment](#).

**Program Description**
The Electronics Department at Merced College is offering cross-disciplinary curricula that prepare students for rewarding entry-level technician positions in various high-tech fields as Electronics, Electrical, Computer Networking and Industrial Electronics, and Instrumentation and Process Control.

These programs introduce students to electrical and electronics tools, components, circuits, energy sources, analog and digital integrated devices that can be found in complex technical equipment. Hands-on laboratory exercises are designed to develop real-world practical skills in using modern test equipment for troubleshooting circuits and repairing various industrial computerized systems and networks, specific to each area of study.

**Career Opportunities**
Students who graduate with a degree in electronics have many work opportunities. There are wide variety of businesses that are looking for workers with good electronics background to maintain, repair electronic equipment or to provide technical support to engineers in such areas as research, design, development, testing, or manufacturing process.

**DEGREE**

**[5/13]**

- **A.A. - Computer and Networking Technology**
  **(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.
B. Demonstrate field related entry level theoretical and practical skills.
C. Employ the principles of job related safety requirements.

**Core:**
- **CPSC-30** Computer Applications ........................................3
- **CPSC-40A** or **ELCT-40A** Networking for Home and Small Businesses........3
- **CPSC-40B** or **ELCT-40B** Working at a Small-to-Medium Business or ISP .....3
- **ELCT-30** or **ELCT-31** Exploring the World of Electricity and Electronics.....3
- **ELCT-34** Digital Logic Circuits and Systems...............................3
- **ELCT-36** or **ELCT-40C** Networking Topologies and Cabling..............3
- **ELCT-40D** or **ELCT-44** Routing and Switching in the Enterprise ..........3
- **ELCT-51A** or **ELCT-51B** Designing and Supporting Computer Networks.....3
- **ELCT-51** or **ELCT-52** Personal Computer Configuration, Assembly and Repair..................................................3
- **A+ Certification Training**......................................................3

**Units**
33-35

**DEGREE**

**[2/08]**

- **A.A. - Electrical Technology**  **(09200.AA)**

  For an Associate in Arts Degree in Electrical Technology, students must meet the graduation requirements and complete the following required courses.

**Program Student Learning Outcomes**
A. Exhibit the ability to communicate effectively in accomplishing job related tasks.
B. Demonstrate field related entry level theoretical and practical skills.
C. Recognize an appreciation for life-long learning.
D. Employ the principles of job related safety requirements.

**Core:**
- **DRFT-44** Print Reading and Sketching........................................3
- **ELCT-30** or **ELCT-31** Exploring the World of Electricity and Electronics.....3
- **ELCT-52** Foundations of Electronics - DC and AC Circuits..............5

**Units**
3
DEGREE (5/13)
A.A. - Electronics Technician  (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 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 trouble shoot electronic circuits.

Core:  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..................... 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  PC Configuration, Assembly & Repair.................. 3

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DEGREE (2/13)
A.A. - Mechatronics/Automated Systems Technology  (09660.AA)

An Associate in Arts Degree in Mechatronics/Automated Systems Technology will be awarded upon the completion of the required program courses with a minimum grade of 2.0 in each course required for the degree.

Program Student Learning Outcomes
A. Demonstrate entry level theoretical and practical skills applicable to mechatronics systems.
B. Recognize the importance of following the safety regulations at the workplace.
C. Exhibit the ability to communicate effectively in accomplishing job related tasks.

Core:  Units
ELCT-31  Foundations of Electronics - DC and AC Circuits..... 5
ELCT-32  Fundamentals of Analog Electronics..................... 5
ELCT-34  Digital Logic Circuits and Systems..................... 3
ELCT-35  Microcontrollers and Programming with Robotics
Applications.............................................................. 4
ELCT-41  Industrial Motor and Equipment Control............... 3
ELCT-42A  Programmable Logic Controllers...................... 2
ELCT-42B  Advanced Topics in PLC Configuration and
Programming......................................................... 2
ELCT-43A  Industrial Instrumentation and Process Control..... 3
ELCT-44  Electronics Project Design, Fabrication and Repair.. 3
ELCT-47  Electrical Motors, Generators, Transformers and AC
Distribution................................................................... 3
ELCT-55  Electrical Conduit Bending Theory and Techniques.. 1

32-34

2015-2016 CATALOG
CERTIFICATE (5/13)
Computer and Networking Technology (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.

Core: Units
CPSC-30 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 ............................. 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 431
ELCT-51A Personal Computer Configuration, Assembly and Repair .................................................. 3
ELCT-51B A+ Certification Training .............................................. 3
33-35

Recommended Sequence:
Computer and Networking Technology (09040.CT)

Fall Semester Units
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 Project Design, Fabrication and Repair .................... 3
ELCT-51A Personal Computer Configuration, Assembly and Repair .................................................. 3
CPSC-30 Computer Applications .............................................. 3

Spring Semester Units
ELCT-34 Digital Logic, Circuits, & Systems ............................ 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
33-35

CERTIFICATE (2/14)
Industrial Electrical Technician (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.

Core: Units
ELCT-41 Industrial Motor and Equipment Control .................. 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 ................................................... 3
INDT-41 Industrial Power Transmission ............................... 3
INDT-49 Electrical Codes and Ordinances ......................... 3
31

Recommended Sequence: Industrial Electrical Technician (09510.CT)

Fall Semester classes Units
INDT-25 Fluid Power ......................................................... 3
ELCT-41 Industrial Motor and Equipment Control .................. 3
ELCT-42A Principles and Applications of Programmable Logic Controllers .................................................. 2
ELCT-47 Electrical Motors, Generators, Transformers & AC Distribution .................................................. 3
INDT-49 Electrical Codes and Ordinances ........................... 3
INDT-52 Introduction to Electricity and Electronics ............... 3
ELCT-55 Electrical Conduit Bending ................................. 1

Spring Semester classes Units
ELCT-53A Solar Installer Course 1 ............................................ 3
ELCT-56 Introduction to Mechatronics ................................. 4
INDT-35 Electrical Wiring: Residential and Industrial .......... 3
INDT-41 Industrial Power Transmission ............................... 3
31
CERTIFICATE  (5/13)
Electronics Technician  (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 trouble shoot electronic circuits.

Core: 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..................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  PC Configuration, Assembly & Repair .............3

Units: 30-32

CERTIFICATE  (5/13)
Instrumentation and Process Control Technology      
(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, 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. Demonstrate field related entry level theoretical and practical skills.
C. Employ the principles of job related safety requirements.

Core: Units
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..................3
ELCT-35  Microcontrollers and Programming with Robotics Applications.........................................................4
ELCT-41  Industrial Motor and Equipment Control................3
ELCT-42A  Programmable Logic Controllers......................2
ELCT-42B  Advanced Topics in PLC Configuration and Programming.............................................2
ELCT-43A  Industrial Instrumentation and Process Control ......3
ELCT-44  Electronics Project Design, Fabrication and Repair..3
ELCT-47  Electrical Motors, Generators, Transformers and AC

ELCT-55  Distribution ..................................................3
ELCT-56  Electrical Conduit Bending Theory and Techniques...1

32-34

CERTIFICATE  (2/13)
Mechatronics/Automated Systems Technology         
(09660.CT)

A Certificate of Achievement in Mechatronics/Automated Systems Technology will be awarded upon completion of the required program courses with a minimum grade of 2.0 in each course required for the certificate.

Program Student Learning Outcomes
A. Demonstrate entry level theoretical and practical skills applicable to mechatronics systems.
B. Demonstrate field related entry level theoretical and practical skills applicable to mechatronics systems.
C. Demonstrate field related entry level theoretical and practical skills applicable to mechatronics systems.

Core: Units
ELCT-31  Foundations of Electronics - DC and AC Circuits.....5
ELCT-32  Digital Logic Circuits and Systems..................5
ELCT-34  Digital Logic Circuits and Systems..................3
ELCT-35  Microcontrollers and Programming with Robotics Applications.........................................................4
ELCT-41  Industrial Motor and Equipment Control................3
ELCT-42A  Programmable Logic Controllers......................2
ELCT-42B  Advanced Topics in PLC Configuration and Programming.............................................2
ELCT-56  Advanced Topics in Mechatronics/Automated Systems ..................................................5

Units: 33

ELECTRICITY -- ELECTRONICS  (ELCT)

ELCT-30  EXPLORING THE WORLD OF ELECTRICITY AND ELECTRONICS  
3 units: 3 hours lecture.
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  
5 units: 3 hours lecture, 6 hours lab.
Advisories: ENGL-85, 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  
5 units: 2 hours lecture, 9 hours lab.
Prerequisite: ELCT-31. Advisories: ENGL-85; 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 transistors, as well as operational amplifiers and their practical applications (e.g. rectifiers, amplifiers, power supplies). The skills emphasized are
ELCT-34 DIGITAL LOGIC, CIRCUITS, AND SYSTEMS (FOUNDATIONS OF ELECTRONICS)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ELCT-30, ELCT-31; READ-81, ENGL-84; 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/V and D/A converters and the basic operation of programmable logic controllers and microcomputers will be introduced. (2/13)

ELCT-35 MICROCONTROLLERS AND PROGRAMMING WITH ROBOTICS APPLICATIONS
4 units: 2 hours lecture, 6 hours lab.
Prerequisite: ELCT-34. Advisory: ELCT-30, ELCT-31; ENGL-85.
This is an introductory course to the design and control of autonomous robots. Students will start by exploring microcontroller programming with PBASIC and Basic Stamp interface board. Students will gain first-hand experience with more advanced topics such as input and output processing, motion control, servo motor control, as well as ultrasound, tactile, light and robotic vision navigation. These topics will be explored through lectures, textbook assignments and ample hands-on laboratory experiments and project troubleshooting. (2/13)

ELCT-36 NETWORKING TOPOLOGIES AND CABLING
3 units: 2 hours lecture, 3 hours lab.
Advisories: ELCT-51B; ENGL-85; 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 cabling 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 parts 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)
[CILC areas A,C,E]
3 units: 2 hours lecture, 3 hours lab.
Advisories: ELCT-51A; ENGL-85; 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. (2/13)

ELCT-40B WORKING AT A SMALL-TO-MEDIUM BUSINESS OR ISP (ALSO: CPSC-40B)
[CILC areas A,C,E]
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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. (5/13)

ELCT-40C ROUTING AND SWITCHING IN THE ENTERPRISE
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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. (5/13)

ELCT-40D DESIGNING AND SUPPORTING COMPUTER NETWORKS
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: 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. (5/13)

ELCT-41 INDUSTRIAL MOTOR AND EQUIPMENT CONTROL (APPLICATIONS OF ELECTRONICS)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ELCT-31; ENGL-85.
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
2 units: 1 hour lecture, 3 hours lab.
Advisories: ELCT 34; ENGL-85.
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
2 unit: 1 hour lecture, 3 hours lab.
Prerequisite: ELCT-42A. Advisory: 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
3 units: 2.5 hours lecture, 1.5 hours lab.
Advisories: ELCT-31; ENGL-85; 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: level & pressure, flow, temperature, pneumatic control, electronic controls and sensors, dynamic braking of Direct Current (DC) motors, linear motion, and flux vector Alternating Current (AC) drives may be addressed. (5/13)
ELCT-44  ELECTRONICS PROJECT DESIGN, FABRICATION AND REPAIR
3 units: 2 hours lecture, 3 hours lab.
Prerequisites: ELCT-30 or ELCT-31. Advisories: ENGL-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. (5/13)

ELCT-47  ELECTRICAL MOTORS, GENERATORS, TRANSFORMERS, AND AC DISTRIBUTION
3 units: 2 hours lecture, 3 hours lab.
Advisories: ELCT-31; ENGL-85; 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
[CILC area A]
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80 or MATH-85.
This course is 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
[CILC area A]
3 units: 2 hours lecture, 3 hours lab.
Advisory: ELCT-51A; ENGL-85; 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
3 units: 2.5 hours lecture, 1.5 hours lab.
Advisories: READ-81, ENGL-84; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
1 unit: 0.5 hour lecture, 1.5 hours lab.
Advisories: READ-81, ENGL-84; 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
4 units: 2 hours lecture, 6 hours lab.
Prerequisite: 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-57  ADVANCED TOPICS IN MECHATRONICS/AUTOMATED SYSTEMS
5 units: 3 hours lecture, 6 hours lab.
Prerequisite: ELCT-42B, ELCT-56. Advisory: ELCT-32, ELCT-43A.
This course introduces students to advanced mechatronics systems that integrate complex mechanical, electronic, pneumatics and PLC programming software applications. 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 through laboratory activities. (10/14)

ELCT-71A-Z  ELECTRONICS/INDUSTRIAL ELECTRONICS TECHNOLOGY SPECIAL TOPICS
0.5 - 4 units: 1.5 - 12 hours lab.
Prerequisite/Advisory: None.
This course is the study of principles, processes, and theories of the special topic being presented. (3/96)
CERTIFICATE
Emergency Medical Technician

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Career Opportunities
This certificate leads to potential employment with ambulance providers, fire departments, police departments, hospitals, doctor’s offices and private companies who require on-site emergency medical responders. Many who enter at the EMT level also choose to continue their education toward an advanced health care profession.

Web site
www.mccd.edu/alliedhealth/

CERTIFICATE (11/10)
Emergency Medical Technician (12100.CE)

This program is designed to provide the education and training for individuals interested in sitting for the National Registry of Emergency Medical Technicians (NREMT) exam and obtaining Emergency Medical Technician certification. Upon receipt of this certificate, students are then eligible for an entry level position as an EMT.

Program Student Learning Outcomes
A. Demonstrate an understanding of all facets of basic life support according to state and national standards, to include assessment, emergency treatment, and equipment operation.
B. Effectively communicate patient details to base hospital emergency department personnel.
C. Successfully pass the National Registry of Emergency Medical Technicians (NREMT) exam.

Core: Units
EMER-50 Emergency Medical Technician I.........................6
EMER-51 Emergency Medical Technician I, Ambulance........1
EMER-52 Emergency Medical Technician II..........................5
Core: Units
EMER-10 Paramedic I........................................6
EMER-11 Paramedic I Lab........................................1
EMER-20 Advanced Paramedic......................................2

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.

Limitations on enrollment for both EMER-50 and EMER-51: Participants must have a current CPR card based on American Red Cross or American Heart Association that includes one- and two-rescuer CPR plus infant CPR; negative TB skin test or negative chest X-ray for TB.

Advisories: ENGL-84; ALLH-67; a first aid course equivalent to the course offered by the Red Cross.

EMER-50 and EMER-51 should be taken concurrently in order to verify that the student has met all EMT I course requirements.
EMER-21 ADVANCED PARAMEDIC LAB
1.5 units: 4.5 hours lab.
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-30 PARAMEDIC, ACUTE CLINICAL LAB
3 units: 9 hours lab TBA.
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
9 units: 27 hours lab TBA.
This course is the final course in the paramedic series and occurs completely in the field under the direct supervision of a certified pre-arranged 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-50 EMERGENCY MEDICAL TECHNICIAN I
6 units: 5 hours lecture, 3 hours lab.
Limitation 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. Two way corequisite: EMER-51. Advisories: ALLH-67, ENGL-85, First Aid. Be able to perform first aid based on the course offered by the Red Cross or its equivalent: a) recognize when emergency has occurred; b) follow emergency action steps in any emergency; c) provide basic care for injury and or sudden illness until the victim can receive professional medical help.
This beginning course is 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-50A EMERGENCY MEDICAL TECHNICIAN 1, MODULE A
2.5 units: 2.25 hours lecture, 7.5 hours lab.
Limitation 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. Advisory ALLH-67; ENGL-85.
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 1 certifying exam from the National Registry of Emergency Medical Technicians. (10/14)

EMER-50B EMERGENCY MEDICAL TECHNICIAN 1, MODULE B
4.5 units: 3.75 hours lecture, 2.25 hours lab.
Limitation 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. Prerequisite: EMER-50A. Advisories: ALLH-67, ENGL-85.
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-51 EMERGENCY MEDICAL TECHNICIAN I, AMBULANCE
1 unit: 18 total hours lecture, plus 8 hours of field experience.
Limitation on enrollment: Valid California Driver’s License; Negative TB skin test or negative chest x-ray for TB within one year; valid CPR certification based on American Red Cross Professional Rescuer or American Heart Association Healthcare Provider. Two-way corequisite: EMER-50. Advisories: ALLH-67; ENGL-85, First Aid: Be able to perform first aid based on the course offered by the Red Cross or its equivalent: a) recognize when emergency has occurred; b) follow emergency action steps in any emergency; c) provide basic care for injury and or sudden illness until the victim can receive professional medical help.
This course provides the ambulance module of the EMT 1 certification program. Topics for the course include the roles and responsibilities of ambulance personnel, legal aspects of ambulance operation, radio communications, maintenance of medical equipment and supplies, driver’s licensing requirements. This course with EMER-50 satisfies the California Administrative Code requirements for eligibility for certification as an EMT 1. (11/14)

EMER-52 EMERGENCY MEDICAL TECHNICIAN 1 REFRESHER
1.5 units: 24 hours total lecture.
Limitation 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)
Engineering
MATH, SCIENCE AND ENGINEERING

DEGREES
A.S. - Engineering
A.S. - Engineering Technology

Program Description
Widely diversified professional engineering programs are available at California universities. Merced College offers the first two years of engineering to prepare students for transfer at the junior class level into a bachelor's degree program.

Students must be aware that completion of the course selection does not necessarily satisfy all lower division requirements as specified by the Engineering Liaison Committee. The program is listed in such a way as to permit sufficient flexibility for students transferring to a variety of institutions. Students must work closely with their counselors to assure a smooth transition to the four-year institution of their choice.

Engineering Technology is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the craftsman and the engineer.

Engineering Technology prepares the student for junior class standing at California State University at Pomona, San Jose, San Luis Obispo, and Sacramento, and Northrop Institute of Technology in most specialized fields of engineering technology. This program leads to a Bachelor's in Science Degree and classification as an engineering technologist.

Career Opportunities
- Aerospace Engineers
- Agricultural Engineers
- Biomedical Engineers
- Chemical Engineers
- Civil Engineers
- Electrical Engineering
- Environmental Engineers
- Industrial Engineers
- Materials Engineers
- Mechanical Engineering
- Geological Engineers
- Petroleum Engineers
- Software Engineers

DEGREE (2/14)
A.S. - Engineering (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.

Core: Units
CHEM-04A General Chemistry I .............................................. 5
ENGR-15 Elementary Mechanics (Statics)............................... 3
ENGR-18 Electrical Circuits Analysis ...................................... 4
ENGR-45 Engineering Materials ............................................. 4
MATH-04A Calculus I ............................................................ 4
MATH-04B Calculus II .......................................................... 4
MATH-04C Multivariable Calculus ........................................... 4
MATH-06 Differential Equations ............................................. 3
PHYS-04A Physics I ............................................................. 4
PHYS-04B Physics II ......................................................... 4

Total Units 39

Suggested Electives: Units
(Please talk to a counselor and Engineering Professional for guidance on which courses to take.)
CHEM-04B General Chemistry II .............................................. 5
CPSC -06 Programming Concepts & Methodology I .................... 3
or
CPSC-14 C++ Programming .................................................. 3
or
ENGR-14 C++ Programming .................................................. 3
DRFT-25 Descriptive Geometry .............................................. 3
ENGR-30 Introduction to Engineering ..................................... 2
MATH-08 Linear Algebra ..................................................... 3
PHYS-04C Physics III ......................................................... 4
DEGREE (2/14)  
A.S. - Engineering Technology (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.
E. Use appropriate technology in a variety of engineering problems.

Core: Units
CHEM-04A General Chemistry I .................................................5
CPSC-06 Programming Concepts & Methodology I .......................3
or CPSC-14 C++ Programming ..................................................3
or ENGR-14 C++ Programming ..................................................3
ENGR-18 Electrical Circuits Analysis .........................................4
ENGR-45 Engineering Materials ................................................4
MATH-04A Calculus I .............................................................4
MATH-04B Calculus II .............................................................4
MATH-04C Multivariable Calculus ..............................................4
PHYS-04A Physics I ...............................................................4
PHYS-04B Physics II ..............................................................4
Total Units 36

Suggested Electives: Units
(Please talk to a counselor and Engineering Professional for guidance on which courses to take.)
DRFT-25 Descriptive Geometry ..................................................3
ENGR-15 Elementary Mechanics (Statics) ...............................3
ENGR-30 Introduction to Engineering ......................................2
MATH-06 Differential Equations .............................................3
MATH-08 Linear Algebra .........................................................3

Recommended Sequence: A.S. - Engineering (09300.AS)
Additional units can be taken as breadth and/or elective courses.

Fall 1
ENGR-30 Introduction to Engineering ..................................2
MATH-04A Calculus I ............................................................4

Spring 1
MATH-04B Calculus II ..........................................................4

Fall 2
ENGR-15 Elementary Mechanics (Statics) ............................3
MATH-04C Multivariable Calculus .........................................4

Spring 2
ENGR-18 Electrical Circuits Analysis ....................................4
MATH-06 Differential Equations ...........................................3

Suggested Sequence: A.S. - Engineering Technology (09350.AS)
Additional units can be taken as breadth and/or elective courses.

Fall 1
CHEM-04A General Chemistry I ...........................................5
MATH-04A Calculus I ............................................................4

Spring 1
ELCT-31 Direct Current and Alternating Current Circuits ....5
MATH-04B Calculus II ..........................................................4
PHYS-04A Physics I .............................................................4

Fall 2
ENGR-15 Elementary Mechanics (Statics) ............................3
MATH-04C Multivariable Calculus .........................................4
PHYS-04B Physics II ...........................................................4

Spring 2
ENGR-15 Elementary Mechanics (Statics) ............................3

ENGINEERING (ENGR)

ENGR-14 C++ PROGRAMMING (ALSO: CPSC-14)  
(C-ID COMP 122)  
3 units: 2 hours lecture, 3 hours lab.  
Prerequisite: MATH-C. Advisory: 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++. (12/13)

ENGR-15 ELEMENTARY MECHANICS (STATICS)  
3 units: 3 hours lecture.  
Prerequisite: PHYS-04A. One-way corequisite: MATH-04C. Advisory: ENGL-85.

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  
4 units: 3 hours lecture, 3 hours lab.  
Prerequisite: PHYS-04B. One-way corequisite: MATH-04C. Advisory: ENGL-85.

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. (2/08)

ENGR-30 INTRODUCTION TO ENGINEERING  
[CILC area C, D]  
2 units: 1 hour lecture, 3 hours lab.  
Advisories: ENGL-85; MATH-C.

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. (10/11)

ENGR-45 ENGINEERING MATERIALS  
4 units: 3 hours lecture, 3 hours lab.  
Prerequisites: CHEM-04A; MATH-04A; PHYS-04A. Advisory: ENGL-85.

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  
0.5 - 3 units: 0-3 hours lecture, 0-9 hours lab.  
Advisories: ENGL-85; LRNR-30; MATH-C.

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. (4/08)
DEGREE (10/12)

A.A.T. - English (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.

Core: 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: Select a minimum of 6 units from the following ............ 6
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 - Beginnings to Civil War (3)
ENGL-11 American Literature - Civil War to Present (3)

List B: Select a minimum of 3 units from the following ............ 3
Any course from List A not used above. (3)
ENGL-05 Introduction to Fiction (3)
ENGL-12 Creative Writing (3)

List C: Select a minimum of 3 units from the following ............ 3
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 (5)
GERM-03 Intermediate German (5)
GERM-04 Intermediate German (5)
HUM-01 Studies in Humanities:
SPAN-03 Intermediate Spanish (5)
SPAN-04 Intermediate Spanish (5)
Elective (CSU Transferable) Units: .................................................. 11-14
Total Degree Units: ........................................................................ 60

Recommended Sequence: A.A.T - English (15200.AAT)
ENGL-01A and 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 - 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 - Poetry........................................3
ENGL-11 American Literature - 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 to the Late 18th Century 3
ENGL-08 Introduction to Shakespeare......................................3
ENGL-12 Creative Writing.........................................................3

ENGLISH (ENGL)

ENGL-01A COLLEGE COMPOSITION AND READING
(C-ID ENGL 100) (CSU breadth area A2) (IGETC area 1A) [CILC area G]
4 units: 4 hours lecture.
Prerequisite: ENGL-05. Advisory: LRNR-30.
This course focuses on critical reading and thinking, research strategies, and scholarly composition with proper documentation at the college transfer level. Students write expository, analytical, and argumentative essays informed by assigned readings, discussion, and/or research. (2/12)

ENGL-01B INTRODUCTION TO LITERATURE
(C-ID ENGL 120) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A.
This course introduces representative works from four major genres: short story, novel, drama, and poetry. Students develop analytical and evaluative reading and writing skills while acquiring an appreciation for the cultural context and the aesthetic qualities of literature. Students read texts from various countries and periods in order to encourage an appreciation of literature’s range, artistry, and insight into the human experience. (2/12)

ENGL-02 ORAL INTERPRETATION (ALSO: COMM-02)
3 units: 3 hours lecture.
Prerequisite: ENGL-85.
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)

ENGL-04A INTRODUCTION TO WORLD LITERATURE: ANCIENTS TO 1650
(CSU breadth area C2) (IGETC area 3B) (C-ID ENGL 140)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
This course examines the origins and developments of world literatures and cultures from the ancients to 1650 through various literary genres and cultural traditions. Primary focus will fall on major works of certain periods and of geographic origins. Students will engage in comparative analysis and evaluation of the literary works as well as close study of the works in addition to the study of each text’s merit. (3/12)

ENGL-04B INTRODUCTION TO WORLD LITERATURE: 1650 TO PRESENT
(C-ID ENGL 145) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
This course examines the origins and subsequent developments of world literatures and cultures from 1650 to the present through various literary genres and cultural traditions. Primary focus will fall on major works of certain periods and of geographic origins. Students will engage in comparative analysis and evaluation of the literary works as well as close study of the works in addition to the study of each text’s merits. (5/05)

ENGL-05 INTRODUCTION TO FICTION
(CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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
(C-ID ENGL 160) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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
(C-ID ENGL 165) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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
(CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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-08 INTRODUCTION TO SHAKESPEARE
(CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
Introduction to Shakespeare is a course of literary analysis based on reading and studying the major works of William Shakespeare. The course focuses on a number of Shakespeare’s plays, especially the most widely-known ones, from the categories Comedy, History, and Tragedy, as well as a survey of his non-dramatic poetry. As this course is an introductory course, students will receive the opportunity to learn about Elizabethan England -- the England of the time of Shakespeare. (12/04)
ENGL-10  AMERICAN LITERATURE FROM BEGINNINGS TO CIVIL WAR
(C-ID ENGL 130) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
This course is designed to introduce students to the history and variety of literature from American Literature's beginnings to the Civil War. Representative works are read as examples of various genres, literary trends, and historical eras. (2/12)

ENGL-11  AMERICAN LITERATURE FROM POST-CIVIL WAR TO PRESENT
(C-ID ENGL135) (CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
This course is designed to introduce students to the history and variety of American literature from the end of the 1865 to the present. Representative works of major and influential authors are read as examples of various genres, literary movements, and historical eras. (2/12)

ENGL-12  CREATIVE WRITING
(C-ID ENGL 200)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: ENGL-01B.
A course designed to provide experience in the writing of poetry, drama, fiction, and creative non-fiction and to aid the student in becoming aware of the craft of writing as described and/or demonstrated by professional writers. The class is conducted primarily as a workshop in which students read their works for constructive criticism. (3/12)

ENGL-13  CRITICAL REASONING AND WRITING
(ASLO: PHIL-13)
(CSU breadth area A3) [CILC area G] (C-ID ENGL 105)
(IGETC area 1B)
3 units: 3 hours lecture.
Prerequisite: 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)

ENGL-13H  HONORS CRITICAL REASONING AND WRITING
(ASLO: PHIL-13H)
(C-ID ENGL 105) (CSU breadth area A3) [CILC area G]
(IGETC area 1B)
3 units: 3 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program.
Prerequisite: 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-13H/PHIL-13 meets the IGETC critical thinking/composition requirement. (3/12)

ENGL-14  INTRODUCTION TO FILM
(CSU breadth area C1) (IGETC area 3A)
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: ENGL-85. Advisory: 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
(CSU breadth area C1)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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
(CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Prerequisite: ENGL-01A. Advisory: 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 epics 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-83  FOUNDATIONS IN WRITING II
5 units: 5 hours lecture.
Prerequisite: ENGL-90 or ESL-92B. Advisory: Concurrent enrollment in READ-80.
This course focuses on developing short, unified written compositions (single to multi paragraph), basic English grammar, and sentence construction. The students construct short compositions with original sentences which demonstrate basic grammatical concepts and patterns of Standard Academic English. (2/11)

ENGL-84  FOUNDATIONS IN WRITING III
5 units: 5 hours lecture.
Prerequisite: ENGL-83 or ESL-83. Advisory: Concurrent enrollment in READ-81.
This course focuses on developing short, unified essays through intensive practice in writing, including composition structure and paragraph development, application of English grammar and usage in conjunction with written work, as well as analysis of and response to relevant texts. (2/14)

ENGL-85  FOUNDATIONS IN ACADEMIC LITERACY
5 units: 4 hours lecture, 3 hours lab.
Prerequisite: READ-81 and ENGL-84
This course focuses on a process-based approach to writing essays, including an introduction to argumentation, and offers a review of grammar and English usage in conjunction with composition assignments. Reading assignments include a variety of subjects for class discussion and for fostering reading comprehension and analysis. An introduction to library research and source materials is integrated into the course. This course also includes assignments in a computer-based setting to practice and enhance reading and writing skills, including individualized instruction and assistance. (2/12)

ENGL-90  FOUNDATIONS IN READING AND WRITING I
4 units: 4 hours lecture.
Advisory: Upon entering the course it is recommended that the student be able to read commonly used words and sound out words of more than two syllables.
This course will introduce students to text-based reading and 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 through context clues, to understand basic level appropriate texts, to think critically about those texts, and to respond in writing about their thinking at four levels below transfer. (2/11)
Program Description
This three-level ESL program helps students whose primary language is not English to acquire the English language skills and cultural awareness necessary to begin a program of study that prepares them to succeed in college level courses. Separate courses in grammar and linguistic competence, pronunciation and speaking, reading, and paragraph development prepare students to enter developmental reading and writing classes and do not count toward graduation. Because credit ESL courses begin on an intermediate level, it is recommended that students have three years of prior instruction in ESL, or speak, read, and write English regularly in their daily lives.

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL-80 FOUNDATIONS IN ESL READING II
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: ENGL-90 or ESL-92B. Advisory: Concurrent enrollment in ESL-83.
This course is intended for ESL students and is equivalent to READ 80. This course is designed to improve basic reading skills, primarily comprehension. The course will emphasize the application of reading strategies to improve students’ ability to read effectively at three levels below transfer. The course will stress vocabulary acquisition, literal and inferential comprehension, critical reading, and fluency. This course also includes assignments in a computer-based setting to practice and enhance reading skills, including individualized instruction and assistance. (12/13)

ESL-83 FOUNDATIONS IN ESL WRITING II
5 units: 5 hours lecture.
Prerequisite: ENGL-90 or ESL-92B. Advisory: Concurrent enrollment in ESL-80.
This course is intended for ESL students and is equivalent to English 83. This course focuses on developing short, unified written compositions (single to multi-paragraph), basic English grammar, and sentence construction. The students construct short compositions with original sentences which demonstrate basic grammatical concepts and patterns of Standard Academic English. (12/13)

ESL-92A ESL READING AND WRITING 1
5 units: 5 hours lecture.
Advisory: Student has completed non-credit ESL Level 5 or at least three years of the study of ESL/ELD in high school or adult school program or Student 1) has the ability to use complete English sentences to carry on a conversation with a native speaker, 2) is able to read English magazines and newspapers, and 3) is able to write complete sentences (although they 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. (12/09)

ESL-92B ESL READING AND WRITING 2
5 units: 5 hours lecture.
Prerequisite: ESL-92A.
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 vocabulary development and comprehension. Students will write about reading by using a step-by-step process to compose well-ordered paragraphs and short essays with a variety of sentence structures. (12/09)
Entrepreneurship
ALLIED HEALTH, BUSINESS AND PUBLIC SAFETY

DEGREE
A.A. - Small Business Entrepreneurship

CERTIFICATE
Small Business Entrepreneurship

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Entrepreneurship programs at Merced College are designed to equip students with the necessary skills to start and operate a small business. Students who possess industry skills or talents will be educated in areas to help them be successful business people. Additionally, students who complete undergraduate coursework in the field of entrepreneurship will be prepared for transfer to a four-year institution.

Career Opportunities
Business Owner, Investor, Administrator, Consultant, Manager, Community Leader, CEO, Partner, Controller, Partner.

Highlights
Merced College is a member of the national Collegiate Entrepreneur’s Organization (C-E-O), which supports the education of future entrepreneurs.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>ACTG-31</td>
<td>Computerized Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUS-10</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS-35</td>
<td>Money Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS-43</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
<td>3</td>
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<tr>
<td>MGMT-31</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-33</td>
<td>Elements of Effective Leadership</td>
<td>3</td>
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<tr>
<td>MGMT-37</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
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<tr>
<td>MKTG-30</td>
<td>Principles of Marketing</td>
<td>3</td>
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<td>MKTG-33</td>
<td>Advertising</td>
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Required - Select two courses from Management Series:

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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MGMT-50A</td>
<td>Challenges of Leadership: Difficult People/Tough Conversations</td>
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<tr>
<td>MGMT-50B</td>
<td>Values &amp; Ethics</td>
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<tr>
<td>MGMT-50C</td>
<td>Time Management</td>
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<td>MGMT-50D</td>
<td>Communication in the Workplace</td>
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<tr>
<td>MGMT-50F</td>
<td>Team Building</td>
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<tr>
<td>MGMT-50G</td>
<td>Decision Making &amp; Problem Solving</td>
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<tr>
<td>MGMT-50H</td>
<td>Customer Service</td>
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<tr>
<td>MGMT-50I</td>
<td>Attitude in the Workplace</td>
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<tr>
<td>MGMT-50J</td>
<td>Thrive and Survive in the Workplace</td>
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<tr>
<td>MGMT-51C</td>
<td>Leadership Essentials: What Emerging Leaders Need to Know</td>
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<tr>
<td>MGMT-51F</td>
<td>Conflict Resolution</td>
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<tr>
<td>MGMT-51G</td>
<td>Stress Management &amp; Counseling</td>
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<td>MGMT-52B</td>
<td>Writing Skills for Managers</td>
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<tr>
<td>MGMT-52C</td>
<td>Successful Business Speaking</td>
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<tr>
<td>MGMT-52D</td>
<td>Managing Organizational Change</td>
<td>0.5</td>
</tr>
</tbody>
</table>

30
CERTIFICATE (2/10)
Small Business Entrepreneurship (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.

Core:

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ACTG-31</td>
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<tr>
<td>BUS-10</td>
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<tr>
<td>BUS-35</td>
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<td>BUS-43</td>
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<tr>
<td>CPSC-30</td>
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<td>MGMT-31</td>
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<td>MGMT-33</td>
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<tr>
<td>MKTG-30</td>
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<td>MKTG-33</td>
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Required - Select two courses from Management Series:

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<tr>
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Recommended Sequence:

1st Semester (17 units)
- ACTG-04A or ACTG-51: Financial Accounting (prerequisite for ACTG-31) .....4
- BUS-10: Introduction to Business ...........................................3
- CPSC-30: Computer Applications ............................................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

2nd Semester (17 units)
- ACTG-31: Computerized Accounting ........................................2
- BUS-35: Money Management ................................................3
- BUS-43: Business Communication .........................................3
- MGMT-33: Elements of Effective Leadership .............................3
- MGMT-37: Small Business Entrepreneurship ..............................3
- MKTG-33: Advertising .........................................................3
- MKTG-33: Advertising .........................................................3
DEGREE
A.A. - Fire Technology

CERTIFICATE
Fire Technology

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Fire Technology Program is composed of three goal areas: an Associate Degree and/or Certificate of Achievement, Fire Fighter I Academy, and professional growth. With successful completion of the AA or Certificate program, a fire academy, and possession of an EMT certification, the student will possess the basic qualifications for entry level fire service application at most fire prevention and suppression departments.

Career Opportunities
Fire prevention and suppression offers many career opportunities including positions in municipal fire departments, county departments, fire protection districts, and California Fire agencies. There are also employment opportunities in correctional institutions, military bases, and numerous federal agencies. Specialists are in demand by industry.

Highlights
Academic and hands on experiences

DEGREE (2/11)
A.A. - Fire Technology (21400.AA)

For an Associate in Arts 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.

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.

Core:

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<th>Course</th>
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<td>FIRE-32</td>
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<td>FIRE-34</td>
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Plus six units from the following electives:

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<td>FIRE-39</td>
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<tr>
<td>FIRE-49A-ZZ</td>
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<td>FIRE-65F</td>
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<td>FIRE-70</td>
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CERTIFICATE
Fire Technology (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.A. 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.

Core:

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<td>FIRE-34</td>
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Plus 15 additional FIRE units .............................................. 15

30
ACADEMY

Firefighter

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.

Core:

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<th>Description</th>
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<tbody>
<tr>
<td>FIRE-63A</td>
<td>Basic Firefighter I, Academy A</td>
<td>8</td>
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<tr>
<td>FIRE-63B</td>
<td>Basic Firefighter I, Academy B</td>
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Fire Officer I

The following courses are designed to provide the fire officer with instruction according to the standards identified within the California Fire Service Master Plan for Training and Education. Successful completion of all eight courses may enable the participant to receive certification as a Fire Officer I.

Program Student Learning Outcomes
A. Demonstrate effective written communication skills.
B. Demonstrate effective verbal and nonverbal communication skills.
C. Apply the principles of fire technology.
D. Demonstrate an appreciation of lifelong learning.
E. Demonstrate the ability to evaluate information and incorporate it into appropriate tasks.
F. Demonstrate the ability to analyze and solve problems using logical and creative methods.

Core:

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<td>FIRE-71A</td>
<td>Fire Instructor I (Module A)</td>
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<td>Fire Instructor I (Module B)</td>
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<tr>
<td>FIRE-72B</td>
<td>Fire Command I (Module B)</td>
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<tr>
<td>FIRE-73A</td>
<td>Fire Prevention I (Module A)</td>
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<td>FIRE-73B</td>
<td>Fire Prevention I (Module B)</td>
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<tr>
<td>FIRE-75</td>
<td>Fire Management I - Management for Co Officers</td>
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Recommended Sequence: A.A. - Fire Technology (21400.AA)

Fall

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<td>FIRE-31</td>
<td>Fire Behavior and Combustion</td>
<td>3</td>
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<td>FIRE-32</td>
<td>Fire Prevention Technology</td>
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<tr>
<td>FIRE-33</td>
<td>Fire Protection Equipment and Systems</td>
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Spring

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<td>FIRE-30</td>
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</tr>
<tr>
<td>FIRE-34</td>
<td>Building Construction for Fire Protection</td>
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Suggested electives:

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<tr>
<td>FIRE-36</td>
<td>Hazardous Materials</td>
<td>3</td>
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<tr>
<td>FIRE-63A</td>
<td>Basic Firefighter I, Academy A</td>
<td>8</td>
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<tr>
<td>FIRE-63B</td>
<td>Basic Firefighter I, Academy B</td>
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FIRE TECHNOLOGY (FIRE)

FIRE-30 FIRE PROTECTION ORGANIZATION

3 units: 3 hours lecture.
Advisory: ENGL-85.
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

3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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

3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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

3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
This course provides 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

3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, seasonal or full-time firefighter for a certified fire protection department. Advisories: ENGL-85; MATH-80.
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
3 units: 3 hours lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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-47A  FIRE INVESTIGATION - 1A
2 units: 36 total hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
This course is an introduction to arson, laws related 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
2 units: 36 total hours lecture.
Prerequisite: FIRE-47A. Advisory: ENGL-85.
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
0.5 - 4 units: 0.5 - 4 hours lecture, 0 - 12 hours lab.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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 in the field. (9/13)

FIRE-63A  BASIC FIREFIGHTER I, ACADEMY A
8 units: 7 hours lecture, 3 hours lab.
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
8 units: 7 hours lecture, 3 hours lab.
Limitation on enrollment: Physician's clearance for strenuous activity. Prerequisite: FIRE-63A. Advisory: ENGL-85.
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. Students must supply instructor approved personal protective equipment (required instructional material). (11/12)

FIRE-65C  WILDLAND FIREFIGHTING STRATEGY & TACTICS
1 unit: 1 hour lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
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-65D  FIRE COMMAND I -- MODULE C
2 units: 2 hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisories: ENGL-85.
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 interface 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
2.5 units: 2.5 hours lecture.
Advisories: ENGL-85.
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
2 units: 2 hours lecture.
Limitation 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. Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
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
1 unit: 1 hour lecture.
Prerequisite: FIRE-30. Advisory: ENGL-85.
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
0.5 unit: .5 hours lecture.
Prerequisite: FIRE-30 or currently a paid call, seasonal, or full-time firefighter. Advisories: ENGL-85; Health questionnaire. Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
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-68A BASIC INCIDENT COMMAND SYSTEM (I-200)
1 unit: 1 hour lecture.
Limitation on enrollment: Instructor-verified ICS (I-100) completion. Advisory: ENGL-85.
This course is designed for the entry-level and veteran firefighter. The subject matter relates to principles and features of ICS, organization, incident facilities, incident resources and responsibilities associated with ICS Assignments. Student must have instructor verified ICS (1-100) completion. (2/11)

FIRE-68C INCIDENT COMMAND SYSTEM - INTERMEDIATE (I-300)
1.5 units: 1.5 hours lecture.
Prerequisite: FIRE-68B. Advisory: ENGL-85.
This course is designed for the entry-level and veteran firefighter. The subject matter relates to organization and staffing for incidents or events, incident resources management, air operations, and incident event planning. (11/11)

FIRE-68D ADVANCED INCIDENT COMMAND SYSTEM (I-400)
2 units: 2 hours lecture.
Prerequisite: FIRE-68C. Advisory: ENGL-85.
This is an advanced course in the Incident Command System. This course is designed for senior personnel who are expected to perform in a management capacity in an Area Command or multi-agency coordination system. This course is designed to provide overall incident management skills rather than tactical expertise. (2/13)

FIRE-69A FIRST RESPONDER MEDICAL
2.5 units: 2.5 hours lecture.
Prerequisite: FIRE-30 or currently a paid call, seasonal, or full-time firefighter. Advisory: ENGL-85.
This course is designed to meet the state requirements for emergency medical personnel. The course relates to patient assessment, cardiovascular systems, fractures, splinting, childbirth, and environmental emergencies. (10/13)

FIRE-69B FIRST RESPONDER RE-CERTIFICATION
1.5 units: 1.5 hours lecture.
Limitation on enrollment: Must possess a current valid CPR card in Basic Life Support of Health Care Providers (or equivalent) as outlined by the American Heart Association. Prerequisite: FIRE-69A. Advisory: ENGL-85.
This course is designed to meet the state re-certification requirements for emergency medical personnel. The course relates to patient assessment, cardiovascular systems, fractures, splinting, childbirth and environmental emergencies. Must possess a current valid CPR card in Basic Life Support of Health Care Providers. (2/13)

FIRE-70 FIRE DEPARTMENT ADMINISTRATION
3 units: 3 hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
This course is designed to cover broad subject matter and information necessary to organize and administer a fire department. (2/13)

FIRE-71A FIRE INSTRUCTOR I -- MODULE A
2.25 units: 40.5 total hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
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. (2/11)

FIRE-71B FIRE INSTRUCTOR I -- MODULE B
2 units: 2 hours lecture.
Prerequisite: FIRE-71A. Advisory: ENGL-85
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. (11/11)

FIRE-72A FIRE COMMAND I -- MODULE A
2 units: 40 total hours lecture.
Advisory: ENGL-85.
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. (11/12)
FIRE-72B  FIRE COMMAND I -- MODULE B
2 units: 40 total hours lecture.
Prerequisite: FIRE-72A. Advisory: ENGL-85.
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 PREVENTION I -- MODULE A
2 units: 40 total hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
This course will provide instruction in basic fire prevention management for company officers and fire prevention personnel. The students will learn responses to a variety of fire prevention situations in a professional and effective manner. This course will prepare the first-level fire officer to deal with responsibilities of fire prevention in his/her jurisdiction. (11/11)

FIRE-73B  FIRE PREVENTION I -- MODULE B
2 units: 40 total hours lecture.
Prerequisite: FIRE-73A. Advisory: ENGL-85.
This course will provide instruction in basic fire prevention management for company officers and fire prevention personnel. It will teach the response to a variety of fire prevention situations in a professional and effective manner. The course will prepare first-level fire officers to deal with responsibilities of fire prevention in his/her jurisdiction. (11/11)

FIRE-75  FIRE MANAGEMENT I - MANAGEMENT FOR COMPANY OFFICERS
2 units: 40 total hours lecture.
Prerequisite: FIRE-30 or current volunteer, paid call, or seasonal or full-time firefighter for a certified fire protection department. Advisory: ENGL-85.
This course will provide instruction to improve the student's managerial effectiveness and will require demonstration of growth and development in the use of managerial skills. The course will stress resource identification and utilization. (11/11)

FIRE-76A  FIRE APPARATUS DRIVER/OPERATOR 1A (EMERGENCY VEHICLE OPERATIONS)
2 units: 40 total hours lecture.
Limitation on enrollment: Must possess a valid California Drivers License, Class B, firefighter restricted (minimum); must be physically fit per department standards; must not have a hearing loss of 25 decibels or more in 3 of 4 frequencies; must have vision better than, or corrected to, far visual acuity of 20/30 with contact lenses or spectacles; and must be a paid call, volunteer, or full-time firefighter at a certified fire protection agency. Prerequisites: FIRE-63A, FIRE-63B. Advisory: ENGL-85.
This course will provide fire service personnel with knowledge of the laws and requirements that pertain to emergency vehicle operation and basic maintenance, troubleshooting, and documentation of fire apparatus. (11/11)

FIRE-76B  FIRE APPARATUS DRIVER/OPERATOR 1B (PUMP OPERATIONS)
2 units: 40 total hours lecture.
Limitation on enrollment: Must possess a valid California Drivers License, Class B, firefighter restricted (minimum); must be physically fit per department standards; must not have a hearing loss of 25 decibels or more in 3 of 4 frequencies; must have vision better than, or corrected to, far visual acuity of 20/30 with contact lenses or spectacles; and must be a paid call, volunteer, or full-time firefighter at a certified fire protection agency. Prerequisite: FIRE-76A. Advisories: ENGL-85; MATH-80.
This course will provide fire service personnel with information on pump construction, theory of pump operation, and methods of performing basic hydraulics. Further, students will receive information and techniques on basic inspections, documentation, maintenance, and troubleshooting fire pumps. This course will provide fire service personnel with the knowledge of the laws and requirements that pertain to emergency vehicle operation and basic maintenance, troubleshooting, and documentation of fire apparatus. (10/13)
DEGREE
A.A. - Foods and Nutrition

CERTIFICATES
Foods and Nutrition
Dietetic Service Supervisor

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
Food Service is one of the fastest growing industries. Schools, hospitals, prisons, universities and the hospitality industry are always in need of trained food service professionals. Merced College provides Foods and Nutrition courses that are designed to provide knowledge and skills to ensure a strong foundation for students.

Career Opportunities
Employment of Registered dietitians is expected to grow about as fast as the average for all occupations because of increased emphasis on disease prevention, a growing and aging population and public interest in nutrition. Growth is anticipated in nursing homes, residential care facilities and physicians clinics. There are always opportunities for all levels of Food service.

Dietary Service Supervisor
Foods and Nutrition
Registered DIettitian

Off-Site Resources:
American Dietetic Association: www.eatright.org
Programs with bachelor degrees: www.fresnostate.edu www.calpoly.edu; www.ucdavis.edu

DEGREE (2/13)
A.A. - Foods and Nutrition (13160.AA)

For an Associate in Arts Degree in Foods and Nutrition, students must meet the graduation requirements and complete the following courses with a minimum grade point of 2.0 in each course required for the degree.

Program Student Learning Outcomes
A. Create a detailed menu utilizing resources and following restrictions for a particular client group.
B. Internalize, practice and direct food safety and sanitation techniques.
C. Demonstrate ability to oversee and prepare/plan meals for large quantities.
D. Apply supervisory skills in a food service setting.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUTR-10</td>
<td>Nutrition</td>
</tr>
<tr>
<td>NUTR-20</td>
<td>Principles of Foods</td>
</tr>
<tr>
<td>NUTR-36</td>
<td>Nutrition and Food Service Supervised Field Experience</td>
</tr>
<tr>
<td>NUTR-42</td>
<td>Quantity Food Preparation</td>
</tr>
<tr>
<td>NUTR-44</td>
<td>Food Safety and Sanitation</td>
</tr>
<tr>
<td>NUTR-45</td>
<td>Introduction to Therapeutic Diets</td>
</tr>
<tr>
<td>MGMT-50-52</td>
<td>Management 50 Series</td>
</tr>
</tbody>
</table>

Plus seven units from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
</tr>
<tr>
<td>NUTR-26ABC</td>
<td>Independent Study in Foods and Nutrition</td>
</tr>
<tr>
<td>NUTR-40</td>
<td>Menu Planning for Food Service Operations</td>
</tr>
<tr>
<td>NUTR-41</td>
<td>Infant and Toddler Feeding</td>
</tr>
<tr>
<td>NUTR-43</td>
<td>Children and Weight Concerns</td>
</tr>
<tr>
<td>NUTR-70A-ZZ</td>
<td>Special Topics in Foods and Nutrition</td>
</tr>
</tbody>
</table>

24

CERTIFICATE (2/13)
Foods and Nutrition (13160.CL)

A Certificate of Achievement will be awarded upon the satisfactory completion of the curriculum listed below.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUTR-10</td>
<td>Nutrition</td>
</tr>
<tr>
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</tr>
<tr>
<td>NUTR-36</td>
<td>Nutrition and Food Service Supervised Field Experience</td>
</tr>
<tr>
<td>NUTR-42</td>
<td>Quantity Food Preparation</td>
</tr>
<tr>
<td>NUTR-44</td>
<td>Food Safety and Sanitation</td>
</tr>
<tr>
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<td>Introduction to Therapeutic Diets</td>
</tr>
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<td>MGMT-50-52</td>
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</tr>
</tbody>
</table>

Plus seven units from the following courses:

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<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
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</tr>
<tr>
<td>NUTR-70A-ZZ</td>
<td>Special Topics in Foods and Nutrition</td>
</tr>
</tbody>
</table>

24
CERTIFICATE (2/08)
Dietetic Service Supervisor  (13180.CE)

Upon satisfactory completion of the 17-unit core listed below, students meet the California Department of Public Health’s certification requirements for Dietetic Service Supervisor.

Program Student Learning Outcomes
A. Demonstrates ability to provide safe, satisfying and nutritionally adequate food for patients/clients with appropriate staff, space, equipment and supplies with consideration to budget.
B. Assist in the development of planned menus to meet nutritional needs of the population and ensure that menus are followed.

<table>
<thead>
<tr>
<th>Core:</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUTR-10 Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>NUTR-20 Principles of Foods</td>
<td>3</td>
</tr>
<tr>
<td>NUTR-36 Nutrition and Food Service Supervised Field Experience</td>
<td>2.5</td>
</tr>
<tr>
<td>NUTR-42 Quantity Food Preparation</td>
<td>3</td>
</tr>
<tr>
<td>NUTR-44 Food Safety and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>NUTR-45 Introduction to Therapeutic Diets</td>
<td>2</td>
</tr>
<tr>
<td>MGMT-50-52 Management 50 Series</td>
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</table>

Recommended Sequence: A.A. - Foods and Nutrition  (13160.AA); Certificate Foods and Nutrition  (13160.CL)

<table>
<thead>
<tr>
<th>Fall 1</th>
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<tbody>
<tr>
<td>NUTR-10 Nutrition</td>
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<td>NUTR-42 Quantity Food Preparation</td>
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</tr>
<tr>
<td>NUTR-44 Food Safety and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>MGMT-50-52 Management 50 Series</td>
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<thead>
<tr>
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<tr>
<td>NUTR-10 Nutrition</td>
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<tr>
<td>NUTR-20 Principles of Foods</td>
<td>3</td>
</tr>
<tr>
<td>NUTR-36 Nutrition and Food Service Supervised Field Experience</td>
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<tr>
<td>NUTR-45 Introduction to Therapeutic Diets</td>
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</tr>
<tr>
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<thead>
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<th>Summer 1</th>
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<tbody>
<tr>
<td>NUTR-10 Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-50-52 Management 50 Series</td>
<td>1.5</td>
</tr>
</tbody>
</table>

NUTR-10 NUTRITION  (CSU breadth area E)
3 units: 3 hours lecture.
Prerequisite: ENGL-85. Advisory: 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (3/14)

NUTR-26ABC INDEPENDENT STUDY IN FOODS AND NUTRITION
1-3 units: 3-9 hours lab.
Prerequisite: NUTR-10, NUTR-20.
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. (4/12)

NUTR-36 NUTRITION AND FOOD SERVICE SUPERVISED FIELD EXPERIENCE
2.5 units: 1 hour lecture, 4.5 hours lab.
Limitation 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. Prerequisite: NUTR-44. One-way corequisites: NUTR-42, NUTR 45. Advisories: ENGL-85; 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 food service work site supervisor and college nutrition instructor. 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 and other immunizations required by the clinical facility to which they are assigned along with criminal background check. (1/13)

NUTR-40 MENU PLANNING FOR FOOD SERVICE OPERATIONS
3 units: 3 hours lecture.
Prerequisite: NUTR-10; Advisories: ENGL-85.
This course covers the principles of menu planning for a variety of food service operations including childcare, schools, elder care, and restaurants. Emphasis is on multicultural and healthful menus as well as policies and procedures in an organization and significance of the menu and the cost and pricing of menu items. (10/10)

NUTR-41 INFANT AND TODDLER FEEDING
1 unit: 1 hour lecture.
Advisory: ENGL-85.
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 (4/12)
NUTR-42 QUANTITY FOOD PREPARATION
3 units: 2.5 hours lecture, 1.5 hours lab.
One-way corequisites: NUTR-44. Advisories: ENGL-85; MATH-91.
This course addresses the preparation and service for quantity food service operations. The focus is on food production. Recipe standardization, equipment and layout, application of safe food handling, supervisory functions including record-keeping and quality assurance. (10/12)

NUTR-43 CHILDREN AND WEIGHT CONCERNS
1 unit: 1 hour lecture.
Advisory: ENGL-85.
This course is designed to provide an overview of the problem of childhood obesity. Students will explore reasons for the recent epidemic in our country and review the trends. Factors including pressure by the media and the connection to eating disorders will be studied. Students will look at the role of the family, school and community in addressing childhood obesity. This course is recommended for Foods and Nutrition and Child Development. (4/14)

NUTR-44 FOOD SAFETY AND SANITATION
2 units: 2 hours lecture.
Advisory: ENGL-85.
This beginning course is designed to teach basic food safety principles of personal and institutional sanitation. This includes the proper storage, preparation, and service as well as HACCP, food allergies, regulations and pest management. An emphasis is placed on the Supervisor’s role in maintaining high standards for these principles. This course meets the California Retail Food Code requirement section numbers 113947.1 through 113947.6. This course is required by the Dietary Service Supervisory Program and is highly recommended to those interested in working in Food Service. (3/12)

NUTR-45 INTRODUCTION TO THERAPEUTIC DIETS
2 units: 2 hours lecture.
Prerequisite: NUTR-10.
This course is designed to acquaint students with therapeutic and modified diets used in health care facilities. Topics include nutrition for disease states as well as normal nutrition needs. Students will role play on how to interview patients to obtain food preferences, become familiar with assistive feeding devices, and be able to develop menus to meet the nutritional needs of patients. Cultural considerations and the management of long term care residents will be emphasized. This course is required for the student planning a career in food service supervision especially in health care institutions and recommended for nursing students. (1/13)

NUTR-70A-ZZ SPECIAL TOPICS IN FOODS AND NUTRITION
1-3 units: 1-3 hours lecture, 0-9 hours lab.
Advisory: ENGL-85; NUTR-10.
This is a course designed to address special topics in Foods and Nutrition to meet current needs of students. Specific classes will be offered to expose and introduce students to current issues in the foods and nutrition field and provide most up-to-date information in order to be successful in the industry. (10/13)
French
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A. - French

Program Description
Studies in foreign languages provide specialists to work in areas such as anthropology, economics, political science, literature, international business, and the travel industry. While teaching is one of the principal areas of employment, other careers may be found in interpreting, translating, research, diplomacy, libraries, publishing, and the service industries.

DEGREE
A.A. - French (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.

Core: Units
FREN-01 Elementary French I ............................................. 5
FREN-02 Elementary French II ........................................... 5
FREN-03 Intermediate French I ............................................ 5
FREN-04 Intermediate French II ......................................... 5
HIST-04A History of Civilization Part I ............................... 3
HIST-04B History of Civilization: Part II ............................ 3

Total: 26 units

Recommended Sequence: A.A. - French (11200.AA)

Fall 1
FREN-01 Elementary French I ............................................. 5
HIST-04A History of civilization Part I ............................... 3

Spring 1
FREN-02 Elementary French II ........................................... 5
HIST-04B History of Civilization Part II ............................ 3

Fall 2
FREN-03 Intermediate French I ............................................ 5

Spring 2
FREN-04 Intermediate French II ......................................... 5
<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Placement</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Fruit Production</td>
<td></td>
<td></td>
<td>(See Crop Science)</td>
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**CAREER AND TECHNICAL EDUCATION**

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<tr>
<th>DEAN</th>
<th>PHONE</th>
<th>AREA OFFICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMES ANDERSEN</td>
<td>(209) 384-6250</td>
<td>AG-OFFICE</td>
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</table>

<table>
<thead>
<tr>
<th>COUNSELING</th>
<th>COOPERATIVE WORK EXPERIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(209) 384-6314</td>
<td>(209) 384-6364</td>
</tr>
</tbody>
</table>
Geography

FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

Geography is the study of the physical aspects of the planet. Topics studied include population pressures, food supply, and resource availability. Physical Geography is a natural science about weather, climate, and earth processes creating different landforms, while World Geography is a social science of how mankind utilizes earth resources to create different cultures and standards of living. The study of Geography enables a student to better understand world problems and events; it prepares a student for a career as a planner, teacher, journalist, earth scientist, and for other occupations.

GEOGRAPHY (GEOG)

Lower division preparation for transfer students intending to major in geography should include:

<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>ENGL-01A</td>
<td>College Composition and Reading</td>
<td>4</td>
</tr>
<tr>
<td>GEOG-01</td>
<td>Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-01L</td>
<td>Physical Geography Lab</td>
<td>1</td>
</tr>
<tr>
<td>GEOG-02</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL-01</td>
<td>Physical Geology</td>
<td>4</td>
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</tbody>
</table>

Other pertinent courses are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL-01</td>
<td>General Biology for Non-Majors</td>
<td>4</td>
</tr>
<tr>
<td>HIST-04AB</td>
<td>History of Civilization: Parts I &amp; II</td>
<td>6</td>
</tr>
<tr>
<td>PHSC-01</td>
<td>Introduction to Physical and Earth Science</td>
<td>3</td>
</tr>
</tbody>
</table>

GEOG-01 PHYSICAL GEOGRAPHY

(3 units: 3 hours lecture.
Advisory: ENGL-85.
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

(1 unit: 3 hours lab.
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

(3 units: 3 hours lecture.
Advisory: ENGL-85.
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

(3 units: 3 hours lecture.
Advisory: ENGL-85.
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

(3 units: 3 hours lecture.
Advisory: ENGL-85.
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
MATH, SCIENCE AND ENGINEERING

DEGREE
A.S.-T. - Geology

Program Description
The Associate in Science in Geology for Transfer degree is designed for students planning on transferring to a California State University with a degree in geology. 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 Geology for Transfer (AS-T), students must complete the following:
1. Certification of the Inter-segmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements, with a minimum grade point average of 2.0.
2. The required core 26 semester units, with a minimum grade point average of 2.0.
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).

Web Site
http://www.mccd.edu/academics/divisions/sme/facstaff/davies.htm

DEGREE (10/12)
A.S.-T. - Geology (19400.AST)

The Geology curriculum is suggested for those 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 Student Learning Outcomes:
A. Construct a geologic cross section of Merced and Mariposa counties in a report format that conforms to Geological Society of America conventions and standards.
B. Relate common rocks and minerals to their origin and physical properties.
C. Recognize geological structures and landforms within the context of plate tectonic theory.
D. List the events of earth’s history within the geologic timescale.

Program Requirements
For an Associate in Science in Geology for Transfer (AS-T), students must complete the following:
1. Certification of the Inter-segmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements, with a minimum grade point average of 2.0.
2. The required core 26 semester units, with a minimum grade point average of 2.0.
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).

Core:

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<tr>
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<tbody>
<tr>
<td>GEOL-01</td>
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<tr>
<td>GEOL-02</td>
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<tr>
<td>CHEM-04A</td>
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<td>CHEM-04B</td>
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<tr>
<td>MATH-04A</td>
<td></td>
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<tr>
<td>MATH-04B</td>
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</tbody>
</table>

26

Recommended Sequence for the Geology AS-T (19400.AST)

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
GEOLOGY (GEOL)

GEOL-01 PHYSICAL GEOLOGY
(C-ID GEOL 101) (CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Advisory: ENGL-85; 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
(C-ID GEOL 111) (CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Advisory: 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
(C-ID GEOL 121) (CSU breadth area B1/B3)
4 units: 3 hours lecture, 3 hours lab.
Advisory: ENGL-85
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
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A. - German (11400.AA)

Program Description
Studies in foreign languages provide specialists to work in areas such as anthropology, economics, political science, literature, international business, and the travel industry. While teaching is one of the principal areas of employment, other careers may be found in interpreting, translating, research, diplomacy, libraries, publishing, and the service industries.

DEGREE
A.A. - German (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: 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.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>GERM-01</td>
<td>5</td>
</tr>
<tr>
<td>GERM-02</td>
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<tr>
<td>GERM-03</td>
<td>5</td>
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<tr>
<td>GERM-04</td>
<td>5</td>
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<td>HIST-04A</td>
<td>3</td>
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<tr>
<td>HIST-04B</td>
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</table>

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Recommended Sequence: A.A. - German (11400.AA)

Fall 1
- GERM-01 Elementary German
- HIST-04A History of Civilization: Part I

Spring 1
- GERM-02 Elementary German
- HIST-04B History of Civilization: Part II

Fall 2
- GERM-03 Intermediate German

Spring 2
- GERM-04 Intermediate German

GERMAN (GERM)

GERM-01 ELEMENTARY GERMAN
(CSU breadth area C2) (IGETC area 6)
5 units: 5 hours lecture.
Prerequisite: ENGL-84.
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. (2/10)

GERM-02 ELEMENTARY GERMAN
(CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: GERM-01 or two years of high school German.
GERM-02 is a continuation of GERM-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. (3/10)

GERM-03 INTERMEDIATE GERMAN
(CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: GERM-02. Advisory: LRNR-30.
GERM-03 is a continuation of GERM-02. This course reviews and further develops grammatical concepts introduced in GERM-01 and GERM-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. (03/10)

GERM-04 INTERMEDIATE GERMAN
(CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: GERM-03. Advisory: LRNR-30.
This course is a thorough review of the fundamentals of reading, writing, speaking and understanding German, designed to aid the student in preparing for advanced studies in German composition, grammar, and conversation, as well as literature in German, history and culture. (3/10)
GUIDANCE (GUID)

GUID-30 FOUNDATIONS AND STRATEGIES FOR COLLEGE SUCCESS
(CSU breadth area E)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
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-54 FOUNDATIONS AND STRATEGIES FOR ACADEMIC RECOVERY
3 units: 3 hours lecture.
Advisories: READ-81, ENGL-84.
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)

GUID-85 FIRST YEAR SUCCESS
.50 unit: .50 hour lecture.
Advisories: READ-80, ENGL-83.
This course is designed to introduce first year students to strategies for college success through an exploration of college policies, programs, services and academic expectations. Students will learn about Merced College’s academic programs, student services, academic expectations and policies, student rights and responsibilities, and campus activities. Students will receive a brief introduction to academic success strategies such as time management, goal setting, and study skills. Pass/no pass only. (2/10)
HEALTH (HLTH)

HLTH-10 CONTEMPORARY HEALTH
(CSU breadth area E)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
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)
Degree
A.A. - Health Sciences

Degree (11/08)
A.A. - Health Sciences (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.

Core: Units
BIOL-01 General Biology for Non-Majors ......................... 4
or
BIOL-02 Human Biology ........................................ 4
CHEM-02B Introduction to Chemistry ............................. 4
NUTR-10 Nutrition .................................................. 3

And select eight units from the following:
BIOL-16 General Human Anatomy ......................... 4
BIOL-18 Principles of Physiology ............................. 4
BIOL-20 Microbiology ........................................... 4

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Suggested Course Sequence: A.A. - Health Sciences (12300.AA)
Additional units can be taken as breadth and/or elective courses.

Fall 1
BIOL-02 Human Biology ......................................... 4
CHEM-02A Introductory Chemistry .......................... 4
NUTR-10 Nutrition ................................................ 3

Spring 1
CHEM-02B Introduction to Chemistry ..................... 4

Additional units can be taken as breadth and/or elective courses.

Fall 2
Additional units can be taken as breadth and/or elective courses.

Spring 2
Additional units can be taken as breadth and/or elective courses.
HVAC Technology
CAREER AND TECHNICAL EDUCATION

DEGREES
A.A. - Commercial Refrigeration Technician
A.A. - HVAC Technician

CERTIFICATES
Commercial Refrigeration Technician
HVAC Technician

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address:
https://skydrive.live.com/view.aspx?cid=5EE3D05E952DCF60&resid=5EE3D05E952DCF60%21223

Program Description
The students will learn from lecture as well as laboratory experience. The instructor has practical experience in the field and the formal education to provide the students with the necessary skills as well as equip them for HVAC/R employment.
Students will use the College HVAC/R Simulators during classroom training. Successful completion of the class will result in attainment of a Merced College Certificate of Completion.
The Heating, Ventilation, Air Conditioning / Refrigeration Program are designed to meet the increasing need within the local Business Community for trained technicians.

Career Opportunities
An Advisory Board was formed with the Private Industry Training Department and local businesses to offer internship opportunities to students in the program. This program prepares students for a variety of different fields: Heating and Air Conditioning Technician, Industrial Maintenance where heating, air conditioning, and ventilation is a requirement, Commercial Refrigeration Technician, HVAC specialist or maintenance in food processing industries as Refrigeration technicians, heating and air conditioning sales, entry level skills into HVAC Union apprenticeship, schools, hospitals, hotel / motel.

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

Core:

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<td>ELCT-41</td>
<td>Industrial Motor and Equipment Control</td>
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<tr>
<td>ELCT-42A</td>
<td>Principles and Applications of Programmable Logic Controllers</td>
<td>2</td>
</tr>
<tr>
<td>ELCT-47</td>
<td>Electrical Motors, Generators, Transformers, and AC Distribution</td>
<td>3</td>
</tr>
<tr>
<td>ELCT-52</td>
<td>Introduction to Electricity and Electronics</td>
<td>3</td>
</tr>
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<td>INDT-40</td>
<td>Commercial Refrigeration Systems</td>
<td>3</td>
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<td>INDT-49</td>
<td>Electrical Codes and Ordinances</td>
<td>3</td>
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<td>INDT-51</td>
<td>Ventilation and Air Conditioning</td>
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<td>MATH-B</td>
<td>Applied Mathematics</td>
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<td>WELD-06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded</td>
<td>3</td>
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<td>WELD-07</td>
<td>Metal Arc Welding</td>
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<td>Fundamentals of T.I.G. and M.I.G. Welding</td>
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</table>

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DEGREE
A.A. - HVAC Technician (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 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.

CERTIFICATE
HVAC Technician (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.

CERTIFICATE
Commercial Refrigeration Technician (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 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 Description
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 advantageously 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.

Core:
Required Core: 12 units

| HIST-04A | History of Civilization: Part I .................................. 3 |
| HIST-04B | History of Civilization: Part II ..................................... 3 |
| 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

- HIST-09A | Introduction to East Asian Civilization: China (3) |
- HIST-09B | Introduction to East Asian Civilization: Japan (3) |
- HIST-22 | History of Minorities - Black Emphasis (3) |
- HIST-23 | The History of Hispanic-Americans in the Southwest US (3) |
- ANTH-10 | Southeast Asian Culture: Emphasis Hmong Culture (3) |
- ENGL-18 | African and African American Literature (3) |
- HUM-01 | Studies in Humanities--Ancient through Renaissance (3) |

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 both 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. 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).
### General Education (CSU-GE or IGETC) Units:

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<td>History Elective</td>
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<td>Spring 1</td>
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### Elective:

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<th>Course</th>
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<td>Any HIST or HUM course from the Diversity list not used above</td>
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Total Degree Units: 60

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**Recommended Sequence:** A.A.-T. - History (22300.AAT)

#### Fall 1
- **HIST-04A** History of Civilization: Part I 3
- **History Elective** 3

#### Spring 1
- **HIST-04B** History of Civilization: Part II 3
- **History Elective** 3

#### Fall 2
- **HIST-17A** United States History and United States Constitution 3
- **History Elective** 3

#### Spring 2
- **HIST-17B** Political and Social History of the United States 3

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**HISTORY (HIST)**

**HIST-04A HISTORY OF CIVILIZATION: PART I**
- (C-ID HIST 150) (CSU breadth area C2/D) (IGETC area 3B)
- 3 units: 3 hours lecture.
- Advisory: ENGL-85.

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 approximately 1650. (11/09)

**HIST-04B HISTORY OF CIVILIZATION: PART II**
- (C-ID HIST 180) (CSU breadth area C2/D) (IGETC area 3B)
- 3 units: 3 hours lecture.
- Advisory: ENGL-85.

This course provides a broad historical survey of humanity's social, political, economic and intellectual experiences for all major world civilizations from the 17th century to the present. (5/12)

**HIST-05 HISTORY OF EUROPE FROM 1901 TO THE PRESENT**
- (CSU breadth area C2/D) (IGETC area 4)
- 3 units: 3 hours lecture.
- Advisory: ENGL-85.

HIST-05 is a one-semester survey course on 20th century and early 21st century European history (1901 to the present). The political, economic, cultural, and social development of 20th century and recent European history will be covered. There will be emphasis on the traumatic changes brought about by political realignment, colonialism, war, revolution, and economic upheaval. (12/06)

**HIST-09A INTRODUCTION TO EAST ASIAN CIVILIZATION: CHINA**
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.
- Advisories: ENGL-01A; LRNR-30; PHIL-10.

This course provides a broad historical survey of China, the Far East's oldest civilization, from prehistoric times to the present, with emphasis on China's cultural achievements and contributions to both Eastern and Western civilizations. (11/12)

**HIST-09B INTRODUCTION TO EAST ASIAN CIVILIZATION: JAPAN**
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.
- Advisories: ENGL-01A.

This course provides a broad historical survey of Japan from prehistoric 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. (11/12)

**HIST-17A UNITED STATES HISTORY AND UNITED STATES CONSTITUTION**
- (CSU breadth area C2/D/F1/F2) (IGETC area 3B/4)
- 3 units: 3 hours lecture.
- 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-17AH HONORS UNITED STATES HISTORY AND UNITED STATES CONSTITUTION**
- (CSU breadth area C2/D/F1/F2) (IGETC area 3B/4)
- 3 units: 3 hours lecture.
- Limitation on enrollment: Enrollment in the Honors Program. (See the college catalog for a description of enrollment requirements.)
- Advisories: ENGL-01A; ENGL-13/13H or PHIL-13/13H.

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
   (CSU breadth area C2/D/F1/F2)   (IGETC area 3B/4)
   3 units: 3 hours lecture.
   Advisories: ENGL-01A.
This course is a continuation of HIST-17A from the end of the Reconstruction Period in 1877 to the present. It examines national, state, and local history from the late 19th century to the present. The course covers the social, political, economic, and constitutional development of the nation. (5/12)

HIST-17BH  HONORS UNITED STATES HISTORY AND CALIFORNIA STATE AND LOCAL GOVERNMENT
   (CSU breadth area C2/D/F1/F2)   (IGETC area 3B/4)
   3 units: 3 hours lecture.
   Limitation on enrollment: Enrollment in the Honors Program. (See the college catalog for a description of enrollment requirements.)
   Advisories: ENGL-01A; ENGL-13/13H or PHIL-13/13H.
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-22  HISTORY OF MINORITIES -- BLACK EMPHASIS
   (CSU breadth area D/F2)   (IGETC area 4)
   3 units: 3 hours lecture.
   Advisories: ENGL-01A.
This course is a political and social history of American society and culture as seen from the Black perspective. It is a survey course covering the period from 1600 to the present. This course presents in-depth the historical development of American institutions and ideals. (2/13)

HIST-23  THE HISTORY OF HISPANIC-AMERICANS IN THE SOUTHWEST U.S.
   (CSU breadth area D)   (IGETC area 4)
   3 units: 3 hours lecture.
   Advisory: ENGL-85.
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
   (CSU breadth area D)
   3 units: 3 hours lecture.
   Advisory: ENGL-85.
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)
### Hmong

**FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES**

<table>
<thead>
<tr>
<th>DEAN</th>
<th>JOHN ALBANO</th>
<th>PHONE</th>
<th>(209) 384-6073</th>
</tr>
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<tbody>
<tr>
<td>COUNSELING</td>
<td></td>
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<td>(209) 384-6314</td>
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</table>

#### HMONG (HMNG)

**HMNG-01  ELEMENTARY HMONG I**
- (CSU breadth area C2)  (IGETC area 6)
- 5 units: 5 hours lecture.
- Advisory: ENGL-84.

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**
- (CSU breadth area C2)  (IGETC area 3B/6)
- 5 units: 5 hours lecture.
- Prerequisite: 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)
TAKING THE HONORS CHALLENGE
Honors Classes at Merced College are designed to provide learning environments that foster creative thinking and critical discussion. The purpose of Honors Classes is to offer challenging assignments and learning activities that will spark intellectual curiosity, while sharpening the skills required for transfer and career success.

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

Advantages of Taking Honors Classes:
- Smaller classes that provide the opportunity for more individualized instruction and more stimulating discussion.
- Honors recognition on transcripts to underscore achievement.
- Special academic advising.
- Opportunities to attend a variety of seminars, cultural events, and conferences.
- Eligibility to apply for McConnell Honors Scholarships.

Projected Honors Course Offerings

Fall
- COMM-01H Honors Fundamentals of Speech..................3
- HIST-17AH Honors United States History and United States Constitution....................................................3
- HUM-01H Honors Studies in Humanities - Ancient Through Renaissance ................................................3
- PHIL-01H Honors Introduction to Philosophy..................3

Spring
- ENGL-13H Honors Critical Reasoning and Writing ........3
- HIST-17BH Honors U.S. History and California State & Local Government ..................................................3
- HUM-02H Honors Studies in Humanities - Renaissance to Present ..........................................................3
- MATH-02H Honors Precalculus.......................................4
- PHIL-13H Honors Critical Reasoning and Writing ........3
- PSYC-01AH Honors introduction to Psychology...............3

Classes Approved for Honors
(Course descriptions of these classes can be found under the appropriate discipline.)
- HIST-17BH Honors United States History and United States Constitution....................................................3
- HIST-17AH Honors United States History and United States Constitution....................................................3
- HUM-01H Honors Studies in Humanities - Ancient Through Renaissance ................................................3
- HUM-02H Honors Studies in Humanities - Renaissance to Present ..........................................................3
- MATH-02H Honors Precalculus.......................................4
- PHIL-01H Honors Introduction to Philosophy..................3
- PHIL-13H Honors Critical Reasoning and Writing ........3
- PSYC-01AH Honors introduction to Psychology...............3

HONORS (HNRS)

HNRS-40A HONORS SEMINAR: THE 60'S EXPERIENCE
2 units: 2 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program.
This course will focus on the in-depth discussion and analysis of the philosophy, politics, and music of the 1960's. (11/12)

HNRS-40B HONORS SEMINAR: NATIVE AMERICAN PHILOSOPHY
2 units: 2 hours lecture.
Limitation 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
2 units: 2 hours lecture.
Limitation 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
2 units: 2 hours lecture.
Limitation 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)
Horse Management
CAREER AND TECHNICAL EDUCATION

DEGREES
A.S. - Equine Science and Management

CERTIFICATES
Equine Science and Management

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Horse Management Program at Merced College is designed to meet the need for trained personnel in a broad range of occupational opportunities involved with or related to the horse industry.

Students enrolled in the Merced College Horse Management Program study theory and apply practical experiences in a variety of classes that are related to the horse. Students receive a platform of experiences which help prepare them for a very competitive business.

The diverse curriculum includes: Agricultural Sales and Accounting, Animal Nutrition, Breeding and Disease, Beginning and Intermediate Horsemanship, and Specialized Horse Training, as well as Tack Repair, Hoof Care, and Equipment Construction. The safety and well-being of both horse and rider is emphasized in all courses. These classes give the student a wide view of Agriculture in general and provide in-depth experience in dealing with the problems to be faced when raising horses.

The course teaches the actual trimming and shoeing of horses, iron and forge work introduces the construction of man-made horseshoes. The anatomy and physiology of the equine foot and leg, horse psychology, and proper hoof balance in relation to conformation are also covered. Approximately 700 horses and mules are trimmed per semester by Merced College students. Horses are brought to the college to be shod. Students also participate in working field trips to various breeding farms, ranches, and pack stations.

Additional courses may be taken if desired in the afternoon or evening during the semester. Examples of courses that may be of interest to horseshoers are: Welding, Animal Nutrition, Horse Husbandry, Horsemanship, and Hoof Care and Trimming (offered during our Fall Semester).

Career Opportunities
Careers in horse management are available to those students showing a keen interest in equine science they range from agri business, ag education, to on the farm husbandry.

DEGREE (2/14)
A.S. - Equine Science and Management (01225.AS)

The Associate in Science degree in Equine 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.

Core:                     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 ........................................1
WELD-06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ..................3
Seven units from the following electives:..........................7
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 Units 29
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 in the certificate 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.

Core:

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<thead>
<tr>
<th>Course</th>
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<tr>
<td>AGBS-12</td>
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<td>Equipment Safety</td>
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<tr>
<td>WELD-06</td>
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</table>

Eight units from the following electives: 8

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<tbody>
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<td>AGBS-13</td>
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</tr>
<tr>
<td>MECH-12</td>
<td>Agriculture Equipment - Fall (3)</td>
</tr>
</tbody>
</table>

Total Units: 30
Gainful Employment Disclosure Metrics

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Program Description

The Human Services A.A. program provides a basic academic background for the student seeking a career working with people in a variety of social settings. The program is based on a synthesis of knowledge from several social sciences, together with methodologies of intervention at the individual, group and community levels. The Human Service profession promotes improved service delivery systems by addressing not only the quality of direct services, but by also seeking to improve accessibility, accountability, coordination, and collaboration among professionals and agencies to attain the highest quality of life with the least amount of intervention.

Over a two year course of study students engage in a rich learning experience to explore theory, and acquire knowledge and skills in intervention, community organization, social welfare policy, and basic social work strategies. In addition, students are guided to a better understanding of self, and their abilities to make a difference in individuals, families and communities.

As a basic introductory program graduates may find entry level positions as advocates, youth workers, volunteer coordinators, fund-raisers or advocacy specialists for victims of child abuse, domestic violence, homelessness, or other social issues. A significant number of graduates from this program are employed in agencies, federal, state and non-profit organizations, for profit enterprises, and a variety of societal settings.

Many graduates continue their education completing B.A. or B.S. degrees in social work, counseling, psychology, vocational rehabilitation, public administration or education. Students who intend to continue their studies at one of the California State Colleges or at the University of California; students should work with their counselors for specific requirements.

The Associate in Arts Degree in Human Services 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. 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.

Core:

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<tr>
<th>Course</th>
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<tr>
<td>COOP-41</td>
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<tr>
<td>HMSV-20</td>
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<td>HMSV-21</td>
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<tr>
<td>HMSV-22</td>
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<tr>
<td>Take 6 units from the following courses:</td>
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<tr>
<td>HMSV-41</td>
<td>Case Management (3)</td>
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<tr>
<td>HMSV-42</td>
<td>Introduction to Counseling Skills (3)</td>
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<tr>
<td>HMSV-43</td>
<td>Ethics in Counseling (3)</td>
</tr>
<tr>
<td>HMSV-44</td>
<td>Leadership and Counseling in Groups (3)</td>
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<tr>
<td>Take 6 units from the following electives:</td>
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<tr>
<td>ANTH-02</td>
<td>Sociocultural Anthropology (3)</td>
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<tr>
<td>ANTH-10</td>
<td>Southeast Asian Culture; Hmong (3)</td>
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<tr>
<td>CRIM-33</td>
<td>Family Violence (3)</td>
</tr>
<tr>
<td>HIST-22</td>
<td>History of Minorities – Black Emphasis (3)</td>
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<tr>
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<td>History of Hispanic Americans in the Southwest US (3)</td>
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<tr>
<td>HLTH-15</td>
<td>Drugs, Alcohol, and Tobacco (3)</td>
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<tr>
<td>HUM-15</td>
<td>Comparative Cultures (3)</td>
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<tr>
<td>PSYC-01A</td>
<td>Introduction to Psychology (3)</td>
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<tr>
<td>PSYC-01AH</td>
<td>Honors Introduction to Psychology (3)</td>
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<tr>
<td>CLDV-09</td>
<td>Human Development (3)</td>
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<td>PSYC-22</td>
<td>Human Sexuality (3)</td>
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<tr>
<td>SOC-01</td>
<td>Introduction to Sociology (3)</td>
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<tr>
<td>SOC-03</td>
<td>Marriage and the Family (3)</td>
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Required Major Total: 25
Completion of MCCD-GE Breadth pattern: 23
Electives (as needed to reach 60 units): 2

TOTAL UNITS: 60
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.

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<td>HMSV-21</td>
<td>Human Behavior and the Helping Process</td>
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<td>HMSV-22</td>
<td>Survey and Utilization of Community Resources</td>
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Take 2 courses from the following: ................................................................. 6

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Total Units ........................................................................................................ 32-34

HUMAN SERVICES (HMSV)

HMSV-20 SOCIAL WELFARE & SOCIAL WORK
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
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
3 units: 3 hours lecture.
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-41 CASE MANAGEMENT
3 units: 3 hours lecture.
Advisories: ENGL-85.
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
3 units: 3 hours lecture.
Advisories: ENGL-85.
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
3 units: 3 hours lecture.
Advisories: ENGL-85.
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
3 units: 3 hours lecture.
Advisories: ENGL-85.
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)
### Humanities (HUM)

#### HUM-01 STUDIES IN HUMANITIES -- ANCIENT THROUGH RENAISSANCE
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.
- Prerequisite: ENGL-05. Advisory: 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
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.

Limitation on enrollment: Enrollment in the Honors Program. See the college catalog for a description of enrollment requirements.

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. (11/09)

#### HUM-02 STUDIES IN HUMANITIES -- RENAISSANCE TO PRESENT
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.

Prerequisite: ENGL-05. Advisory: 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
- (CSU breadth area C2) (IGETC area 3B)
- 3 units: 3 hours lecture.

Limitation on enrollment: Enrollment in the Honors Program. See the college catalog for a description of enrollment requirements.

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. (09/10)

#### HUM-15 COMPARATIVE CULTURES
- (CSU breadth area C2/D) (IGETC area 3B/4)
- 3 units: 3 hours lecture.

Advisory: ENGL-01A.

This course surveys the historical development and social structures of several different cultures in the United States. Cultures discussed will normally include African American, Asian American, Mexican American and Native American. Emphasis will be placed on issues of ethnicity and pluralism. (3/12)

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**Degrees**

**A.A. - Humanities**

**Program Description**

Humanities is the study of cultural manifestations in all their varieties, such as literature, philosophy, foreign language, and the fine arts. It is the study of intellectual, cultural, and aesthetic development through history with an integration of multi-cultural influences.

**Career Opportunities**

A humanities major prepares a student for employment in many diverse fields, including education and research, law, international business, government, and the creative arts.

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**Degrees**

**A.A. - Humanities (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.

**Core:**

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<tr>
<th>Units</th>
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<tr>
<td></td>
<td>HUM-01 Studies in Humanities - Ancient Through Renaissance ............................................... 3</td>
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<tr>
<td>or</td>
<td>HUM-01H Honors Studies in Humanities - Ancient Through Renaissance ........................................... 3</td>
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<tr>
<td></td>
<td>HUM-02 Studies in Humanities - Renaissance to Present ...................................................... 3</td>
</tr>
<tr>
<td>or</td>
<td>HUM-02H Honors Studies in Humanities - Renaissance to Present ............................................. 3</td>
</tr>
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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
ENGL-01B, ENGL-06A, ENGL-06B, ENGL-08, ENGL-10, ENGL-11, ENGL-18

**Philosophy and Humanities** ...................................... 3
PHIL-03, PHIL-04, PHIL-05, PHIL-15
HUM-15, HUM-21

**Art and Music** .......................................................... 3
ART-01, ART-02, ART-03, ART-04
MUSG-11, MUSG-12, MUSG-13, MUSG-14

**Foreign Language** .................................................. 5
FREN-02, FREN-03, FREN-04
GERM-02, GERM-03, GERM-04
HMGN-02
SPAN-02, SPAN-03, SPAN-04

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**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.
HUM-21  HUMANITIES AND FILM
   (CSU breadth area C2)  (IGETC area 3A)
3 units: 2 hours lecture, 3 hours lab.
Prerequisite:  ENGL-85.
This course is an introduction to the humanities through the study of film.
Film criticism will be combined with the analysis of philosophical, literary,
and/or artistic themes. Feature-length films will be screened.  (3/12)

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (IGETC)

CERTIFICATE
Intersegmental General Education Transfer Curriculum (IGETC)

CERTIFICATE  (1/14)
Intersegmental General Education Transfer Curriculum (IGETC)  (49200.CT)
A minimum of 34 units from the following:
Students must complete a minimum of 34 units used to satisfy the IGETC Transfer Breadth Requirements. Students must receive full certification of the IGETC pattern which requires a minimum of grade “C” or better in each IGETC course. See the IGETC Transfer Breadth requirements patterns listed in the Merced College catalog or consult with a Merced College counselor.
Industrial Technology
CAREER AND TECHNICAL EDUCATION

DEGREE
A.A. - Industrial Maintenance Technology

CERTIFICATE
Industrial Maintenance Technology

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
Industrial Technology is a program which blends technical, scientific, and business principles, and which prepares versatile individuals for technological management, production supervision, and related leadership positions.

For locating the various degrees and certificates that fall under Industrial Technology, students should refer to the following degree and certificate titles in this portion of the catalog:

Automotive Technology
Drafting Technology
HVAC Technology
Welding Technology

DEGREE
A.A. - Industrial Maintenance Technology (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

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>DRFT-44</td>
<td>Print Reading and Sketching</td>
<td>3</td>
</tr>
<tr>
<td>ELCT-41</td>
<td>Industrial Motor and Equipment Control....</td>
<td>3</td>
</tr>
<tr>
<td>ELCT-47</td>
<td>Electrical Motors, Generators, Transformers, and AC Distribution</td>
<td>3</td>
</tr>
<tr>
<td>ELCT-52</td>
<td>Introduction to Electricity and Electronics</td>
<td>3</td>
</tr>
<tr>
<td>INDT-10</td>
<td>Agricultural and Industrial Technical Skills</td>
<td>3</td>
</tr>
<tr>
<td>INDT-25</td>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>INDT-32</td>
<td>Building Construction Concepts</td>
<td>3</td>
</tr>
<tr>
<td>INDT-35</td>
<td>Electrical Wiring</td>
<td>3</td>
</tr>
<tr>
<td>INDT-41</td>
<td>Industrial Power Transmission</td>
<td>3</td>
</tr>
<tr>
<td>INDT-49</td>
<td>Electrical Codes and Ordinances</td>
<td>3</td>
</tr>
<tr>
<td>MATH-B</td>
<td>Applied Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>WELD-06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding</td>
<td>3</td>
</tr>
<tr>
<td>WELD-07</td>
<td>Fundamentals of TIG and MIG Welding</td>
<td>3</td>
</tr>
<tr>
<td>WELD-40A</td>
<td>Introduction Welding Design and Construction</td>
<td>3</td>
</tr>
</tbody>
</table>

44
CERTIFICATE
Industrial Maintenance Technology (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

Core:  Units
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DRFT-44  Print Reading and Sketching....................................3
ELCT-41  Industrial Motor and Equipment Control....................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 T.I.G. and M.I.G. Welding.............3
WELD-40A  Introduction Welding Design and Construction........3

Recommended Sequence:
A.A. - Industrial Maintenance Technology (09550.AA);
Industrial Maintenance Technology (09550.CT)

Fall
DRFT-44  Print Reading and Sketching....................................3
ELCT-52  Introduction to Electricity and Electronics ...............3
INDT-49  Electrical Codes and Ordinances............................3
MATH-B  Applied Mathematics..............................................5

Spring
ELCT-41  Industrial Motor and Equipment Control....................3
INDT-25  Fluid Power..........................................................3
INDT-35  Electrical Wiring..................................................3
INDT-41  Industrial Power Transmission.................................3

Fall
ELCT-41  Industrial Motor and Equipment Control....................3
INDT-32  Building Construction Concepts.............................3
WELD-07  Fundamentals of T.I.G. and M.I.G. Welding.............3
WELD-40A  Introduction Welding Design and Construction........3
INDUSTRIAL TECHNOLOGY (INDT)

INDT-10 AGRICULTURAL AND INDUSTRIAL TECHNICAL SKILLS
(ALSO: MECH-10)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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, pipefitting, electrical wiring fundamentals, basic woodwork, concrete materials and mixes, and sketching and estimating. (1/12)

INDT-25 FLUID POWER
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (11/12)

INDT-30 BUILDING CONSTRUCTION CONCEPTS
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; 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
3 units: 2 hours lecture, 3 hours lab.
Advisory: READ-81; ENGL-84; 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-38I INDUSTRIAL TECHNOLOGY COMPUTER APPLICATIONS AND LITERACY
[CILC area A,B,C,D,E,F]
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80 or MATH-85.
This course explores usage in the workplace with emphasis on industrial technology (IT) situations and applications. Computer applications including word processing, spreadsheets, databases, and presentation managers will be covered. Also included will be other software and hardware appropriate to industrial technology. (12/14)

INDT-40 COMMERCIAL REFRIGERATION SYSTEMS
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (1/14)

INDT-41 INDUSTRIAL POWER TRANSMISSION
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 3 hours lecture.
Advisory: ENGL-85; 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
6 units: 4 hours lecture, 6 hours lab.
Advisories: ENGL-85; 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
6 units: 4 hours lecture, 6 hours lab.
Advisories: ENGL-85; 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. (11/14)

INDT-52 REFRIGERANT USAGE CERTIFICATION AND R-410A SAFETY
1 unit: 1 hour lecture.
Advisory: ENGL-85.
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
0.5-4 units: lecture/lab hours will vary, depending on topic.
Advisories: ENGL-85; 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)
International Studies

DEGREE
A.A. - International Studies

Program Description
In order to meet the ever-changing needs of a diverse community, Merced College has developed a degree that embodies the spirit of global education. The International Studies area of emphasis allows students to take courses that will foster an appreciation of various cultural perspectives. Students will gain an understanding of the benefits of living in a culturally diverse world. The development of cross-cultural tolerance and competencies provides students with skills valued in careers involving intercultural relations such as those in the fields of public service, teaching, health care arts, and business.

The Merced College International Studies Area of Emphasis helps prepare students for upper division International Studies majors at universities in California and other states. It also can help currently employed individuals increase their skills in dealing with international issues they and their employers may encounter.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

DEGREE (5/08)
A.A. - International Studies (22700.AA)

For an Associate in Arts Degree in the area of emphasis in International Studies, students must meet the basic graduation requirements and complete 18 units from the courses listed below.

Select courses from at least two of the following three categories, with at least six units in each of the two categories. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Program Student Learning Outcomes
A. Depending on their choice of courses within the three categories of courses, students will develop competencies in a combination of the following areas: multicultural, historical, and philosophical literacy.
B. Students will be able to apply these skills to both public and private sector careers with international components.
C. Students will gain an understanding of living in a culturally diverse and interdependent world.

Category 1: Foreign Languages

<table>
<thead>
<tr>
<th>Units</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Beginning American Sign Language</td>
</tr>
<tr>
<td>3</td>
<td>Intermediate American Sign Language</td>
</tr>
<tr>
<td>3</td>
<td>Advanced American Sign Language</td>
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<tr>
<td>5</td>
<td>Elementary French I</td>
</tr>
<tr>
<td>5</td>
<td>Elementary French II</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate French I</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate French II</td>
</tr>
<tr>
<td>5</td>
<td>Elementary German</td>
</tr>
<tr>
<td>5</td>
<td>Elementary German</td>
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<tr>
<td>5</td>
<td>Intermediate German</td>
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<tr>
<td>5</td>
<td>Intermediate German</td>
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<tr>
<td>5</td>
<td>Elementary Hmong I</td>
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<tr>
<td>5</td>
<td>Elementary Hmong II</td>
</tr>
<tr>
<td>2.5</td>
<td>Elementary Japanese</td>
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</tbody>
</table>

Category 2: Global and Cultural Understanding

<table>
<thead>
<tr>
<th>Units</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Sociocultural Anthropology</td>
</tr>
<tr>
<td>3</td>
<td>Southeast Asian Culture: Hmong</td>
</tr>
<tr>
<td>3</td>
<td>Art History: Ancient through Gothic</td>
</tr>
<tr>
<td>3</td>
<td>Art History: Renaissance through 20th Century</td>
</tr>
<tr>
<td>3</td>
<td>Art of the 20th Century</td>
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<td>3</td>
<td>Introduction to Intercultural Communication</td>
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<td>3</td>
<td>Theatre History: Ancient to Romanticism</td>
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<td>3</td>
<td>Introduction to Macroeconomics</td>
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<td>3</td>
<td>Introduction to Literature</td>
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<tr>
<td>3</td>
<td>Introduction to World Literature: Ancients to 1650</td>
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<tr>
<td>3</td>
<td>Introduction to World Literature: 1650 to Present</td>
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<tr>
<td>3</td>
<td>World Geography</td>
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<tr>
<td>3</td>
<td>Studies in Humanities – Ancient Through Renaissance</td>
</tr>
<tr>
<td>3</td>
<td>Honors Studies in Humanities–Ancient Through Renaissance</td>
</tr>
<tr>
<td>3</td>
<td>Studies in Humanities – Renaissance to Present</td>
</tr>
<tr>
<td>3</td>
<td>Honors Studies in Humanities – Renaissance to Present</td>
</tr>
<tr>
<td>3</td>
<td>Comparative Cultures</td>
</tr>
<tr>
<td>3</td>
<td>Classical Music History I</td>
</tr>
<tr>
<td>3</td>
<td>Classical Music History II</td>
</tr>
<tr>
<td>3</td>
<td>Jazz Music History</td>
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<tr>
<td>3</td>
<td>An Introduction to World Political Systems</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to Sociology</td>
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<tr>
<td>3</td>
<td>Contemporary Social Problems</td>
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</table>

Category 3: History and Philosophy

<table>
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<tr>
<th>Units</th>
<th>Course</th>
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<tbody>
<tr>
<td>3</td>
<td>History of Civilization: Part I</td>
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<tr>
<td>3</td>
<td>History of Civilization: Part II</td>
</tr>
<tr>
<td>3</td>
<td>History of Europe from 1901 to the Present</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to East Asian Civilization: China</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to East Asian Civilization: Japan</td>
</tr>
<tr>
<td>3</td>
<td>History of Minorities – Black Emphasis</td>
</tr>
<tr>
<td>3</td>
<td>U.S. History of Hispanic-Americans in the Southwest</td>
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<tr>
<td>3</td>
<td>Introduction to Philosophy</td>
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<tr>
<td>3</td>
<td>Honors Introduction to Philosophy</td>
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<tr>
<td>3</td>
<td>Ancient Philosophy</td>
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<tr>
<td>3</td>
<td>Modern Philosophy</td>
</tr>
<tr>
<td>3</td>
<td>Contemporary Ethical Issues</td>
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<td>3</td>
<td>Comparative Religions</td>
</tr>
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</table>
Japanese
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

JAPANESE (JPNS)

JPNS-01A ELEMENTARY JAPANESE
(CSU breadth area C2)
2.5 units: 2.5 hours lecture.
Advisory: ENGL-84.
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
(CSU breadth area C2) (IGETC area 6)
2.5 units: 2.5 hours lecture.
Prerequisite: 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
(CSU breadth area C2) (IGETC area 6)
5 units: 5 hours lecture.
Prerequisite: 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)
Program Description
The goal of the Associate in Arts in Kinesiology for Transfer degree (AA-T in Kinesiology) is designed to prepare students for transfer into the CSU system to complete a baccalaureate degree in Kinesiology or similar major.

For an Associate in Arts in Kinesiology 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
3. Intersegmental General Education Transfer Curriculum (IGETC) pattern.
4. a minimum of 18 semester in the major or area of emphasis as determined by the community college district.
5. obtainment of a minimum grade point average (GPA) of 2.0.
6. 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 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, self-responsibility, leadership, decision-making, cooperation, self-reflection and empowerment during physical activity.
C. Identify and analyze the fundamental concepts and scientific foundations of kinesiology.

Core:

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<td>BIOL-16</td>
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<td>BIOL-18</td>
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<td>KINE-01</td>
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<th>Movement Based Courses: minimum 3</th>
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<tr>
<td>KINE-13 Beginning Basketball (1)</td>
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<tr>
<td>KINE-16 Football-Offensive Development (1)</td>
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<tr>
<td>KINE-14 Beginning Volleyball (1)</td>
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<td>KINE-33</td>
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<th>Aquatics:</th>
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<tbody>
<tr>
<td>KINE-20</td>
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</tbody>
</table>

Select 2 of the following:
CHEM-04A General Chemistry I (5)
KINE-02 First Aid and CPR For The Professional Rescuer (3)
MATH-10 Elementary Statistics (3)
PHYS-02A General Physics I (4)

Total Units toward the Major: 20-23
Total Units that may be double counted: 4
General Education (CSU-GE or IGETC) Units: 38-41
Elective (CSU Transferable) Units: 0-6
Total Degree Units: 60
KINESIOLOGY (KINE)

KINE-01 INTRODUCTION TO KINESIOLOGY  
(C-ID KIN 100)  
3 units: 3 hours lecture.  
Prerequisite: ENGL-85. Advisory: LRNR-30.  
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  
(C-ID KIN 101)  
3 units: 3 hours lecture.  
Advisory: ENGL-85.  
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  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: ENGL-85.  
This is an introductory course in recognition, assessment, management, care and prevention of injuries occurring in physical activities. (2/14)

KINE-12A BEGINNING BASEBALL  
1 - 2 units: 3-4 hours lecture.  
Advisory: 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  
1 - 2 units: 3-6 hours lecture.  
Advisory: 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  
1 unit: 3 hours lab.  
Advisory: 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 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  
1 unit: 3 hours lab.  
Advisory: 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 SPORTS INJURIES  
1 unit: 3 hours lab.  
Advisory: KINE-12A.  
This course is designed for the advanced swimmer to develop a greater understanding of the game of water polo. (2/14)

KINE-16 FOOTBALL-OFFENSIVE DEVELOPMENT  
1 unit: 3 hours lab.  
Advisory: 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  
1 unit: 3 hours lab.  
Advisory: 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  
1 unit: 3 hours lab.  
Advisory: 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  
2 units: 1.5 hours lecture, 1.5 hours lab.  
Limitation on Enrollment: Students must pass American Red Cross lifeguarding prerequisite skills. Advisory: 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. (11/13)

KINE-24A BEGINNING SWIMMING  
1 unit: 3 hours lab.  
Advisory: 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  
1 unit: 3 hours lab.  
Advisory: 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  
1 unit: 3 hours lab.  
Advisory: 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-31 AEROBIC TRAINING
1 unit: 3 hours lab.
Advisory: 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
1 unit: 3 hours lab.
Advisory: 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
1 unit: 3 hours lab.
Advisory: 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
1 unit: 3 hours lab.
Advisory: 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-42 GOLF
1 unit: 3 hours lab.
Advisory: 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 includes student participation, practicing golf shots, playing golf holes and learning about tournament competition. (2/15)

KINE-90 ADAPTIVE PHYSICAL EDUCATION
1 unit: 3 hours lab.
Advisory: ENGL-90.
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. (2/14)
Landscape Horticulture

CAREER AND TECHNICAL EDUCATION

DEGREE
A.S. - Landscape Horticulture

CERTIFICATE
Landscape Horticulture

Gainful Employment Disclosure Metrics

Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description

The Landscape Horticulture Program at Merced is designed to meet the need for trained personnel in a broad range of occupational opportunities involved with or related to the Landscape Industry.

The Merced College Landscape Unit includes greenhouses, a lath house, a spacious growing grounds and modern head house for potting. Facilities available to the Landscape Unit include a large school farm, laboratories, classrooms, and a beautifully landscaped campus. These facilities provide excellent opportunity for study and practice in the production and use of ornamental plants both for sale and for use in the landscape.

The Landscape Horticulture student receives well-rounded training in his field by being exposed to Tree and Plant Identification, Landscape Design, Construction and Maintenance, and finally, Nursery and Garden Center Practice. All courses deal with the entire range of activities within that particular area such as landscape uses of plants, plant propagation, basic irrigation and sprinkler systems. The legal aspects of the field are covered in the Landscape Construction and Installation course when local codes and state requirements for licensing are taught.

Career Opportunities

Enjoyable and profitable employment is waiting for qualified Merced College graduates who become proficient in propagating, growing, installing, and caring for ornamental plants.

The increase in leisure time with the related increase in employment and high earnings, have created an ever-expanding demand for plant material.

The following list is a sample of the positions available to the graduate:

**Nursery Industry**
- Retail Nursery Sales
- Retail Nursery Owner
- Plant Propagation
- Nursery Production
- Golf Course Personnel
- Parks Grounds keeper
- Government Services
- Extension Assistant

**Landscape Industry**
- Arbor Personnel
- Landscape Maintenance
- Landscape Estimator
- Landscape Installation
- Landscape Designer

**Related Industry**
- Pest Control
- Sales Representative
- Park Ranger

**Program Student Learning Outcomes**

**Core:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND-10A</td>
<td>3</td>
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<tr>
<td>LAND-10B</td>
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<tr>
<td>LAND-11</td>
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<tr>
<td>LAND-12</td>
<td>3</td>
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<tr>
<td>LAND-14</td>
<td>3</td>
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<tr>
<td>MECH-31</td>
<td>3</td>
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<tr>
<td>PLSC-10</td>
<td>3</td>
</tr>
<tr>
<td>SOIL-10</td>
<td>3</td>
</tr>
<tr>
<td>Plus 11 units from the following electives:</td>
<td></td>
</tr>
<tr>
<td>AGBS-18</td>
<td>3</td>
</tr>
<tr>
<td>DRFT-04A</td>
<td>3</td>
</tr>
<tr>
<td>FPRO-13</td>
<td>3</td>
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<tr>
<td>LAND-15</td>
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<td>LAND-17</td>
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<td>MECH-15</td>
<td>3</td>
</tr>
<tr>
<td>MECH-35</td>
<td>3</td>
</tr>
<tr>
<td>PLSC-13</td>
<td>3</td>
</tr>
<tr>
<td>LAND-16</td>
<td>3</td>
</tr>
<tr>
<td>SOIL-11</td>
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**Plus:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Plant Identification and Usage: Fall</td>
<td>3</td>
</tr>
<tr>
<td>Plant Identification and Usage: Spring</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Landscape Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>Landscape Design</td>
<td>3</td>
</tr>
<tr>
<td>Landscape Construction and Installation</td>
<td>3</td>
</tr>
<tr>
<td>Equipment Safety</td>
<td>3</td>
</tr>
<tr>
<td>Elements of Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>Soil Science</td>
<td>3</td>
</tr>
<tr>
<td>Agricultural Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Computer-Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>Fruit Tree Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Nursery and Garden Center Practice</td>
<td>3</td>
</tr>
<tr>
<td>Small Engine Repair/Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>Compact Power Equipment</td>
<td>3</td>
</tr>
<tr>
<td>Economic Entomology</td>
<td>3</td>
</tr>
<tr>
<td>Plant Propagation</td>
<td>3</td>
</tr>
<tr>
<td>Fertilizers and Soil Amendments</td>
<td>3</td>
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</tbody>
</table>

**Total:** 30 units

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.
CERTIFICATE
Landscape Horticulture (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.

Core:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>LAND-10A</td>
<td>Plant Identification and Usage: Fall</td>
<td>3</td>
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</tr>
<tr>
<td>LAND-10B</td>
<td>Plant Identification and Usage: Spring</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LAND-11</td>
<td>Elements of Landscape Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LAND-12</td>
<td>Landscape Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LAND-14</td>
<td>Landscape Construction and Installation</td>
<td>3</td>
<td></td>
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<tr>
<td>MECH-31</td>
<td>Equipment Safety</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PLSC-10</td>
<td>Elements of Plant Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOIL-10</td>
<td>Soil Science</td>
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Plus 18 units from the following electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AGBS-18</td>
<td>Agricultural Computer Applications</td>
<td>3</td>
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<td>DRFT-04A</td>
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<td>3</td>
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<tr>
<td>FFRO-13</td>
<td>Fruit Tree Maintenance</td>
<td>3</td>
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</tr>
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<td>LAND-16</td>
<td>Plant Propagation</td>
<td>3</td>
</tr>
<tr>
<td>SOIL-11</td>
<td>Fertilizers and Soil Amendments</td>
<td>2</td>
</tr>
</tbody>
</table>

37 units: 2 hours lecture, 3 hours lab.

LANDSCAPE HORTICULTURE (LAND)

LAND-10A PLANT IDENTIFICATION AND USAGE: FALL
3 units: 2 hours lecture, 3 hours lab.
Advisory: ENGL-85.
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. (1/06)

LAND-10B PLANT IDENTIFICATION AND USAGE: SPRING
3 units: 2 hours lecture, 3 hours lab.
Advisory: ENGL-85.
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. (1/06)

LAND-11 ELEMENTS OF LANDSCAPE HORTICULTURE
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (1/08)

LAND-17  NURSERY AND GARDEN CENTER PRACTICE
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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. (1/06)

LAND-50  RESIDENTIAL GARDENING
3 units: 3 hours lecture.
Advisory: ENGL-85.
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)

Learning Resources
ENGLISH, BASIC SKILLS AND CHILD DEVELOPMENT

DEAN
KEVIN KISTLER
(209) 384-6314

COUNSELING
(209) 384-6364

PHONE
(209) 384-6150

AREA OFFICE
IAC HUMANITIES BLDG., 2ND FLOOR

Learning Resources (LRNR)
LRNR-30  INFORMATION COMPETENCY IN THE ELECTRONIC AGE
[CiLC areas A,B,C,D,E,F,G]
3 units: 3 hours lecture.
Prerequisite: ENGL-85. 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 bibliography production. This course fulfills the Computer and Information Literacy requirements of Merced College. (11/09)
DEGREE
A.A.-T. - Elementary Teacher Education
A.A. - Liberal Studies (Teaching Preparation)

Program Description
Liberal Studies 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.

DEGREE (11/14)
A.A.-T. - Elementary Teacher Education (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 matter areas, 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 (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 grade of C or better in all courses required for the major or area of emphasis.
5. Students are not required to complete any additional local graduation requirements for the AA-T (e.g., PE and Computer and Information Literacy courses).

Required Core Courses (43 Units):

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>LBST-10</td>
<td>Introduction to Education I</td>
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<tr>
<td>CLDV-01</td>
<td>Child Growth and Development</td>
<td>3</td>
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<tr>
<td>BIOL-01</td>
<td>General Biology for Non-Majors</td>
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<tr>
<td>PHSC-02</td>
<td>Survey of Chemistry and Physics</td>
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<td>PHSC-02L</td>
<td>Survey of Chemistry and Physics Laboratory</td>
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<tr>
<td>GEOL-03</td>
<td>Earth Science</td>
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<tr>
<td>MATH-20A</td>
<td>Basic Structure of Mathematics I</td>
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COMM-01 or COMM-01H

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<tr>
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ENGL-01A

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ENGL-01B

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<td>Introduction to Literature</td>
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GEOG-02

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<tbody>
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HIST-17A or HIST-17AH

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<tbody>
<tr>
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<tr>
<td>Honors United States History and United States Constitution</td>
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HIST-04A

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<tr>
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<tbody>
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<td>History of Civilization: Part I</td>
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POSC-01

<table>
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<tr>
<th>Course</th>
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<tbody>
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<td>Essentials of American Political System</td>
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List A: Select 1 course from the following

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<td>ENGL-13H</td>
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<tr>
<td>or</td>
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<tr>
<td>or</td>
<td>Critical Reasoning and Writing</td>
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List B: Select 1 course from the following

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<td>ART-01</td>
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<tr>
<td>ART-02</td>
<td>Art History: Renaissance through 20th Century</td>
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</tr>
<tr>
<td>ART-06</td>
<td>Art of the 20th Century</td>
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</tr>
<tr>
<td>DRAM-01</td>
<td>Introduction to Theater</td>
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<tr>
<td>MUSG-10</td>
<td>Fundamentals of Music</td>
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</tr>
<tr>
<td>MUSG-11</td>
<td>Classical Music History I</td>
<td>3</td>
</tr>
<tr>
<td>MUSG-12</td>
<td>Classical Music History II</td>
<td>3</td>
</tr>
<tr>
<td>MUSG-14</td>
<td>American Popular Music History</td>
<td>3</td>
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List C: Up to 3 additional units*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any course(s) not selected above, and/or any courses that are lower preparation for the targeted major at a university.</td>
<td>3</td>
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CPSC-30

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Computer Applications</td>
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HUM-01 or HUM-01H

<table>
<thead>
<tr>
<th>Course</th>
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<th>Units</th>
</tr>
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<tbody>
<tr>
<td>Studies in Humanities—Ancient through Renaissance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Honors Studies in Humanities—Ancient through Renaissance</td>
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<td></td>
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HUM 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparative Cultures</td>
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<td></td>
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</table>

LBST-20

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Education II</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

LBST-30

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children’s Literature</td>
<td>3</td>
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MATH-20B

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Structure of Mathematics II</td>
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PSYC-09

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Human Development</td>
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CLDV-09

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Development</td>
<td>3</td>
<td></td>
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</table>

Total Units toward the Major: 52
Total Units that may be double counted: ........................................... 28-34
General Education (CSU-GE or IGETC) Units: ................................... 37-39
Elective (CSU Transferable) Units: ................................................... 0-3
Total Degree Units: ......................................................................... 60

*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.

DEGREE
A.A. - Liberal Studies (Teaching Preparation)
(49501.AA)

For an Associate in Arts Degree in Liberal Studies, students must meet the graduation requirements and complete the 34-unit curriculum listed below. The courses listed below must be in addition to the basic graduation requirements.

Program Student Learning Outcomes
A. Make explicit 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. Demonstrate integrative thinking through the development of projects that connect and integrate discipline knowledge across subject matter areas, including effective oral, written, and interpersonal communications skills in a variety of communication contexts.
C. Demonstrate sensitivity to the diverse cultural, linguistic, and learning abilities of students, and understanding of a variety of teaching strategies to teach all learners effectively.
D. Reflect thoughtfully and critically examine volunteer service activities in K-8 classrooms.

Core: Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM-01*</td>
<td>Fundamentals of Speech</td>
</tr>
<tr>
<td>or COMM-01H*</td>
<td>Honors Fundamentals of Speech</td>
</tr>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
</tr>
<tr>
<td>or ENGLPHIL-13*</td>
<td>Critical Reasoning and Writing</td>
</tr>
<tr>
<td>or ENGLPHIL-13H*</td>
<td>Honors Critical Reasoning and Writing</td>
</tr>
<tr>
<td>LBST-30</td>
<td>Children’s Literature</td>
</tr>
<tr>
<td>or HIST-17A</td>
<td>United States History and United States Constitution</td>
</tr>
<tr>
<td>or HIST-17AH</td>
<td>Honors United States History and United States Constitution</td>
</tr>
<tr>
<td>LBST-10</td>
<td>Introduction to Education I</td>
</tr>
<tr>
<td>LBST-20</td>
<td>Introduction to Education II</td>
</tr>
<tr>
<td>MATH-20A</td>
<td>Basic Structure of Mathematics I</td>
</tr>
<tr>
<td>PHSC-01</td>
<td>Introduction to Physical and Earth Science</td>
</tr>
<tr>
<td>or PHSC-01L</td>
<td>Introduction to Physical and Earth Science Laboratory</td>
</tr>
<tr>
<td>Plus six units from the following:</td>
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<tr>
<td>ART-12A</td>
<td>Sculpture: 3-D Foundations</td>
</tr>
<tr>
<td>or ART-15</td>
<td>Design: 2-D Foundations</td>
</tr>
<tr>
<td>or ART-24A</td>
<td>Drawing</td>
</tr>
<tr>
<td>BIOL-01</td>
<td>General Biology for Non-Majors</td>
</tr>
<tr>
<td>or CLDV/PSYC-09</td>
<td>Human Development</td>
</tr>
<tr>
<td>or COMM-30</td>
<td>Introduction to Intercultural Communication</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL-08</td>
<td>Introduction to Shakespeare</td>
</tr>
<tr>
<td>ENGL-18</td>
<td>African and African American Literature</td>
</tr>
<tr>
<td>HIST-29</td>
<td>History of California</td>
</tr>
<tr>
<td>HUM/PHIL-15</td>
<td>Comparative Cultures</td>
</tr>
<tr>
<td>MATH-20B</td>
<td>Basic Structure of Math II</td>
</tr>
<tr>
<td>MUSG-14</td>
<td>American Popular Music History</td>
</tr>
</tbody>
</table>

Students should see a Liberal Studies counselor for general breadth lower-division requirements specific to the transfer institution.

*COMM-01 and ENGL/PHIL-13 may count for the major and for general breadth lower division requirements.

LIBERAL STUDIES (LBST)

LBST-10 INTRODUCTION TO EDUCATION I
(C-ID EDUC 200)
3 units: 2 hours lecture, 3 hours lab. Limitation on enrollment: Students must obtain a fingerprint clearance and negative TB clearance. Advisories: ENGL-01A; CPSC-30; 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 in area 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 required by off-campus school sites. Observation placements will not be available for students with felony convictions. (1/14)

LBST-20 INTRODUCTION TO EDUCATION II
3 units: 2 hours lecture, 3 hours lab. Limitation on enrollment: Students must obtain a fingerprint clearance and a negative TB clearance. Prerequisite: LBST-10.

Students are provided additional opportunities to explore the teaching profession and how their personalities will fit with their career choice. Students will observe students and teachers 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-30 CHILDREN’S LITERATURE
3 units: 3 hours lecture. Prerequisite: 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)
Management

ALLIED HEALTH, BUSINESS AND PUBLIC SAFETY

DEGREES
A.A. - Management/Supervisory Training
A.A. - Small Business Entrepreneurship (see Entrepreneurship)

CERTIFICATES
Customer Service Academy
Management/Supervisory Training
Small Business Entrepreneurship (see Entrepreneurship)

Gainful Employment Disclosure Metrics

Gainful Employment Disclosure Information
Information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description

The mission of the Merced College Management Program is to equip students with the skills necessary to advance in a management career. The Management Program prepares students for both the challenges and changes faced in the workplace today. Students can earn an A.A. Degree or Certificate of Completion or simply take classes for professional development growth.

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.

The Customer Service Academy conducts practical, hands-on workshops to enhance a business’ ability to gain and retain both customers and quality employees. This program delivers high quality, energetic, cutting edge training to equip your employees with the skills they need to effectively work together and serve both internal and external customers.

The Customer Service Academy is offered on campus and is also delivered locally through several chambers of commerce. The program can also be delivered on-site in your workplace. For more information about the Customer Service Academy visit us on-line at www.customerserviceacademy.org.

Career Opportunities:

- Management
- Supervision
- Sales
- Executive Assistant
- Administration
- Small Business Owner/Entrepreneur

DEGREE (2/09)
A.A. - Management/Supervisory Training (05450.AA)
See Entrepreneurship.

DEGREE (2/10)
A.A. - Small Business Entrepreneurship (05700.AA)
See Entrepreneurship.

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.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>ACTG-04A</td>
<td>4</td>
</tr>
<tr>
<td>ACTG-51</td>
<td>4</td>
</tr>
<tr>
<td>BUS-18A</td>
<td>4</td>
</tr>
<tr>
<td>CPSC-01</td>
<td>4</td>
</tr>
<tr>
<td>CPSC-30</td>
<td>3</td>
</tr>
<tr>
<td>ECON-02</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-31</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-32</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-33</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-34</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-50-52</td>
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</table>

Suggested electives include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>BUS-10</td>
<td>3</td>
</tr>
<tr>
<td>BUS-35</td>
<td>3</td>
</tr>
<tr>
<td>BUS-49A-ZZ</td>
<td>½ - 3</td>
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<tr>
<td>COMM-04</td>
<td>3</td>
</tr>
<tr>
<td>ECON-01</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-37</td>
<td>3</td>
</tr>
<tr>
<td>MGMT-50</td>
<td>½ - 3 ½</td>
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<tr>
<td>MGMT-51</td>
<td>½ - 3 ½</td>
</tr>
<tr>
<td>MGMT-52</td>
<td>½ - 3 ½</td>
</tr>
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</table>
CERTIFICATE
Customer Service Academy (05200.CO)

For a Customer Service Academy Certificate, students must complete all ten management courses listed below.

Program Student Learning Outcomes
Apply the following skills to their interactions with both internal and external customers: Customer service, communication, attitude, team work, values and ethics, time management, stress management, conflict management, decision making and problem solving and managing organizational change.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MGMT-50B</td>
<td>Values and Ethics</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50C</td>
<td>Time Management</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50D</td>
<td>Communication in the Workplace</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50F</td>
<td>Team Building</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50G</td>
<td>Decision Making and Problem Solving</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50H</td>
<td>Customer Service</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-50I</td>
<td>Attitude in the Workplace</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-51F</td>
<td>Conflict Resolution</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-51G</td>
<td>Stress Management</td>
<td>½</td>
</tr>
<tr>
<td>MGMT-52D</td>
<td>Managing Organizational Change</td>
<td>½</td>
</tr>
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</table>

5 units

CERTIFICATE
Management/Supervisory Training (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.

Core:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Advice</th>
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</thead>
<tbody>
<tr>
<td>ACTG-04A</td>
<td>Fundamentals of Financial Accounting</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>ACTG-51</td>
<td>Applied Accounting</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>BUS-18A</td>
<td>Business Law</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>CPSC-01</td>
<td>Introduction to Computer Information Systems</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>ECON-02</td>
<td>Introduction to Macroeconomics</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>MGMT-31</td>
<td>Principles of Management</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>MGMT-32</td>
<td>Human Resource Management</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>MGMT-33</td>
<td>Elements of Effective Leadership</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>MGMT-34</td>
<td>Employment Law</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
<tr>
<td>MGMT-50-52</td>
<td>Management 50 Series</td>
<td>0.5 unit: 0.5 hour lecture.</td>
</tr>
</tbody>
</table>

29-30 units

MANAGEMENT (MGMT)

MGMT-31 PRINCIPLES OF MANAGEMENT
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85.
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
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85.
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
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85.
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
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85.
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
3 units: 3 hours lecture.
Advisories: CPSC-30; ENGL-85.
This course is designed to assist small business and prospective small business owners through the utilization of an entrepreneur’s business plan. Topics include the environment and management of the small enterprise, legal considerations in starting a small business, financing and insuring a business, as well as marketing and budgeting for a small business. Students will use microcomputers in the decision making and business planning process. (12/08)

MGMT-50A CHALLENGES OF LEADERSHIP: DIFFICULT PEOPLE/TOUGH CONVERSATIONS
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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 ones ethical behavior, and helping people do the right thing. Pass/No Pass only. (1/08)
MGMT-50C TIME MANAGEMENT
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This is the first time in America’s history that we have four generations working side by side in the workplace. This course is designed to equip students with knowledge and skills to work with and lead cross-generational teams. Pass/No Pass only. (2/09)

MGMT-50L AUTHENTIC LEADERSHIP: KNOW YOURSELF/LEAD YOUR PEOPLE
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This course is designed to help leaders recognize their own strengths and learn how to invest in the strengths of those they lead. Participants will learn what followers look for in a leader and will focus on the importance of authenticity. Participants will also explore what type of leader they aspire to be and will develop a personal mission statement. Pass/No Pass only. (2/14)

MGMT-50M CULTURAL DIVERSITY
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This course will help students understand their unique strengths and how applying their strengths can give them their best opportunity for success. Through the Strengthsfinder 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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This course is designed to acquaint the student with the essential things 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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This course is designed to acquaint 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-52B  WRITING SKILLS FOR MANAGERS
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
This course is designed to provide the student with the skills necessary to effectively write various business documents. Topics will include the guidelines necessary to produce effective written communications, introduction to various communication devices used internally in an organization, preparation of written communications for use outside the organization, and business communication and the law. Pass/No Pass only. (1/13)

MGMT-52C  SUCCESSFUL BUSINESS SPEAKING
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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 speaking and listening skills, speaking one-to-one, giving oral presentations, and conducting effective meetings. Pass/No Pass only. (1/13)

MGMT-52D  MANAGING ORGANIZATIONAL CHANGE
0.5 unit: 0.5 hour lecture.
Advisories: READ-81, ENGL-84.
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)
### DEGREE

**A.A. - Marketing**

#### CERTIFICATE

**Marketing**

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**Gainful Employment Disclosure Metrics**

Gainful Employment provides students information useful in determining which school to attend for 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 address:

Merced College Gainful Employment

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**Program Description**

The Associate in Arts Degree in Merchandising/Marketing Management is in preparation for employment in the merchandising and marketing areas. Students must meet the graduation requirements and complete the major requirements.

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**Career Opportunities**

Marketing Manager, Sales, Distribution, Retailing, Entrepreneur, Creative Director, Public Relations, Business Owner, Advertising Executive.

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**Core:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ACTG-04A</td>
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<tr>
<td>or ACTG-51</td>
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<tr>
<td>AOM-50B</td>
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<tr>
<td>or BUS 43</td>
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<td>MKTG-33</td>
<td>3</td>
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<tr>
<td>MGMT-31</td>
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**Suggested electives include:**

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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>ARTD-41A</td>
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<td>ARTD-41B</td>
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<td>BUS-35</td>
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<td>MGMT-37</td>
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<td>PSYC-05</td>
<td>3</td>
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<tr>
<td>or MATH-10</td>
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</tbody>
</table>
A Certificate of Achievement will be awarded upon the satisfactory completion of 29 units of course work in this area of study which includes the core courses indicated for the Associate in Arts Degree 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.

Core: Units
ACTG-04A Financial Accounting ........................................4
or
ACTG-51 Applied Accounting .............................................4
AOM-50B Keyboarding & Document Formatting ......................3
or
BUS 43 Business Communication ....................................3
BUS-10 Introduction to Business ....................................3
BUS-18A Business Law ..................................................4
CPSC-30 Computer Applications .......................................3
MKTG-30 Principles of Marketing ......................................3
MKTG-31 Retailing and E-Commerce ..................................3
MKTG-33 Advertising .....................................................3
MGMT-31 Principles of Management ..................................3

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Recommended Sequence: A.A. - Marketing (05460.AA)

Fall 1
ACTG-04A Fundamentals of Financial Accounting .................4
or
ACTG-51 Applied Accounting............................................4

Spring 1

Fall 2
MGMT-31 Principles of Management.................................3

Spring 2
BUS-18A Business Law..................................................4
MKTG-30 Principles of Marketing......................................3

MARKETING (MKTG)

MKTG-30 PRINCIPLES OF MARKETING
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course is an introductory course in retailing including electronic commerce. It will include, but not be limited to, e-commerce and its relationship to retailing, selling, marketing, advertising, financial transactions, security, and privacy matters. (9/13)

MKTG-32 PROFESSIONAL SELLING
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course is designed to provide the student with a theoretical and practical background in sales. Included in this course is the study of the psychology of selling, selling principles and techniques, advertising and sales promotion, and development of the individual for entry into the field of professional sales. (9/13)

MKTG-33 ADVERTISING
3 units: 3 hours lecture.
Advisory: CPSC-30; ENGL-85; AOM-61.
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)
Mathematics
MATH, SCIENCE AND ENGINEERING

Associate Degree for Transfer™

DEGREE
A.S.-T. - Mathematics

Program Description
The Mathematics curriculum at Merced College prepares students to transfer to four-year institutions. Students are strongly encouraged to consult with a counselor for information regarding educational planning and for specific requirements in the catalog of the college to which he/she plans to transfer. Students that complete an Associate in Science in Mathematics for Transfer from Merced College will be prepared for upper division course work in Mathematics at a California State University.

For an Associate in Science in Mathematics 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 units in the major or area of emphasis as determined by the community college district.
4. 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).

Web Site
www.mccd.edu/academics/divisions/sme/math.html

Career Opportunities
This degree is designed for students who plan to transfer to a California State University, but also provides students with mathematical knowledge that can be used in variety of careers.

DEGREE (2/14)
A.S.-T. - Mathematics (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 to assist students in the seamless transferring to a California State University. Upon completion of the AS-T in Mathematics, students will be able to:

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.

Core:

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<td>MATH-04B</td>
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<tr>
<td>MATH-04C</td>
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List A: Select 3 units from the following
- MATH-06 Elementary Differential Equations (3)
- MATH-08 Linear Algebra (3)
- Any course from List A not used (3)

List B: Select 6 units from the following
- CPSC-06 Programming Concepts & Methodology I (3)
- ENGR-14 C++ Programming (3)
- MATH-14 C++ Programming (3)
- MATH-07 Discrete Structures (3)
- MATH-10 Elementary Statistics (3)
- PHYS-04A Physics I (4)

Total units toward the major..............................................21-22
Total units that may be double counted..............................3-7
General Education (CSU-GE or IGETC) units..........................37-39
Elective (CSU Transferable) units......................................2-9

DEGREE TOTAL..................................................................60
Recommended Sequence: A.S.-T. - Mathematics (17400.AS-T)
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/ENGR-14  C++ Programming .................................. 3
MATH-10  Elementary Statistics ........................................... 3

Spring 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-08  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.

MATHEMATICS (MATH)

MATH-B  APPLIED MATHEMATICS
5 units: 5 hours lecture.
Prerequisite: MATH-80. Advisory: ENGL-85.
This course will explore mathematical applications from various vocational and technical areas. It will be an intense course covering a review of pre-algebra, ratios, proportions, percents, measurements, basic algebra, plane and solid geometry. (2/13)

MATH-C  INTERMEDIATE ALGEBRA
4 units: 4 hours lecture.
Prerequisite: MATH-B1. Advisory: ENGL-85.
This course covers factoring, functions and graphs, solving linear, quadratic, piecewise defined, exponential, and logarithmic equations, rational expressions and equations, complex numbers, and conic sections. (10/13)

MATH-02  PRECALCULUS
(CSU breadth area B4) (IGETC area 2)
4 units: 4 hours lecture.
Prerequisite: MATH-25. Advisory: ENGL-85.
This course is designed to prepare students for calculus. Topics of study include polynomials, complex numbers, algebra of functions, inverse functions, exponential, logarithmic, trigonometric functions and their graphs, systems of equations and inequalities, topics in analytic geometry, and polar coordinates. (10/13)

MATH-02H  HONORS PRECALCULUS
(CSU breadth area B4)
4 units: 4 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program; see the college catalog for a description of enrollment requirement. Prerequisite: MATH-25. Advisory: ENGL-85.
This course is designed to prepare students for calculus. Topics of study include polynomials, complex numbers, algebra of functions, inverse functions, exponential, logarithmic, trigonometric functions and their graphs, systems of equations and inequalities, topics in analytic geometry, and polar coordinates. There will be an emphasis in the use of available technology, mathematical writing, and collaborative learning. (10/13)

MATH-04A  CALCULUS I
(C-ID MATH 211) (CSU breadth area B4) (IGETC area 2)
4 units: 4 hours lecture.
Prerequisite: MATH-02 or MATH-02H. Advisory: ENGL-85.
This course covers limits, continuity, differentiation and integration of algebraic and trigonometric functions along with their respective applications. (10/13)

MATH-04B  CALCULUS II
(C-ID MATH 221) (CSU breadth area B4) (IGETC area 2)
4 units: 4 hours lecture.
Prerequisite: MATH-04A. Advisory: ENGL-85.
This course is a continuation of MATH-04A, addressing conic sections, transcendental functions, methods of integration, hyperbolic functions, improper integrals, Taylor’s Formula, infinite series, and plane curves and polar coordinates. (2/12)

MATH-04C  MULTIVARIABLE CALCULUS
(CSU breadth area B4) (IGETC area 2)
4 units: 4 hours lecture.
Prerequisite: MATH-04B. Advisory: ENGL-85.
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
(C-ID MATH 240) (CSU breadth area B4) (IGETC area 2)
3 units: 3 hours lecture.
Prerequisite: MATH-04C. Advisories: ENGL-85; 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)
(CSU breadth area B4)
3 units: 2.5 hours lecture, 1.5 hours lab.
Prerequisite: CPSC-06 or ENGR-14 or CPSC-14; MATH-02 or MATH-02H.
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. (11/13)

MATH-08  LINEAR ALGEBRA
(C-ID MATH 250) (CSU breadth area B4) (IGETC area 2)
3 units: 3 hours lecture.
Prerequisite: MATH-04B. Advisory: ENGL-85.
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
(CSU breadth area B4) (IGETC area 2)
3 units: 3 hours lecture.
Prerequisite: MATH-C. Advisory: ENGL-85.
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. (3/10)
MATH-15 FINITE MATHEMATICS  
(CSU breadth area B4) (IGETC area 2)  
3 units: 3 hours lecture.  
Prerequisite: MATH-C. Advisory: ENGL-85.  
This course covers algebra review, linear models, systems of linear equations, matrices, linear programming, mathematics of finance, set theory, and probability.

MATH-20A BASIC STRUCTURE OF MATHEMATICS I  
(CSU breadth area B4)  
3 units: 3 hours lecture.  
Prerequisite: MATH-C. Advisory: ENGL-85.  
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. (3/10)

MATH-20B BASIC STRUCTURE OF MATHEMATICS II  
(CSU breadth area B4)  
3 units: 3 hours lecture.  
Prerequisite: MATH-C. Advisories: ENGL-85; 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. This course covers the structure of plane and solid geometry, measurement, introduction to coordinate geometry, elementary probability, and statistics. (2/10)

MATH-25 TRIGONOMETRY  
(CSU breadth area B4)  
3 units: 3 hours lecture.  
Prerequisite: MATH-C. Advisory: ENGL-85.  
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. (10/13)

MATH-26 COLLEGE ALGEBRA FOR LIBERAL ARTS  
(C-ID MATH 150) (CSU breadth area B4) (IGETC area 2)  
3 units: 3 hours lecture.  
Prerequisite: MATH-C. Advisory: ENGL-85.  
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. (10/13)

MATH-80 PREALGEBRA  
4 units: 4 hours lecture.  
Prerequisite: MATH-81. Advisories: READ-81.  
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  
4 units: 4 hours lecture.  
Prerequisite: MATH-80. Advisory: ENGL-85.  
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  
3 units: 2 hours lecture, 3 hours lab.  
Advisory: 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-90 FUNDAMENTALS OF ARITHMETIC  
3 units: 3 hours lecture.  
Advisory: ENGL-90.  
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)

MATH-91 FUNDAMENTALS OF DECIMALS AND FRACTIONS  
3 units: 3 hours lecture.  
Prerequisite: MATH-90. Advisories: READ-80.  
This course begins with a short review of the whole number system using basic computational skills. The course covers the meaning of decimals and fractions, and the four basic operations using them: addition, subtraction, multiplication, and division. Special emphasis will be placed on thought problems, including life skills. The course will conclude with an introduction to prime factoring, exponents, basic geometry, and order of operation. (10/06)
Mechanized Agriculture
CAREER AND TECHNICAL EDUCATION

DEGREES
A.S. - Mechanized Agriculture Technology

CERTIFICATES
Compact Power Equipment
Mechanized Agriculture Technology

Gainful Employment Disclosure Metrics
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Program Description
Agriculture’s dependence on power equipment has given rise to a tremendous vocational education program at Merced College in the Mechanized Agriculture field.

The Mechanized Agriculture program offers courses in a wide variety of subject areas including Power Equipment Mechanics, Agricultural Construction, Diesel Engines, Hydraulics, Small Power Equipment, Machinery Management, and Power Equipment Operation. The Mechanized Agriculture facilities at the College are modern, spacious and equipped with current equipment that is used in the industry.

For instruction in Power Equipment Mechanics, the College shop has diesel engines of all makes and styles, hydraulic components, injection pumps, tractors, and agriculture equipment used for “hands-on” student training. Equipment used in the operation courses consist of both current model tractors as well as vintage designs. In addition, all of the implements necessary to run a complete farming operation are available for instructional use. Trucks and heavy equipment are also available for student instruction.

The Diesel Fuel Systems instruction provides the opportunity for our students to utilize a fully equipped fuel injection room. The College provides students with the tools necessary for all classes.

Career Opportunities
A recent University of California survey on employment opportunities in agriculture categorized the Mechanized Agriculture field as offering “…one of the highest potential labor demands for new employees.” Employment opportunities are excellent and range from farm equipment sales to equipment repair and other careers in related fields such as the trucking industry and compact power equipment.

With the evolution of highly sophisticated farm machinery, the technical level of upcoming technicians in the areas of electrical and hydraulic diagnosis and repair is essential. The curriculum within the Mechanized Agriculture Program is designed to meet this need.

The following lists a few employment possibilities:
- Heavy Equipment Technician
- Agriculture Equipment Technician
- Farm & Power Equipment Technician
- Hydraulic Technician
- Heavy Duty Electrical Technician
- Diesel Equipment Technician

DEGREE (2/14)
A.S. - Mechanized Agriculture Technology (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 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 if the path of repair was correct by testing and/or completing a work order/report.

Core:

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<th>Course</th>
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<td>MECH-12</td>
<td>Agriculture Equipment - Fall</td>
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<td>Hydraulics</td>
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<td>MECH-22A</td>
<td>Diesel Engines</td>
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<td>Power Trains</td>
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<td>MECH-26</td>
<td>Power Equipment Electrical Systems</td>
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<td>MECH-30</td>
<td>Equipment Mechanics Skills</td>
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<td>MECH-33</td>
<td>Power Equipment Air Conditioning</td>
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<td>Plus 15 units from the following electives:</td>
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<tr>
<td>MECH-13</td>
<td>Agriculture Equipment - Spring</td>
</tr>
<tr>
<td>MECH-15</td>
<td>Small Engine Repair/Maintenance</td>
</tr>
<tr>
<td>MECH-23</td>
<td>Diesel Fuel Systems Diagnostics</td>
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<tr>
<td>MECH-27</td>
<td>Applied Diesel Technical Skills</td>
</tr>
<tr>
<td>MECH-32</td>
<td>Applied Electrical and Hydraulic Service</td>
</tr>
<tr>
<td>MECH-35</td>
<td>Compact Power Equipment</td>
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<tr>
<td>WELD-06</td>
<td>Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding</td>
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</table>

Total Units: 36
## Mechanized Agriculture Technology (01450.CT)

A Certificate of Achievement in Mechanized Agriculture Technology will be awarded upon completion of the 33 units listed below with a minimum grade of 2.0 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 if the path of repair was correct by testing and/or completing a work order/report.

### Core:

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### Total Units: 33

### Fall Semester Courses

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### Spring Semester Courses

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<td>WELD-06</td>
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### Total Units: 31

### Recommended Sequence:
- Fall 1: MECH-12, MECH-21, MECH-22A, MECH-23, MECH-26, MECH-30, WELD-06
- Fall 2: MECH-24, MECH-27, MECH-32, WELD-06
- Spring 1: MECH-23, MECH-24, MECH-33
- Spring 2: MECH-13, MECH-35

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## Compact Power Equipment (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.

### Core:

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### Total Units: 19-21

### Recommended Sequence: A.S. - Mechanized Agriculture Technology (01450.AS); Certificate Mechanized Agriculture Technology (01450.CT)

- Fall 1: MECH-21, MECH-22A, MECH-23, MECH-26, MECH-30, MECH-35
- Spring 1: MECH-31, MECH-12, MECH-13, MECH-31
- Fall 2: MECH-12, MECH-13, MECH-31
- Spring 2: MECH-31, MECH-35
MECHANIZED AGRICULTURE & DIESEL EQUIPMENT MECHANICS (MECH)

MECH-06 FUNDAMENTALS OF OXY-FUEL WELDING AND SHIELDED METAL ARC WELDING (ALSO: WELD-06)
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; 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-10 AGRICULTURAL AND INDUSTRIAL TECHNICAL SKILLS (ALSO: INDT-10)
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80.
This course is a study of the use, maintenance, adjustment, calibration, and repair of the equipment commonly used in California agriculture during the spring production season, 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-15 SMALL ENGINE REPAIR/MAINTENANCE
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80.
This course is a complete introduction to the operation, construction, maintenance, repair, and adjustment of two-cycle and four-cycle engines. It is designed for persons without prior experience in small engines. Theory and practical work including safety and the care and use of specialized tools used in small engine repair and maintenance will be covered. Examples of types of engines to be used will include lawn mower, power saw, pump, conveyor, self-propelled small carts, and any other small engines. (11/12)

MECH-21 HYDRAULICS
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80.
This is an introduction to the principles of hydraulics applied to farm and light industrial equipment. The course includes a study of the technical language of fluid power, including graphical symbols, industrial standards, components, and maintenance of hydraulic units. (9/12)

MECH-22A DIESEL ENGINES
4 units: 2 hours lecture, 6 hours lab.
Advisories: ENGL-85; MATH-80.
This course explores the operation and repair of modern diesel engines. Principles and theories are studied by running, testing, diagnosing, disassembling and reassembling components, systems, and engines. (9/12)

MECH-23 DIESEL FUEL SYSTEMS DIAGNOSTICS
2 units: 1 hour lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80.
This course includes the study of common types of diesel fuel injection systems. Design and theory of operation of distributor type, multi-plunger inline type, and common rail diesel fuel injection systems will be covered. Testing and diagnostic procedures for various fuel systems is an important part of the course. Service and adjustments of injectors, nozzles, and governors will also be covered. (9/12)

MECH-24 POWER TRAINS
4 units: 2 hours lecture, 6 hours lab.
Advisories: ENGL-85; MATH-80.
This course is a study of the function and repair of a power train from the clutch through the final drive. Topics will include the theory of operation, maintenance, diagnosis, and repair of clutches and torque converters, mechanical and hydraulic transmissions, differential, and final drives. Safety will be stressed throughout. (9/12)

MECH-26 POWER EQUIPMENT ELECTRICAL SYSTEMS
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; MATH-80.
This course is a study of the fundamentals of electricity with applications to current power equipment electrical systems. Theory and service procedures will include the following systems: starting, charging, lighting, and accessories. (9/12)

MECH-27 APPLIED DIESEL TECHNICAL SKILLS
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: MECH-22A. Advisory: ENGL-85; MATH-85.
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
2 units: 1 hour lecture, 3 hours lab.
Advisories: ENGL-85; 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, dynamometers, valve grinders, boring machines, sharpening tools, reamers, hones, glass bead machine, boil out tank, fork lift, 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
1 unit: 1 hour lecture.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
2 units: 1 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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
3 units: 2 hours lecture, 3 hours lab.
Advisories: ENGL-85; 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-40 EQUIPMENT REPAIR
2 units: 1 hour lecture, 3 hours lab.
Advisories: ENGL-85; MATH-85.
This course is an introduction to the skills of maintenance and repair of equipment. The renovation of equipment including tractors and machinery to include re-tooling and structural repairs will be covered. Replacement of worn components, hard facing, sandblasting, metal preparation, and painting will be performed on a variety of equipment. Safety will be stressed throughout. (2/13)

MECH-51 TRUCK BRAKE AND CHASSIS
4 units: 2 hours lecture, 6 hours lab.
Advisories: ENGL-85; MATH-85.
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
.5 - 4 units: 0-4 hours lecture, 0-12 hours lab.
Advisories: ENGL-85; MATH-85.
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
.5 - 4 units: 0-4 hours lecture, 0-12 hours lab.
Advisories: ENGL-85; 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)
Music
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

Associate Degree for Transfer™

DEGREE
A.A.-T. - Music
A.A. - Music

Program Description

The A.A. Music Degree fulfills lower-division requirements for students planning to transfer to a four-year college or university culminating in employment the areas of music teaching, performance or other fields within the music industry.

While courses in basic music theory and musicianship are at the core of the A.A. music degree, electives in music history, digital music, and techniques will also be available.

Upon entering the program, the student will declare a primary performance medium (instrument or voice) and will follow a plan of techniques classes, applied lessons and performance ensemble participation based on that choice. Students must also demonstrate fundamental keyboard skills by passing a piano proficiency exam or completing appropriate coursework.

Graduates of the A.A. Music Degree will be equipped to move on with their academic training, but the degree will also be beneficial to those seeking employment in the fields of private teaching, recording, and performance.

Career Opportunities
Careers in music include performer, educator, conductor, composer, arranger, digital music technician, accompanist, church musician, music therapist, and private instructor.

DEGREE (4/14)
A.A.-T. - Music (10400.AAT)

The Associate in Arts in Music for Transfer degree at Merced College is designed to prepare students to successfully transfer to a CSU campus as music majors. The AA-T Music degree offers students the opportunity to obtain basic music skills in theory and musicianship, applied music, and ensemble performance. It is designed for students to complete the first two years of core major coursework required at CSU campuses. Students enrolling in the AA-T Music degree will be required to pass a keyboard proficiency exam in order to receive their degree. Upon beginning the program, students will need to determine an area of Applied Performance and will be placed on the basis of audition.

Music faculty are dedicated to assisting students at every step in their studies in the music department of Merced College and are committed to helping students explore their performance, teaching, and professional opportunities, and the process of transferring to baccalaureate programs in music.

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).

### Required Core:

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<tr>
<td>MUST-01</td>
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<td>MUST-02</td>
<td>Music Theory II (Diatonic Harmony II)</td>
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<td>MUST-03</td>
<td>Music Theory III (Chromatic Harmony)</td>
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<td>MUST-04</td>
<td>Music Theory IV (Music Theory of the 20th &amp; 21st Centuries)</td>
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<td>MUST-05</td>
<td>Aural Skills I</td>
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<td>MUST-06</td>
<td>Aural Skills II</td>
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<td>MUST-07</td>
<td>Aural Skills III</td>
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<td>MUST-08</td>
<td>Aural Skills IV</td>
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<tr>
<td>MUSG-11</td>
<td>Introduction to Digital Music</td>
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<td>MUSG-12</td>
<td>American Popular Music History</td>
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**Total Units that may be double counted:** 60

### Elective Units:

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<td>Core</td>
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**Total Degree Units:** 60

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**DEGREE (12/13)**

A.A. - Music (10400.AA)

For an Associate in Arts Degree in Music is available for students who meet the graduation requirements and complete the following 28-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.

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<td>Music Electives</td>
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**Total Units** 28

*Repeatable for credit.*
MUSIC

Note: Many four-year colleges have a maximum number of acceptable performance course units.

MUSA-20 APPLIED MUSIC
(C-ID MUS 160)
.50 unit: 1.5 hours lab.
Limitation 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.
Advisory: 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
3 units: 3 hours lecture.
Limitation on enrollment: Must demonstrate the ability to match pitch; see instructor. Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Prerequisite: MUSA-21A. Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Prerequisite: MUSA-25A. Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Prerequisite: MUSA-27A. Advisory: ENGL-85.
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)

MUSE-41 CONCERT BAND
(C-ID MUS 180)
1 unit: 3 hours lab.
Limitation on enrollment: Audition by instructor.
This course provides experience in performing concert and symphonic band literature. Public performance and exchange concerts are scheduled in addition to class rehearsals. This course may be repeatable three times. (12/13)

MUSE-42 JAZZ ENSEMBLE
(C-ID MUS 180)
1 units: 3 hours lab.
Limitation on enrollment: Audition by instructor.
This course is a study of jazz music in the big band tradition and modern jazz styles will be encouraged. This course may be repeated up to three times. (12/13)

MUSE-43 GUITAR ENSEMBLE
1 unit: 3 hours lab.
Limitation on enrollment: Audition by instructor. Prerequisite: MUSA-25A. Advisories: ENGL-85; MUSA-25B.
The Merced College Guitar Ensemble is a continuation of the skills and techniques learned in Guitar II. Students taking this course perform together in small and large group formats. Music selected to perform will be in a variety of styles including classical, jazz, popular, and international folk genres. Emphasis on group playing and the development of individual style will be encouraged. This course may be repeated up to three times. (12/13)

MUSE-44 CHORALE
(C-ID MUS 180)
1 units: 3 hours lab.
Limitation on enrollment: Audition by instructor.
This course specializes in the study and performance of choral literature chosen from all major eras and genres of choral writing. Particular focus will be made on literature written or arranged for large vocal ensembles. Emphasis includes part-singing, intonation, breath control, vocal development, blend, tone coloring, and choral balance. The Chorale performs several times throughout the year. This course may be repeated three times. (12/13)

MUSE-45 CHAMBER SINGERS
(C-ID MUS 180)
1 unit: 3 hours lab.
Limitation on enrollment: Audition by instructor.
This course specializes in the study and performance of choral literature chosen from all major eras and genres of choral writing. Particular focus will be made on literature written or arranged for small vocal ensembles. Emphasis includes part-singing, intonation, breath control, vocal development, blend, tone coloring, and choral balance. The Chamber Singers perform several times throughout the year. This course may be repeated three times. (12/13)

MUSG-10 MUSIC FUNDAMENTALS
(C-ID MUS 110) (CSU breadth area C1) (IGETC area 3A)
3 units: 3 hours lecture.
Advisory: ENGL-84.
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)
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
(3 units: 3 hours lecture.
Advisory: ENGL-85.
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
(3 units: 3 hours lecture.
Advisory: ENGL-85.
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
(3 units: 3 hours lecture.
Advisory: ENGL-85.
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-17 INTRODUCTION TO DIGITAL MUSIC
(3 units: 3 hours lecture.
Prerequisite: MUGS-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)

MUST-01 MUSIC THEORY I (DIATONIC HARMONY)
(C-ID MUS 120)
(3 units: 3 hours lecture.
Prerequisite: MUGS-10.
This course provides a thorough study of diatonic 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)
(3 units: 3 hours lecture.
Prerequisite: 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)
(C-ID MUS 140)
(3 units: 3 hours lecture.
Prerequisite: MUST-02. 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)
(3 units: 3 hours lecture.
Prerequisite: MUST-03. 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
(C-ID MUS 125)
1 unit: .5 hour lecture, 1.5 hours lab.
Advisory: MUGS-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. Use of computer music programs. (12/13)

MUST-06 AURAL SKILLS II
(C-ID MUS 135)
1 unit: .5 hour lecture, 1.5 hours lab.
Prerequisite: 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
(C-ID MUS 145)
1 unit: .5 hour lecture, 1.5 hours lab.
Prerequisite: MUST-06.
This course applies and develops the rhythmic, melodic, and harmonic materials of Music Theory III through ear training, sight singing, analysis, and dictation. (12/13)

MUST-08 AURAL SKILLS IV
(C-ID MUS 155)
1 unit: .5 hour lecture, 1.5 hours lab.
Prerequisite: MUST-07. Advisory: MUSA-27B.
This course applies and develops the rhythmic, melodic, and harmonic materials of Music Theory IV through ear training, sight singing, analysis, and dictation. (12/13)

MUST-09 JAZZ THEORY AND IMPROVISATION
(3 units: 3 hours lecture.
Prerequisite: MUGS-10.
This course is a study of the basic techniques used in the understanding and performance of improvisation in the jazz style. Topics include the modes of the major scale and chord relationships, blues scales and progressions, ii-V-I progressions, rhythm changes, jazz standards and chromaticism. A study of the rhythms associated with jazz include swing, Latin, and contemporary styles. Students must provide their own instrument. (12/13)
Nursing Assistant
ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY

CERTIFICATE Nursing Assistant (CNA)

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Web site www.mccd.edu/alliedhealth/

Program Description
The Nurse Assistant program is offered during the spring and fall semesters for 18 weeks and the summer semester for nine weeks in Merced and Los Banos.

The course provides basic skills required of the nurse assistant employed in skilled nursing facilities. The course emphasizes care of the older adult client and assistance with the activities of daily living: bathing, dressing, exercise, movement, eating, eliminating, safety measures, and rehabilitation techniques. The Nurse Assistant program also provides clinical instruction. Students will practice skills in lab and then be assigned to assist clients in a skilled nursing facility. This training meets the *California Department of Public Health requirements for eligibility to take the Nurse Assistant certification examination.

*California Department of Public Health (CDPH)
Licensing and Certification Program (L&C)
Aide and Technician Certification Section (ATCS)
MS 3301, P.O. Box 997416
Sacramento, CA 95899-7416
PHONE: (916) 552-8785
FAX: (916) 327-2445
EMAIL: cna@cdph.ca.gov

Upon successful completion of the Nurse Assistant Program, the student must pass the Certification Exam in order to become a Certified Nurse Assistant. The exam has been developed to meet the evaluation legislation. The test is offered throughout the state. The test may be offered at Merced college upon completion of each training course. The test consists of two parts: written and manual.

Orientation
Students must attend a Nurse Assistant Orientation. Contact the Allied Health office at (209) 384-6371 for orientation dates. 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.

Career Opportunities
The Nurse Assistant program is a course leading to an entry level career in the health care industry. Upon completion of the program and certification, Certified Nursing Assistants can expect better than average job opportunities. Most Certified Nursing Assistants work in hospitals, clinics, assisted living facilities and skilled nursing facilities. Individuals interested in the Nurse Assistant program are encouraged to call the Allied Health Office.

Highlights
The Allied Health Center houses two complete Nursing Skills Lab, large computer lab, conference room, study rooms and multiple large and small classrooms. The Nursing Skills Labs have state-of-the art equipment and software that assist students with learning current procedures.

CERTIFICATE (10/06)
Nursing Assistant (12150.CO)

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

Units
ALLH-60 Nurse Assistant .................................................. 5.5
Successful completion of the above course is required to apply for the CNA certification exam.

ALLIED HEALTH (ALLH)

ALLH-60 NURSE ASSISTANT
5.5 units: 3 hours lecture, 7.5 hours lab.
Limitation on enrollment: Orientation workshop; CPR card - Module A/C; negative TB screening test within past 6 months or negative chest x-ray within past year; DOJ fingerprint clearance; Penal Code Violations clearance. Advisories: READ-80, ENGL-84.

The course provides clinical instruction and practice of basic nursing skills required of nursing assistants employed in skilled nursing facilities and extended care facilities. The course emphasizes care of the older adult client, assistance with the activities of daily living, bathing, dressing, exercise movement, eating, eliminating safety measures, cardiopulmonary resuscitation and rehabilitation techniques. Meets California Department of Public Health requirements for eligibility to take the Nursing Assistant Certification examination.(10/06)
Nursing, Registered

DEGREE
A.S. - Nursing, Registered

Web site
www.mccd.edu/alliedhealth/

Program Description
All individuals who meet minimum enrollment requirements are eligible to apply to the nursing programs. Criteria and complete information on the selection process as well as the philosophy and objectives of each program are described in the Nursing Application Handbook which is available online. The handbook is extensive and may contain additional information to the following brief program outline.

Completion of the Registered Nursing Program at Merced College and all requirements of the A.S. Degree qualify students to take the *National Council Licensure Examination for Registered Nurses (NCLEX-RN). (It is the student’s responsibility to meet all requirements to sit for the NCLEX-RN exam.)

*BRN-Board of Registered Nursing;
1625 North Market Blvd; Suite N217; Sacramento, CA  95834-1924; www.rn.ca.gov

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 March, specifically during a 2-3 day window. 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 assessment score. Ten percent of the available seats in the program will be offered to students with the highest points. The remaining seats will be chosen by random selection lottery from the pool of applicants meeting the minimum qualification. These students will be sequentially numbered from one to the maximum allowed for the incoming 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.

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), Version V. 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 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 be 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.

Note to Transfer Students
SECTION 1. Section 66055.8 of the Education Code is amended to read:

66055.8 Notwithstanding any other provision of law, a campus of the California State University or the California Community Colleges that operates a registered nursing program shall not require a student who has been admitted to that registered nursing program and who has already earned a baccalaureate or higher degree from a regionally accredited institution of higher education to undertake any coursework other than the coursework that is unique and exclusively required to earn a nursing degree from that institution.

The System Office is interpreting this amendment to the Education Code as follows:

To obtain an associate degree in nursing, students who have baccalaureate or higher degrees are only required to complete the course work required for completion of the registered nursing program, including prerequisites and nursing course work. These students are not to be required to complete any other courses required by the college for an associate degree.

DEGREE (2/13)
A.S. - Nursing, Registered (12500.AS)

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. Provide quality, safe, patient-center nursing care through evidence-based practice.
B. Participate in collaborative relationships with members of the interdisciplinary team to provide and improve patient care.
C. Engage in critical thinking skills and strategies and clinical reasoning necessary to provide quality patient care.
D. Provide 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. Function as a competent nurse assimilating all professional, ethical, and legal principles.

Prerequisite courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL-16**</td>
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</tr>
<tr>
<td>BIOL-18**</td>
<td>4</td>
</tr>
<tr>
<td>BIOL-20**</td>
<td>4</td>
</tr>
<tr>
<td>ENGL-01A</td>
<td>4</td>
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<tr>
<td>MATH-C</td>
<td>4</td>
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<tr>
<td>ENGL-01A</td>
<td>4</td>
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<tr>
<td>MATH-C</td>
<td>4</td>
</tr>
</tbody>
</table>

**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.

Required courses (non-nursing) which also fulfill A.S. Breadth requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>COMM-01</td>
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<tr>
<td>or</td>
<td>COMM-01H</td>
</tr>
</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM-04</td>
<td>3</td>
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<tr>
<td>or</td>
<td>COMM-05</td>
</tr>
<tr>
<td>Area C</td>
<td>Humanities</td>
</tr>
<tr>
<td>Area D1</td>
<td>Behavioral Science (ANTH-02 recommended)</td>
</tr>
<tr>
<td>Area D2</td>
<td>Social Science</td>
</tr>
<tr>
<td>Area E1</td>
<td>Integrated Organism (met with REGN-34)</td>
</tr>
<tr>
<td>Area E2</td>
<td>Activity</td>
</tr>
</tbody>
</table>

Required courses (nursing):

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

Competencies as required by Merced College for graduation:
Writing: Met by completion of ENGL-01A within program prerequisites.
Math: Met by MATH-C or higher level math course.
Reading: Met by completion of A.S. Breadth courses with “C” grade or better.

[Completion of the Registered Nursing Program at Merced College satisfies CILC areas A through G.]

LVN TO RN PATHWAY

The pathway for California Licensed Vocational Nurses requires one academic year beyond completion of the prerequisite courses, non-nursing breadth requirements, and competencies. LVN to RN students enter into the third semester of the RN curriculum identified above after completion of REGN-01 and all other prerequisites. Applicants submit an application found on the Allied Health web site. Graduates will earn the Associate in Science Degree on completion of designated courses and competency requirements. Communication, natural and social science, and nursing courses must be completed with a grade of “C” or better to be eligible for licensure requirements of the Board of Nursing.

Enrollment eligibility to the LVN to RN pathway requires the completion of previously identified prerequisite courses. Applicants must meet the same selection requirements as generic RN students entering the program in the first semester. Randomized selection is used to select a cohort from the pool of qualified applicants according to available seats.

LVN to RN applicants are notified of eligibility approximately two months prior to the next semester. The LVN-RN application period remains open. To progress into the RN program, students must successfully complete the REGN-01 LVN to RN transition class which is offered when a sufficient number of qualified applicants exist.

Space in the RN program is determined based on the number of RN students progressing from the second semester to the third semester.

Applicants selected from the pool must complete the assessment test (currently using TEAS). A score less than 62 requires the applicant to complete the same remediation requirements as all other generic RN students before admission into the program. Only those students formally accepted into the program may register for courses identified as Registered Nursing Curriculum. Students may, however, enroll in other courses designated as non-nursing program requirements while awaiting
Fourth Semester
REGN-02*** Clinical Skills Transition - LVN to RN .......................... 1
REGN-34 Advanced Medical/Surgical Nursing and Pediatric Nursing ............................ 10

REGN-44 Acute Medical/Surgical Nursing and Mental Health Nursing ............................. 9

***Required for LVN's who have met admission selection criteria, have successfully completed REGN-01 and have been accepted into the Registered Nursing Program's third semester.

Transfer
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.

**REGISTERED NURSING (REGN)**

REGN-01 TRANSITION LVN TO RN
2 units: 1 hour lecture, 3 hours lab.
Limitation on enrollment: California VN license. Prerequisites: BOL-16, BIOL-18, BIOL-20; ENGL-01A; MATH-C.
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 healthcare 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
1 unit: 3 hours TBA lab.
Limitation on enrollment: California VN license, enrolled in REGN Program 3rd semester. Prerequisites: REGN-01.
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
[CILC Area B,C,D,E,F,G] 9 units: 4 hours lecture, 15 hours lab TBA.
Limitation 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. Prerequisites: BOL-16, BIOL-18, BIOL-20; ENGL-01A; MATH-C. Two-way corequisites: REGN-18.
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
3 units: 3 hours lecture.
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
10 units: 5 hours lecture, 15 hours lab TBA.
Limitation on enrollment: Enrollment in the REGN program 2nd semester. Prerequisite: REGN-15, REGN-18.
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)

REGN-34 ADVANCED MEDICAL/SURGICAL NURSING AND PEDIATRIC NURSING
(CSU breadth area E)
10 units: 5 hours lecture, 15 hours lab TBA.
Limitation on enrollment: Enrollment in the REGN program 3rd semester; CPR card Module AC; physical within past 6 months; negative TB screening test within past 6 months or negative chest x-ray within past year; proof of current immunizations; criminal background clearance; drug screening. Prerequisite: REGN-01 or REGN-24.
This course enlarges upon the concepts presented in REGN-15 and REGN-24 by introducing principles of care to maintain and/or restore homeostatic mechanisms in acute health problems. Prototype disease processes associated with each concept are studied in relation to preventive and restorative nursing care. Concurrent practice in the college laboratory and clinical experience in community facilities are required. (2/13)

REGN-44 ACUTE MEDICAL/SURGICAL NURSING AND MENTAL HEALTH NURSING
9 units: 4 hours lecture, 15 hours lab.
Limitation on enrollment: Enrollment in the REGN program 4th semester. Prerequisite: REGN-34.
Registered Nursing 44 builds on REGN-34, focusing on complex medical/surgical conditions of the high acuity patient and the patient at various levels of mental health promotion and mental illness management. Builds on nursing theory, communication, collaboration, and critical thinking skills necessary for safe, patient-centered nursing care to developmentally and culturally diverse patient populations. Incorporates best practices, professional standards, and legal and ethical responsibilities of the professional nurse as applied in the acute care and mental health settings incorporating all aspects of the professional nurse. Application of knowledge and skills occurs in the acute care and community settings to facilitate an effective transition from student to registered nurse. (2/13)
Nursing, Vocational
ALLIED HEALTH, BUSINESS AND PUBLIC SAFETY

DEGREE
A.A. - Nursing, Vocational

CERTIFICATE
Nursing, Vocational

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Web site
www.mccd.edu/allied health

Program Description
The Vocational Nursing curriculum comprises three semesters of combined didactic and clinical work on campus and at affiliated health care facilities. 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. An Associate in Arts Degree is also available for those students who complete the Merced College General Education requirements.

In accordance with the rules and regulations of the *BVNPT-Board of Vocational Nursing and Psychiatric Technicians; 2535 Capitol Oaks Dr, Suite 205; Sacramento, CA 95833; www.bvnpt.ca.gov (916) 263-7800 email - bvnpt@dca.gov

Prerequisites:
Must be in good health.
Must be a high school (or higher) graduate with a grade point average of 2.0 or higher, or the equivalent as measured by the General Education Development (G.E.D.) Test or by the California State High School Proficiency examination. Applicants with high school grade point averages below 2.0 must have completed 15 units of college-level work with a grade point average of 2.0 or higher.

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

Nursing, Vocational
Minimum requirements for admission to the LVN program:

1. Must be a high school (or higher) graduate with a grade point average of 2.0 or higher, or the equivalent as measured by the General Education Development (G.E.D.) Test or by the California State High School Proficiency examination. Applicants with high school grade point averages below 2.0 must have completed 15 units of college-level work with a grade point average of 2.0 or higher.
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-16 or 50, NUTR-10, ALLH-67, and VOCN-46A.

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.

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 2014, Spring 2016, Fall 2017, Spring 2019

DEGREE
A.A. - Nursing, Vocational (12550.AA)

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 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.

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 Math 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
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.

CERTIFICATE Nursing, Vocational (12550.CT)

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.

Prerequisites:

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<tr>
<th>Units</th>
<th>Description</th>
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<tr>
<td>11</td>
<td>Foundations of Nursing</td>
</tr>
<tr>
<td>2</td>
<td>Pharmacology for Nurses</td>
</tr>
<tr>
<td>1</td>
<td>Nursing Guidance I</td>
</tr>
<tr>
<td>1</td>
<td>Principles and Practices of Nursing Care I</td>
</tr>
<tr>
<td>1</td>
<td>Principles and Practices of Nursing Care II</td>
</tr>
<tr>
<td>1</td>
<td>Principles and Practices of Nursing Care III</td>
</tr>
</tbody>
</table>

VOCN-44 PRINCIPLES AND PRACTICES OF NURSING CARE II

14 units: 8 hours lecture, 18 hours TBA lab.
Limitation on enrollment: Enrollment in the Vocational Nursing Program; current CPR card; a negative TB skin test or negative chest x-ray. Prerequisite: VOCN-42. Two-way corequisite: VOCN-47C.
This course emphasizes theoretical principles of Maslow's basic human needs of safety, hygiene, rest, activity, comfort, and self-actualization as it relates to common and complex health problems occurring in individuals of all age groups. Pathophysiologic and psychosocial assessment and management of medical-surgical disorders are stressed. General pharmacological and nutritional considerations are included. This course is part of the third semester of a three-semester program. Clinical experience is integrated. (9/13)

VOCN-46A APPLIED MATHEMATICS FOR PHARMACOLOGY

1 unit: 1 hour lecture.
Prerequisites: ENGL-01A; MATH-81.
This is an introductory pharmacology course which includes an introduction to the professional context of drug administration, and study of the metric, apothecary, and household systems of measurement. Nursing responsibility to patient safety is included. Completion of this course requires accurate interpretation of doctors' order, reading medication bottles, calculating drug dosages, and the reason for their application. (1/13)

VOCN-46B PHARMACOLOGY FOR NURSES

2 units: 2 hours lecture.
Limitation on enrollment: Enrollment in the Vocational Nursing Program. Prerequisite: VOCN-46A. Two-way corequisites: VOCN-40, VOCN-47A.
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

1 unit: 1 hour lecture.
Limitation on enrollment: Enrollment in the Vocational Nursing Program. Two-way corequisites: VOCN-40, VOCN-46B.
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

1 unit: 1 hour lecture.
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

1 unit: 1 hour lecture.
Limitation on enrollment: Enrollment in the Vocational Nursing Program. Prerequisite: VOCN-42. Two-way corequisite: VOCN-44.
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

2 units: 2 hours lecture.
Limitation 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)

Nutrition
(See Foods and Nutrition)

ALLIED HEALTH, BUSINESS AND PUBLIC SAFETY

Refer to the Foods and Nutrition section for nutrition courses and program information details.

DEGREE
A.A. - Foods and Nutrition

CERTIFICATES
Foods and Nutrition
Dietetic Service Supervisor

Gainful Employment Disclosure Metrics
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Philosophy

FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

Associate Degree for Transfer™

DEGREE
A.A.-T. - Philosophy

Program Description
The Philosophy curriculum is designed to meet the lower division requirements of most universities offering a major in Philosophy. Students that complete an Associate in Arts in Philosophy for Transfer from Merced College will be prepared for upper division course work in Philosophy at a California State University. The Associate in Arts in Philosophy for Transfer is to assist students in the seamless transferring to a California State University.

For an Associate in Arts in Philosophy 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 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 AA-T (e.g., PE and Computer and Information Literacy courses).

Career Opportunities
Philosophical training at Merced College prepares the A.A.-T graduate for transfer to four-year institutions, or to enter into the work force in many fields. Graduates of philosophy traditionally enter fields that include education, research, law, business, high technology, government, and ministry. Beyond preparing students for professional life, the Philosophy Department at Merced College is dedicated to personal enrichment through deep reflection on all facets of human life.

DegreE (4/13)
A.A.-T. - Philosophy (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.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PHIL-01</td>
<td>Introduction to Philosophy</td>
</tr>
<tr>
<td>or PHIL-01H</td>
<td>Honors Introduction to Philosophy</td>
</tr>
</tbody>
</table>

**HUM-02 is only offered in the spring semester.

***HUM-01 is only offered in the fall semester.

**PHIL-03 will be offered Fall 2015.

****PHIL-04 will be offered Spring 2015 and Spring 2016.

Electives: Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>PHIL-15</td>
<td>Comparative Religions</td>
</tr>
<tr>
<td>HUM-01*</td>
<td>Studies in Humanities-Ancient through Renaissance</td>
</tr>
<tr>
<td>HUM-01H</td>
<td>Honors Studies in Humanities-Ancient through Renaissance</td>
</tr>
<tr>
<td>HUM-02**</td>
<td>Studies in Humanities-Renaissance to Present</td>
</tr>
<tr>
<td>HUM-02H</td>
<td>Honors Studies in Humanities-Renaissance to Present</td>
</tr>
</tbody>
</table>

Total Units toward the Major: 18

Total Units that may be double counted: 6-9

General Education (CSU-GE or IGETC) Units: 37-39

Elective (CSU Transferable) Units: 9-14

Total Degree Units: 60

Important note:
*HUM-01 is only offered in the fall semester.
**HUM-02 is only offered in the spring semester.
***PHIL-03 will be offered Fall 2015.
****PHIL-04 will be offered Spring 2015 and Spring 2016.
PHILOSOPHY (PHIL)

PHIL-01 INTRODUCTION TO PHILOSOPHY
(CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 100)
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: ENGL-01A.
This course introduces philosophical ideas and methods concerning self-
identity, knowledge, reality and values. These topics will be discussed
through reading primary philosophical texts taken from the traditional
and modern Western philosophical canon, as well as from non-canonical
sources. (4/13)

PHIL-01H HONORS INTRODUCTION TO PHILOSOPHY
(CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 100)
3 units: 3 hours lecture.
Limitation on enrollment: Enrollment in the Honors program.
Prerequisite: ENGL-01A
This course introduces philosophical ideas and methods concerning self-
identity, knowledge, reality and values. These topics will be discussed
through reading primary philosophical texts taken from the traditional
and modern Western philosophical canon, as well as from non-canonical
sources. There will be an emphasis on philosophical research and writing.
Students taking this class must be enrolled in the Honors Program. See
the college catalog for a description of enrollment requirements. (4/13)

PHIL-02 SOCIAL AND POLITICAL PHILOSOPHY
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: 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
(CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 130)
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: 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
(CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 140)
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: 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
(CSU breadth area C2) (IGETC area 3B) (C-ID PHIL 120)
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: 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-10 CRITICAL THINKING
(CSU breadth area A3) [CILC area G]
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: 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 critique, 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-12 INTRODUCTION TO LOGIC
(CSU breadth area A3) (C-ID PHIL 110)
3 units: 3 hours lecture.
Prerequisites: ENGL-85. Advisory: ENGL-01A.
This course introduces the study of valid reasoning with emphasis on
deductive logic. Informal fallacies and the scientific method are also
covered. (4/13)

PHIL-13 CRITICAL REASONING AND WRITING (ALSO: ENGL-13)
(CSU breadth area A3) (IGETC area 1B) [CILC area G]
3 units: 3 hours lecture.
Prerequisite: 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)
(CSU breadth area A3) (IGETC area 1B) [CILC area G]
3 units: 3 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program.
Prerequisite: 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-15 COMPARATIVE RELIGIONS
(CSU breadth area C2) (IGETC area 3B)
3 units: 3 hours lecture.
Advisory: 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)
Photography
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

DEGREE
A.A. - Photography

CERTIFICATE
Photography

Gainful Employment Disclosure Metrics
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Program Description
The study of photography will enrich the student’s experience of the world and encourage the student to draw upon creative resources. An education in photography can lead to professional or vocational careers, as well as enhance abilities in other fields. The photography department offers a foundation in theoretical and practical skills, and the opportunity to work in a wide variety of photographic and digital media. The Photography Program provides transfer, professional preparation, personal development, general interest, and general education, as well as an Associate in Arts degree and a Certificate in Photography.

Career Opportunities
- Portrait and Wedding Photography
- Photojournalism
- Industrial/Architectural/Business Advertising
- Commercial Product Photography
- Fine Art Photography

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.

Core:

<table>
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<tr>
<th>Art</th>
<th>Units</th>
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<tr>
<td>ART-15</td>
<td>Design: 2-D Foundations ................. 3</td>
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<tr>
<td>ARTD-40A</td>
<td>Introduction to Digital Art ............... 3</td>
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<tr>
<td>ARTD-40B</td>
<td>Intermediate Digital Art ................. 3</td>
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<tr>
<td>PHOT-10A</td>
<td>Introduction to Photography .............. 3</td>
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<td>Studio Careers in Photography ............ 3</td>
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<tr>
<td>or PHOT-36</td>
<td>Photo Portfolio Expressions .............. 3</td>
</tr>
</tbody>
</table>

Three units of Art or Photography History: ................. 3
ART-06 | Art of the 20th Century (3)
PHOT-33 | The History of Photography (3)

Plus three units from the following electives: .................... 3
BUS-43 | Business Communication (3)
MGMT-37 | Small Business Entrepreneurship (3)
PHOT-49 | Independent Study in Photography (1)

Total Units 27
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.

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<tr>
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</tr>
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</table>

Total Units: 27

PHOTOGRAPHY (PHOT)

PHOT-10A INTRODUCTION TO PHOTOGRAPHY
3 units: 2 hours lecture, 3 hours lab.
Advisory: ENGL-85.
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
[CILC area A,B,D] 3 units: 2 hours lecture, 3 hours lab.
Prerequisites: PHOT-10A or PHOT-11A. Advisory AOM-50A; ENGL-85.
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
[CILC area A,B] 3 units: 2 hours lecture, 3 hours lab.
Advisory: AOM-50A; ENGL-85.
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
[IGETC area 3A] [CILC area B,D,E,G] 3 units: 3 hours lecture.
Prerequisite: ENGL-85. Advisory: 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
3 units: 2 hour lecture, 3 hours lab.
Prerequisite: 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
3 units: 1 hour lecture, 3 hours lab.
Prerequisite: PHOT-10A.
This course explores the possibilities of visual language in-relation to photographic self-promotion. Advanced camera techniques, film handling, digital methodology, professional portfolio construction and printing formats suggest the emphasis on personal expression and a marketable skill set. (2/14)

PHOT-49 INDEPENDENT STUDY IN PHOTOGRAPHY
1 unit: 3 hours lab.
Prerequisite: PHOT-10A or PHOT-11A. Advisory: AOM-50A.
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. (9/12)
Physical Education
CAREER AND TECHNICAL EDUCATION

DEGREE
A.A. - Physical Education

Program Description
GENERAL INFORMATION: All physical education classes are co-ed unless otherwise stated in the course description and/or Schedule of Classes. The dress for Merced College Physical Education activities classes is dependent upon the nature of activity; students will be advised of proper dress at time of orientation.

Staff members of the Life Fitness and Health Division will screen all students participating in physical activity classes who show a medical problem which may adversely affect their participation. Students so identified will be required to obtain a physician’s clearance. When appropriate, screening may be achieved through the Disabled Student Services Office. Students who lead a sedentary lifestyle or who have a history of heart disease or other medical conditions should check with their physician before starting any exercise program.

Students are advised to use caution when participating in physical activity classes. Strains, pulls, and similar injuries may be caused by improper use of equipment, or failure to follow directions of instructors.

DEGREE (1/05)
A.A. - Physical Education (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.

Core: Units
KINE-02 First Aid and CPR for the Professional Rescuer ......3
KINE-03 Introduction to Athletic Training.......................3
KINE-20 Aqua Aerobics...........................................1
PHED-10A, F, H Life Fitness Activity Course....................2
PHED-11C Individual or Dual Activity Course....................1
PHED-12H Team Activity Course.................................1
PHED-20 Introduction to Physical Education.....................3
RECR-30 Introduction to Community Recreation..................3

Plus at least three units from the following:
ATHL-03 Athletic Conditioning ..................................2
HLTH-15 Drugs, Alcohol, and Tobacco..........................3

PHYSICAL EDUCATION (PHED)
LIFE FITNESS ACTIVITY

PHED-10A AEROBICS
0.5 - 1 unit: 1.5 - 3 hours lab.
Advisories: Good general health; absence of medical conditions that would prevent planned physical activity.
This is a choreographed exercise program set to music which improves cardiovascular fitness while conditioning and toning the whole body. Strenuous physical activity is required. Good general health is advised. (1/13)

PHED-10F FLEXIBILITY AND CARDIOVASCULAR FITNESS
2 units: 6 hours lab.
Advisory: Good general health; absence of medical conditions that would prevent planned physical activity.
Practical applications of all aspects of flexibility and cardiovascular conditioning are presented and performed. A system of class presentation is used to insure a gradual, safe, and total physiological adaptation of the student to exercise. A gradual, progressive, safe, and eventually total body fitness experience is pursued. Geriatric fitness adaptations are emphasized. (1/13)

PHED-10H WALKING FOR CARDIOVASCULAR CONDITIONING AND FLEXIBILITY
1 unit 3 hours lab.
Advisory: 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 and equipment to improve walking performance. (1/13)

INDIVIDUAL OR DUAL ACTIVITY

PHED-11C TENNIS
.5 - 1 unit: 1.5-3 hours lab.
Advisory: 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, footwork, 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. (1/13)
TEAM ACTIVITY

PHED-12H  SOFTBALL
1 unit: 3 hours lab.
Prerequisite/Advisory: None.
This is a course designed to teach fundamentals of softball. Batting, throwing, catching, base running, team play, rules, and strategy will be covered. Team competition is also included. (1/13)

ADAPTIVES

PHED-15  ADAPTED PHYSICAL EDUCATION
1 unit: 3 hours lab.
Advisory: Good general health; absence of medical conditions that would prevent planned physical activity. Advise that student provide medical verification of disability and recommendation of medical intervention.
Adapted Physical Education provides individual instruction for the physically disabled student or other students requiring individual approaches to health-related fitness activities. Students will engage in health-building activities designed to create self confidence, enhanced self image, and physical independence. (1/13)

THEORY AND PRACTICUM

PHED-20  INTRODUCTION TO PHYSICAL EDUCATION AND EXERCISE SCIENCE
3 units: 3 hours lecture.
Advisory: ENGL-85.
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-36C  THEORY AND ANALYSIS OF BASEBALL
1 unit: 1 hour lecture.
Advisory: ENGL-85.
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. (11/13)

PHED-36D  THEORY AND ANALYSIS OF TRACK AND FIELD
1 unit: 1 hour lecture.
Advisory: ENGL-85.
This course presents the fundamental knowledge of track and field through techniques of lecture, discussions, and video/DVD analysis. (12/06)

PHED-70L5  SPECIAL TOPICS IN WATER EXERCISE
1 unit: 3 hours lab.
Prerequisite/Advisory: None.
This course uses water exercises as a means to improve strength, flexibility, and cardiovascular fitness. Swimmers and non-swimmers may take the course. (1/13)

PHED-70L6  SPECIAL TOPICS IN PHYSICAL EDUCATION LAB
1 unit: 3 hours lab.
Prerequisite/Advisory: None.
This is a course teaching a variety of special topics in physical education which have current interest to students. (1/13)
PHYSICAL SCIENCE (PHSC)

PHSC-01  INTRODUCTION TO PHYSICAL AND EARTH SCIENCE
(CSU breadth area B1)  (IGETC area 5A)
3 units: 3 hours lecture.
Advisories: ENGL-85; MATH-81.
This is an introductory course presenting the nature of physical, earth, and space sciences and their relationship to other areas of scientific knowledge. The course will develop the major concepts and give an understanding of the general principles of physical, earth, and space science. As an introductory class, the course of study will focus on major principles and applications to modern observations and phenomena. This course is designed to meet the content requirement for physical science and for earth and space science for the Liberal Studies - Elementary Teaching preparation pathway. (10/12)

PHSC-01L  INTRODUCTION TO PHYSICAL AND EARTH SCIENCE LABORATORY
(CSU breadth areas B1/B3)  (IGETC area 5C)
1 unit: 3 hours lab.
One-way corequisite: PHSC-01. Advisories: ENGL-85; MATH-81
This introductory laboratory is designed to provide hands-on exploration in parallel with topics covered in the lecture course, PHSC-01. 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)

PHSC-02  SURVEY OF CHEMISTRY AND PHYSICS
(C-ID PHYS 140)
3 units: 3 hours lecture.
Prerequisite: MATH-81. Advisory: ENGL-85.
An investigation of basic principles of physics and chemistry including matter, physical and chemical properties, energy, motion, light, atomic structure, bonding, solutions and chemical reactions. The inter-dependence of chemistry and physics will be emphasized. This course is intended for non-science majors. (11/14)

PHSC-02L  SURVEY OF CHEMISTRY AND PHYSICS LABORATORY
(C-ID PHYS 140)
1 unit: 3 hours lab.
Prerequisite: MATH-81. One-way corequisite: PHSC-02l Advisory: ENGL-85.
This introductory laboratory is designed to provide a 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)
DEGREE (12/12)
A.S.-T. - Physics (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.

Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PHYS-04A</td>
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<tr>
<td>PHYS-04B</td>
<td>4</td>
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<td>PHYS-04C</td>
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<tr>
<td>MATH-04A</td>
<td>4</td>
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<td>MATH-04B</td>
<td>4</td>
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<tr>
<td>MATH-04C</td>
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</table>

Total Units toward the Major: 24
Total Units that may be double counted: -8
General Education (CSU-GE or IGETC) Units: 39-42
Elective (CSU Transferable) Units: 2-5
Total Degree Units: 60
Recommended Sequence: A.S.T. - Physics (19700.AST)

Fall 1
- MATH-04A  Calculus I ............................................4
Additional units can be taken as breadth and/or elective courses.

Spring 1
- MATH-04B  Calculus II ............................................4
- PHYS-04A  Physics I .............................................4
Additional units can be taken as breadth and/or elective courses.

Fall 2
- MATH-04C  Multivariable Calculus ............................................4
- PHYS-04B  Physics II .............................................4
Additional units can be taken as breadth and/or elective courses.

Spring 2
- PHYS-04C  Physics III ............................................4

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**PHYSICS (PHYS)**

**PHYS-02A GENERAL PHYSICS I**
(CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: MATH-02 or MATH-02H; or MATH-25 and MATH-26. Advisory: ENGL-85.
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 Anistotle 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)

**PHYS-02B GENERAL PHYSICS II**
(CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID PHYS 110)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: PHYS-02A. Advisory: ENGL-85.
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**
(C-ID PHYS 205/200S) (CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: MATH-04A. Advisory: ENGL-85; MATH-04B.
This course is a calculus-based physics course intended for physics and engineering majors as well as some chemistry and math majors. PHYS-04A is the first semester of a three-semester sequence intended to give a technical introduction to physics with emphasis on concepts and principles of physics and problem-solving. PHYS-04A includes the areas of mechanics, wave motion, fluids, and thermal phenomena. (2/13)

**PHYS-04B PHYSICS II**
(C-ID PHYS 210/200S) (CSU breadth area B1/B3) (IGETC area 5A/5C)
4 units: 3 hours lecture, 3 hours lab.
Prerequisites: PHYS-04A. One-way corequisite: MATH-04B. Advisory: ENGL-85.
PHYS-04B is a continuation of PHYS-04A with emphasis on the areas of electricity, magnetism, and light. (12/12)

**PHYS-04C PHYSICS III**
(CSU breadth area B1/B3) (IGETC area 5A/5C) (C-ID PHYS 200S)
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: MATH-04B; PHYS-04B. Advisory: ENGL-85.
PHYS-04C is a continuation of PHYS-04B. It emphasizes the laws of thermodynamics, relativity, and topics of modern physics. (12/12)

**PHYS-10 CONCEPTS IN PHYSICS**
(CSU breadth area B1) (IGETC area 5A)
3 units: 3 hours lecture.
Advisories: ENGL-85; MATH-81.
This course is a survey of major concepts covered in physics. The concepts, as well as the understanding of general principles, will be developed through lecture, demonstrations, and discussion of everyday phenomena. Both classical and modern topics will be covered, to include mechanics, properties of matter, heat, sound, electricity, magnetism, light, atomic and nuclear physics, relativity, and astrophysics. This course provides an opportunity to work with the concepts of physics in a qualitative manner. (10/13)
Political Science
FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES

POLITICAL SCIENCE (POSC)

POSC-01 ESSENTIALS OF AMERICAN POLITICAL SYSTEM
(CSU breadth area D/F2) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course will introduce students to institutions of American national government, the American political system, and California state and local government. The course includes a study of the United States Constitution and its application to federal, state, and local government. Emphasis is placed upon various roles of national and state government, constitutional rights and obligations of citizens, and the evolution and development of California state political institutions. This course meets the United States Constitution requirement and the federal, California state, and local government requirement. (10/09)

POSC-02 AN INTRODUCTION TO WORLD POLITICAL SYSTEMS
(CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course is a comparative study of the theory, history, structure, and application of the governmental systems of major European nations, as well as non-European countries. Emphasis will be placed on the governments of England, France, Germany, Russia, and Japan. (2/06)
DEGREE
A.A. - Psychology
A.A.-T. - Psychology

Program Description
The Department of Psychology at Merced College offers students an exciting and challenging curriculum. The curriculum provides students with an opportunity to gain an understanding of how psychological research and theory can be applied to daily life experiences. Students also gain insight into the behavior and personality of themselves and others. The primary goals of the Department of Psychology are (1) to enable students to achieve their educational goals; (2) to teach students about the various theories and approaches to the scientific study of human and animal behavior; (3) to help students utilize critical thinking skills when examining questions and issues; and (4) to better serve the community as informed and concerned citizens who understand the importance of diversity and inclusion.

The focus of the Psychology Department is to serve students with a wide range of educational and career goals. To this end, the Psychology Department offers two degrees: The Associate in Arts in Psychology for Transfer (AA-T) and the Associate in Arts in Psychology (AA). For students who are planning on transferring, the AA-T enables them to transfer by successfully completing at least 60 transferable units that will include the psychology major courses, and CSU Breadth or IGETC certification. Students who earn the AA-T in Psychology will be granted junior status at a CSU and will be given priority admission to the psychology program.

For students who are not planning on transferring, but who want to earn a degree, the Associate of Arts (AA) in Psychology degree is available. This degree provides students with great flexibility in designing their educational plan. Students who benefit from the AA option include students whose career choice requires only an AA degree, as well as students who are returning to school to earn a degree for advancement at a current job and are not planning to transfer.

Career Opportunities in Psychology
The AA degree in psychology prepares students for a variety of jobs that require an AA degree. The AA in psychology is valuable for jobs that require an understanding of human behavior, interpersonal skills, critical thinking, and cultural diversity. The AA-T degree is designed for students who plan to transfer to a 4 year college or university, but also prepares students for careers in a variety of fields that require an understanding of human behavior.

DEGREE (4/11)
A.A. - Psychology (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 and Computer and Information Literacy).

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. Develop an understanding of the applications of psychology by demonstrating knowledge of the impact of healthy lifestyles and personal choices on psychological wellbeing.
D. Evaluate the credibility of a claim by differentiating empirical evidence from supposition.

Core: Units
PSYC-01A Introduction to Psychology .......................... 3
or PSYC-01AH Honors Introduction to Psychology .............. 3

Plus 15 units from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>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>BIOL-01</td>
<td>General Biology for Non-Majors</td>
<td>4</td>
</tr>
<tr>
<td>MATH-10</td>
<td>Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC-05</td>
<td>Introduction to Statistics</td>
<td>3</td>
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<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PSYC-01B</td>
<td>Introduction to Psychological Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-09</td>
<td>Human Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-15</td>
<td>Biological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-22</td>
<td>Human Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-23</td>
<td>Personal and Social Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-25</td>
<td>Introduction to Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-36</td>
<td>Developmental Psychology; Adolescence</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-49A-ZZ</td>
<td>Special Topics in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC-01</td>
<td>Introduction to Sociology</td>
<td>3</td>
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Total Units: 18
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 major 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.

Core:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>PSYC-01A</td>
<td>Introduction to Psychology</td>
<td>3</td>
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<tr>
<td>or PSYC-01AH</td>
<td>Honors Introduction to Psychology</td>
<td>3</td>
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<tr>
<td>PSYC-01B</td>
<td>Introduction to Psychological Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-05</td>
<td>Introduction to Statistics in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or MATH-10</td>
<td>Elementary Statistics</td>
<td>3</td>
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</table>

LIST A

Select one of the following courses:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>BIOL-01</td>
<td>General Biology for Non-Majors</td>
<td>4</td>
</tr>
<tr>
<td>BIOL-02</td>
<td>Human Biology</td>
<td>4</td>
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LIST B

Select one of the following courses:

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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ANTH-02</td>
<td>Sociocultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-09</td>
<td>Human Development</td>
<td>3</td>
</tr>
<tr>
<td>SOC-01</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
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LIST C

Select one of the following courses:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>PSYC-15</td>
<td>Biological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-22</td>
<td>Human Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-23</td>
<td>Personal &amp; Social Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-25</td>
<td>Introduction to Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-36</td>
<td>Developmental Psychology: Adolescence</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-49A-ZZ</td>
<td>Special Topics in Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units toward the major: 19

Additional courses toward CSU Breadth or IGETC certification and transferable electives: 41

Total Units: 60

PSYCHOLOGY (PSYC)

PSYC-01A INTRODUCTION TO PSYCHOLOGY
(C-ID PSY 110) (CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.

PSYC-01A is a survey course designed to provide an introduction to the 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. (12/08)

PSYC-01AH HONORS INTRODUCTION TO PSYCHOLOGY
(C-ID PSY 110) (CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Limitation on enrollment: Enrollment in the Honors Program. See the current college catalog for a description of enrollment requirements.
Advisories: ENGL-01A.

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, psychological 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
(C-ID PSY 200)
3 units: 3 hours lecture.
Prerequisite: PSYC-01A or PSYC-01AH; MATH-10 or PSYC-05.
Advisory: 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
(C-ID SOCI 125, MATH 110) (CSU breadth area B4) (IGETC area 2)
3 units: 3 hours lecture.
Prerequisite: MATH-C. Advisory: 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. (1/07)

PSYC-09 HUMAN DEVELOPMENT (ALSO: CLDV-09)
(C-ID PSY 180) (CSU breadth area E)
3 units: 3 hours lecture.
Advisory: ENGL-85.

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
(C-ID PSY 150) (CSU breadth area B2/D) (IGETC area 4)
3 units: 3 hours lecture.
Prerequisite: PSYC-01A or PSYC-01AH. Advisory: ENGL-85.

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
(C-ID PSY 130) (CSU breadth area D/E) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
(C-ID PSY 115) (CSU breadth area D/E) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
(C-ID PSY 120) (CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
Advisory: ENGL-85.
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, causal 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
(CSU breadth area D) (IGETC area 4)
3 Units: 3 hours lecture.
Advisory: ENGL-85.
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-40  DRUGS AND BEHAVIOR
3 units: 3 hours lecture.
Advisory: ENGL-85.
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
3 units: 3 hours lecture.
Advisory: ENGL-85.
This course is designed to address special topics in psychology to meet the needs of students. Special topics will include Theories of Personality, Cognitive Psychology, Learning and Memory, Motivation, Behavior Modification, Death and Dying, and Cross-Cultural Psychology. (1/07)
Radiologic Technology
ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY

DEGREE
A.S. - Diagnostic Radiologic Technology

CERTIFICATE
Diagnostic Radiologic Technology

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Web site
www.mccd.edu/alliedhealth/

Program Description
The Diagnostic Radiologic Technology Program is a full-time Associate Degree and Certificate of Achievement program to which a minimum of 18-20 students are admitted each fall semester. The entire program is 29 consecutive months in length and is composed of five semesters and two eleven-week summer sessions. Students wishing to enter the program must make formal application. Upon verification that all prerequisites have been met with a combined minimum GPA of 2.75, the applicant will be placed on a waiting list. Applications are accepted year-round. If a student withdraws or is dismissed from the program, they will no longer be eligible for re-admittance into the program.

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 withdrawals 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: www.mccd.edu/alliedhealth/DRT/radtechhp.htm

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; otherwise it will be purged. 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.

Career Opportunities
Diagnostic Radiologic Technologists (radiographers) are employed primarily in hospitals, clinics, medical imaging centers, and doctors’ offices. Radiographers manipulate sophisticated technical equipment and computers to obtain detailed images of a patient’s body to assist physicians in the diagnosis of injury and disease. A successful and competent radiographer is one who works well as a team member, thinks critically, solves problems creatively, and possesses strong technical skills. A radiographer must also be flexible and able to work with patients from diverse backgrounds with various needs, abilities, injuries, and disease processes. Employment opportunities for radiographers are expected to remain satisfactory. With experience and/or additional education, graduates can work in the following areas: Computerized Tomography (CT), Mammography, Interventional Radiology, Cardiac Cath, Bone Densitometry, Magnetic Resonance Imaging (MRI), Radiology Management, Radiography Education, Equipment Sales/Service and Technical Representative, Associated fields: Sonography, Radiation Oncology, and Nuclear Medicine.

Highlights
The Allied Health Center houses a large computer lab, conference rooms, study rooms and multiple small and large classrooms. The Diagnostic Radiologic Technology Program has two computerized radiography x-ray stations and a PACS system that provides students hands-on-experience with state-of-the-art equipment.
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.
1. Under the influence of drugs or alcohol while on duty
2. Physical abuse to the patient, visitor or other personnel
3. Petty theft
4. Sexual misconduct
5. Unsafe clinical practice
6. Academic dishonesty
7. Breach of confidentiality (HIPPA)
8. 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.

Advisement
The Diagnostic Radiologic Technology Program is a demanding full-time program. Some students may 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 withdrawals 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.

DEGREE (11/13)
A.S. - Diagnostic Radiologic Technology (12700.AS)

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.

Required:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>First Semester (Fall)</td>
<td>RADT-10</td>
<td>Introduction to Radiologic Sciences and Health Care</td>
<td>4</td>
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<tr>
<td></td>
<td>RADT-11</td>
<td>Radiologic Procedures I</td>
<td>4</td>
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<tr>
<td>Second Semester (Spring)</td>
<td>RADT-12A</td>
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<td></td>
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<td>RADT-13</td>
<td>Radiologic Sciences I</td>
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<tr>
<td>First Summer Session</td>
<td>RADT-14A</td>
<td>Radiologic Sciences II</td>
<td>2</td>
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<td>RADT-14B</td>
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<tr>
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<td>RADT-15B</td>
<td>Clinical Education III</td>
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<td>RADT-15C</td>
<td>Advanced Radiologic Procedures I</td>
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<td>RADT-15D</td>
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<td>RADT-17B</td>
<td>Advanced Clinical Education II</td>
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<tr>
<td>Fifth Semester (Fall)</td>
<td>RADT-18A</td>
<td>Integrative Study In Radiography</td>
<td>2</td>
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<td></td>
<td>RADT-18B</td>
<td>Advanced Clinical Education III</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>RADT-18C</td>
<td>Sectional Anatomy</td>
<td>1</td>
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</tbody>
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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

CERTIFICATE (11/13)
Diagnostic Radiologic Technology (12700.CF)

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.

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71.25
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.

RADIOLOGIC TECHNOLOGY, DIAGNOSTIC 
(RADT)

RADT-10 INTRODUCTION TO RADIOLOGIC SCIENCES AND HEALTH CARE
[CILC Areas A,B,C,D,E,F,G]
4 units: 3 hours lecture, 3 hours lab.
Limitation 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.
Prerequisites: ALLH-67; RADT-50.
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
4 units: 3 hours lecture, 3 hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Radiologic Technology Program; Minimum of 2.75 GPA in prerequisite courses.
Prerequisite: BIOL-16; ENGL-01A. Advisory: 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
4 units: 3 hours lecture, 3 hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Radiologic Technology Program.
This course covers 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
5 units: 15 hours TBA lab (270 total TBA hours).
Limitation on enrollment: Enrollment in the Diagnostic Radiologic Technology Program. One-way corequisite: RADT-12A.
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
3 units: 2 hours lecture, 3 hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Radiologic Technology Program. Prerequisite: CHEM-02A; MATH-C.
This course covers the theory and application of basic physics and radiation physics to diagnostic radiology. Emphasis will be the fundamentals of x-ray generating equipment and the production, emission, and interaction of x-rays with matter. The laboratory portion of this course will focus on solving radiographic technique problems and verification of the basic laws of physics. This course is part of the second semester of the 29-month program in Diagnostic Radiologic Technology, and is only offered during spring semester. (11/13)

RADT-14A RADIOLOGIC SCIENCES II
2 units: 27 total hours lecture, 27 total hours lab.
Limitation 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
3.5 units: 189 total TBA hours lab.
Limitation 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
1 units: .50 hours lecture, 1.5 hours lab.
Limitation 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 cranium, 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
5.5 units: 17 hours TBA lab (306 total TBA hours).
Limitation 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
2 units: 2 hours lecture.
Limitation 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 RADIOLOGIC PATHOLOGY
1.5 units: 1.5 hours lecture.
Limitation 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. (11/13)
RADT-16A ADVANCED RADIOLOGIC PROCEDURES II
2.5 units: 2.5 hours lecture.
Limitation 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
10 units: 540 total TBA hours lab.
Limitation 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
2.25 units: 40.5 total hours lecture.
Limitation 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
2 units: 2 hours lecture.
Limitation 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
7 units: 378 total TBA hours lab.
Limitation 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
2 units: 2 hours lecture.
Limitation 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
9 units: 486 total TBA hours lab.
Limitation 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
1 unit: 1 hour lecture.
Limitation 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-50 CAREER EXPLORATION IN MEDICAL IMAGING
1 unit: 54 TBA total hours lab.
Limitation 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.
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. (11/13)
READING (READ)

READ-80 FOUNDATIONS IN READING II
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: ESL-92B or ENGL-90. Advisory: Concurrent enrollment in ENGL-83.
This course is designed to improve basic reading skills, primarily comprehension. The course will emphasize the application of reading strategies to improve students' ability to read effectively at three levels below transfer. The course will stress vocabulary acquisition, literal and inferential comprehension, critical reading, and fluency. This course also includes assignments in a computer-based setting to practice and enhance reading skills, including individualized instruction and assistance. (2/13)

READ-81 FOUNDATIONS IN READING III
4 units: 3 hours lecture, 3 hours lab.
Prerequisite: READ-80 or ESL-80. Advisory: Concurrent enrollment in ENGL-84.
This course is designed to improve a variety of reading comprehension skills and critical reading/thinking skills. The course will emphasize the application of reading strategies to improve students' ability to read effectively at two levels below transfer and advance to English 85, Foundations in Academic Literacy. The course will stress literal and inferential comprehension, critical reading, vocabulary acquisition and fluency. This course also includes assignments in a computer-based setting to practice and enhance reading skills, including individualized instruction and assistance. (2/14)
Real Estate
ALLIED HEALTH, BUSINESS AND PUBLIC SAFETY

DEGREE
A.A. - Real Estate

CERTIFICATE
Real Estate

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Associate in Arts in Degree in Real Estate is in preparation for the California Real Estate Salesman’s License and Broker’s License.

Entry 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.

The course of study includes instruction in the following: principles of real estate, real estate practices, legal aspects of real estate, real estate finance, real estate appraisal, real property management, and escrow procedure.

Program Requirements

Career Opportunities
● Real Estate Agent
● Broker
● Appraiser
● Banking
● Property Management
● Real Estate Consulting

Off-Site Resources
California Department of Real Estate
www.dre.ca.gov
California Association of REALTORS®
www.car.org
California Real Estate Education Association
www.creea.org
California Office of Real Estate Appraisers
www.orea.ca.gov

DEGREE
A.A. - Real Estate (05600.AA)

Students must meet the graduation requirements and complete the major requirements with the following courses.

Program Student Learning Outcomes
A. Students will have the knowledge and skills required to pass the California Real Estate Salesman’s licensing exam and when accompanied by the statutory two-years of salesperson experience, the Broker’s licensing exam. They will have a basic platform which to continue their education in real estate, and have the knowledge and skills to invest prudently and knowledgeably in real estate.
B. Apply time value of money concepts to a variety of situations.
C. Explain the major financial markets and institutions and then compare and contrast the roles they play in our economic system.
D. Explain the relationship between risk and return.
E. Compare and contrast the various real estate financial markets.
F. Analyze, compare, and contrast various real estate investment opportunities.
G. Evaluate and understand the implementation of mortgage loans.
H. Analyze, compare and contrast various real estate appraisal valuation methods.
I. Compare and contrast the various laws and ethics surrounding real estate activities.

Core:

ACTG-04A  Fundamentals of Financial Accounting .................. 4
or
ACTG-51  Applied Accounting ........................................ 4
BUS-18A  Business Law ................................................. 4
CPSC-30  Computer Applications ................................. 3
REAL-42  Real Estate Principles ..................................... 3
REAL-43  Real Estate Practices ...................................... 3
REAL-45  Real Estate Finance ......................................... 3
REAL-46  Real Estate Appraisal ...................................... 3
REAL-48  Real Property Management ............................ 3
REAL-49  Escrow Procedure ........................................... 3

Completion of these core courses plus appropriate experience in real estate sales will qualify the student to take the broker’s examination.

Suggested electives include:
BUS-10  Introduction to Business ................................. 3
BUS-49  Business Communication .............................. 3
CPSC-01  Introduction to Computer Information Systems ... 4
ECON-02  Introduction to Macroeconomics .................. 3
or
ECON-03  Introduction to Microeconomics .................... 3
AOM-50B  Keyboarding and Document Formatting .......... 3
A Certificate of Achievement will be awarded upon the satisfactory completion of the required courses for the A.A. Degree in Real Estate.

Program Student Learning Outcomes
A. Students will have the knowledge and skills required to pass the California Real Estate Salesman’s licensing exam and when accompanied by the statutory two-years of salesperson experience, the Broker’s licensing exam. They will have a basic platform which to continue their education in real estate, and have the knowledge and skills to invest prudently and knowledgeably in real estate.
B. Apply time value of money concepts to a variety of situations.
C. Explain the major financial markets and institutions and then compare and contrast the roles they play in our economic system.
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H. Analyze, compare and contrast various real estate appraisal valuation methods.
I. Compare and contrast the various laws and ethics surrounding real estate activities.

Recommended Sequence: A.A. - Real Estate (05600.AA)

Fall 1
REAL-42 Real Estate Principles ........................................... 3
REAL-45 Real Estate Finance ............................................. 3

Spring 1
REAL-42 Real Estate Principles ........................................... 3
REAL-43 Real Estate Practices ........................................... 3
REAL-46 Real Estate Appraisal ........................................... 3

Recommended Sequence: Certificate Real Estate (05600.CL)

Fall 1
REAL-42 Real Estate Principles ........................................... 3
REAL-45 Real Estate Finance ............................................. 3

Spring 1
REAL-42 Real Estate Principles ........................................... 3
REAL-43 Real Estate Practices ........................................... 3
REAL-46 Real Estate Appraisal ........................................... 3

Core: Units
ACTG-04A Fundamentals of Financial Accounting ............... 4
or
ACTG-51 Applied Accounting ........................................... 4
BUS-18A Business Law .................................................. 4
CPSC-30 Computer Applications .................................... 3
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REAL-46 Real Estate Appraisal ........................................... 3
REAL-48 Real Property Management ................................ 3
REAL-49 Escrow Procedure ............................................. 3

TOTAL 29

REAL ESTATE PRINCIPLES
3 units: 3 hours lecture.
Advisories: ENGL-85; 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 ESTATE PRACTICES
3 units: 3 hours lecture.
One-way corequisite: REAL-42; Advisories: ENGL-85; 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 ESTATE FINANCE
3 units: 3 hours lecture.
One-way corequisite: REAL-42; Advisories: ENGL-84; READ-81; MATH-91.
This course is a practical applied study and analysis of money markets, interest rates, and real estate financing. Actual case illustrations will demonstrate lending policies, and problems and rules involved in financing real property, including residential, multi-family, commercial, and special purpose properties. (2/14)

REAL ESTATE APPRAISAL
3 units: 3 hours lecture.
One-way corequisite: REAL-42; Advisories: ENGL-84; READ-81
This course explains methods and techniques for analyzing data used in the valuation of real property. Case study methods are employed; field work and demonstration and/or form appraisal reports are required. Principles and theories of real estate valuations, as well as the approaches to value (cost, market, income) are studied with an emphasis on residential properties. (2/14)

REAL PROPERTY MANAGEMENT
3 units: 3 hours lecture.
Prerequisite REAL-42; Advisories: READ-81, ENGL-84.
This course provides a practical approach to management of developed real estate. Emphasis is given to economics of real estate; neighborhood analysis and rent schedules; management procedures; selection of personnel; contracts and purchasing; interior and exterior maintenance repair; leasing, advertising, and publicity; managing family residences, apartment buildings, store buildings, office buildings, and other commercial properties; management accounting; modernization and rehabilitation; and adequate insurance plans. (11/06)

ESCROW PROCEDURE
3 units: 3 hours lecture.
Prerequisite: REAL-42. Advisories: READ-81, ENGL-84.
This course covers the principles and procedures involved in the process of opening and closing real estate escrow transactions. The course will define legal documents and terminology used in escrow procedure as well as explain the processing of documents and transfer of title combined with sale and closing procedures for different types of escrows. (1/04)
RECREATION (RECR)
RECR-30  INTRODUCTION TO COMMUNITY RECREATION
3 units: 3 hours lecture.
Advisory: ENGL-85.
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)
**Sociology & Social Sciences**

**FINE AND PERFORMING ARTS, HUMANITIES & SOCIAL SCIENCES**

**DEGREE**

**A.A. - Social and Behavioral Sciences**

**Program Description**

The degree in Social and Behavioral Science offers a focus on the interrelationships between individuals, families, groups, communities, societies, cultures, historical time periods and political institutions. This area of emphasis prepares students to understand people and their actions and is useful for a variety of careers that involve relating to people such as those in public service, education, law enforcement, government, and general business.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

**DEGREE (2/14)**

**A.A. - Social and Behavioral Sciences (22600.AA)**

The Associate in Arts degree with an area of emphasis in Social and Behavioral 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. 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.

**Category 1**

Nine units from the following: ................................................................. 9

AGBS-11 Agricultural Economics (3)
AGRI-10 Agriculture, Environment, and Society(3)
ANTH-02 Sociocultural Anthropology (3)
ANTH-10 Southeast Asian Culture: Hmong (3)
CLDV-01 Child Growth and Development (3)
CLDV-02 Child, Family and Community (3)
CLDV-09 Human Development (3)
or
PSYC-09 Human Development (3)
COMM-30 Introduction to Intercultural Communication (3)
CRIM-01 Criminology (3)
CRIM-02 Introduction to Criminal Justice (3)
ECON-01 Introduction to Microeconomics (3)
ECON-02 Introduction to Macroeconomics (3)
GEOG-02 World Geography (3)
PSYC-01A Introduction to Psychology (3)
or
PSYC-01AH Honors Introduction to Psychology (3)
PSYC-15 Biological Psychology (3)
PSYC-22 Human Sexuality (3)
PSYC-23 Personal and Social Adjustment (3)

**Category 2**

Nine units from the following: ................................................................. 9

HIST-04A History of Civilization: Part I (3)
HIST-04B History of Civilization: Part II (3)
HIST-09A Introduction to East Asian Civilization: China (3)
HIST-09B Introduction to East Asian Civilization: Japan (3)
HIST-17A United States History and United States Constitution (3)
or
HIST-17AH Honors United States History and United States Constitution (3)
or
HIST-17B U.S. History and California State & Local Government (3)
or
HIST-17BH Honors U.S. History and California State & Local Government (3)
HIST-22 History of Minorities – Black Emphasis (3)
HIST-23 U.S. History of Hispanic-Americans in the Southwest (3)
HIST-29 History of California (3)
HUM-15 Comparative Cultures (3)
POSC-01 Essentials of the American Political System (3)
POSC-02 An Introduction to World Political Systems (3)

**Total Units** .......................................................................................... 18

**SOCIOMETRY (SOC)**

**SOC-01 INTRODUCTION TO SOCIOLOGY**

(C-ID SOCI 110) (CSU breadth area D) (IGETC area 4)
3 units: 3 hours lecture.
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 accents 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**

(C-ID SOCI 115) 3 units: 3 hours lecture.
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

3 units: 3 hours lecture.
Advisories: ENGL-85.

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 paid to contemporary issues, concerns and debates regarding marriage and family dynamics.
CERTIFICATES
Diagnostic Medical Sonography

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Web site www.mccd.edu/alliedhealth

Mission Statement
The mission of the Sonography Program is to provide relevant education in the cognitive, psychomotor, and affective learning domains to prepare competent, and responsible entry-level general, sonographers, with a commitment to life-long learning.

Program Description
The Diagnostic Medical Sonography Program is a full-time Certificate of Achievement program that offers didactic, directed hands-on laboratory, and professionally supervised clinical training in General Sonography (Abdomen and OB/GYN Track). Successful completion provides the student with job-ready skills.

Accreditation
The Merced College Diagnostic Medical Sonography Program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography *(JRC-DMS) and the Commission on Accreditation of Allied Health Education Programs **(CAAHEP) in General Sonography. *JRC-DMS: Joint Review Committee on Education in Diagnostic Medical Sonography 6021 University Boulevard, Suite 500 Ellicott City, MD 21043 www.jrcdms.org **CAAHEP: Commission on Accreditation of Allied Health Education Programs 1361 Park Street Clearwater, FL 33756 www.caahep.org

Program Start Date
Fall 2016

Highlights
The Allied Health Center houses a complete Sonography Suite, large computer lab, conference rooms, study rooms and multiple large and small classrooms. The Sonography Programs have contemporary equipment and software that assist students with learning current procedures.

Advisement
The Sonography Program is a rigorous, and demanding full-time program. Some students may find it difficult to work while attending. Programmatic expectations include perfect on-campus and clinical attendance, and completion of intense homework assignments. Some assignments require extra scanning time in the ultrasound laboratory. The clinical experience assignments vary for each hospital and clinic. A typical schedule is designed to utilize the hours of 05:00a-07:00p, Monday-Friday; however, some facilities will include evening and weekend hours, which may extend to 08:00p.

CERTIFICATE
Diagnostic Medical Sonography (12800.CT)

ABDOMINAL AND OB/GYN
This option is a full-time Certificate of Achievement program. 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 with over 500 hours of direct patient care experience.

Prerequisites:
BIOL-16; BIOL-18: MATH-C; 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

Contact the Allied Health Office for an application or visit our website at: www.mccd.edu/alliedhealth/sonohp.htm

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 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. Student will develop the writing skills to prepare medical manuscripts and present clinical case studies
B. Student will analyze the theory of physics, anatomy and pathophysiology, and sonographic appearance of normal and disease processes
C. Student will meet medical ethical standards and provide proof of cultural competency
D. Student will be able to display both initial and final competencies in the various modalities of sonography

First Semester (Fall) Units
SONO-40 Basic Ultrasound Physics ........................................ 1.5
SONO-41 Introduction to Sonography ........................................ 1.5

Second Semester (Spring)
SONO-42A Abdominal Sonography ........................................... 4
SONO-42B Beginning Clinical Experience I ................................ 9

Summer Session
SONO-44A Advanced Ultrasound Physics .................................. 1.5
SONO-44B Advanced Clinical Experience I ................................... 4.5
SONO-44C Superficial Structures .................................................. 1

Third Semester (Fall)
SONO-43A OB/GYN Sonography ................................................ 4
SONO-43B Beginning Clinical Experience I ................................... 9

Fourth Semester (Spring)
SONO-45A Integrative Study in Sonography ................................. 2
SONO-45B Advanced Clinical Experience II ................................. 2
SONO-45C Basics of Vascular Sonography ..................................... 2

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SONOGRAPHY, DIAGNOSTIC MEDICAL
(SONO)

SONO-40 BASIC ULTRASOUND PHYSICS
[CILC area B]
1.5 units: 18 total hours lecture, 27 total hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography program. Prerequisities: ENGL-01A; MATH-C; PHYS-10 or RADT-13.

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. (2/15)

SONO-41 INTRODUCTION TO SONOGRAPHY
[CILC area A,B,D,E,G]
1.5 units: 18 total hour lecture, 27 total hours lab.
Limitation 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. Prerequisite: ALLH-67; BIOL-16, BIOL-18; ENGL-01A or COMM-01.

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
[CILC area B]
4 units: 3 hours lecture, 3 hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track. Prerequisites: BIOL-16, BIOL-18.

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 BEGINNING CLINICAL EXPERIENCE I
[CILC area B]
9 units: 28 hours lab.
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track. Two-way corequisite: SONO-42A.

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. (2/08)
SONO-43A  OB/GYN SONOGRAPHY  
[CILC area B]  
4 units: 3 hours lecture, 3 hours lab.  
Limitation 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 sono graphic appearance of pathology are covered. First, second, and third trimester obstetrical assessment are covered in depth. (2/08)

SONO-43B  BEGINNING CLINICAL EXPERIENCE II  
[CILC area B]  
9 units: 28 hours lab.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program--Abdominal & OB/GYN Track. Two-way corequisite: SONO-43A.  
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 obstetric and gynecological imaging, in addition to abdominal imaging, is provided. (2/08)

SONO-44A  ADVANCED ULTRASOUND PHYSICS  
[CILC area B]  
1.5 units: 1.5 hours lecture.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program.  
This course is 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 control procedures are also covered. (2/08)

SONO-44B  ADVANCED CLINICAL EXPERIENCE I  
[CILC area B]  
4.5 units: 252 total hours TBA lab.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program. Two-way corequisite: SONO-44C.  
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. (4/13)

SONO-44C  SUPERFICIAL STRUCTURES  
[CILC area B]  
1 unit: 9 total hours lecture, 27 total hours lab.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography Program. Two-way corequisite: SONO-44B.  
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 sono graphic 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  
[CILC area B]  
2 units: 2 hours lecture.  
Limitation 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  ADVANCED CLINICAL EXPERIENCE II  
[CILC area B]  
9 units: 28 hours TBA lab.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography program. Two-way corequisite: SONO-45C.  
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 of basic vascular sonography is provided. Clinical experience in abdominal, obstetric, gynecological, and superficial structures imaging is also provided. (4/13)

SONO-45C  BASICS OF VASCULAR SONOGRAPHY  
[CILC area B]  
2 units: 1.5 hours lecture, 1.5 hours lab.  
Limitation on enrollment: Enrollment in the Diagnostic Medical Sonography program. Two-way corequisite: SONO-45B.  
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 extremities 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  
0.5 - 3 units: 0.5-3 hours lecture, 0-9 hours lab.  
Limitation 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)
DEGREE
A.A.T. - Spanish

Program Description
The Associate in Arts in Spanish for Transfer degree (AA-T in Spanish) is designed to prepare students for transfer into the CSU system to complete a baccalaureate degree in Spanish or similar major. Upon completion of the AA-T in Spanish, students will be able to demonstrate the ability to initiate, sustain and close basic communicative tasks (Speaking); develop an understanding of connected discourse over longer stretches on a number of topics pertaining to different times and places (Listening Comprehension); produce writing focusing on most practical writing needs and limited social demands with an emerging ability to describe and narrate in paragraphs (Writing); distinguish consistently pervasive values of the Spanish-speaking cultures (Cultural Awareness); and evaluate consistently and with full understanding simple connected texts with an emerging ability to comprehend advanced reading (Reading Comprehension).

For an Associate in Arts in Spanish 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 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 AA-T (e.g., PE and Computer and Information Literacy courses).

For an Associate in Arts in Spanish for Transfer degree (AA-T in Spanish) 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)

Core: Units
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.

List A:
SPAN-01 Elementary Spanish ........................................5
SPAN-02 Elementary Spanish II ....................................5
SPAN-03 Intermediate Spanish .....................................5
or SPAN-10 Spanish for Spanish Speakers I ..................5
SPAN-04 Intermediate Spanish .....................................5
or SPAN-11 Spanish for Spanish Speakers II ..................5
 List A: 3-5 units from the following.....................................3-5
ENGL-04A Introduction to World Literature:
Ancients to 1650 (3)
ENGL-04B Introduction to World Literature:
1650 to Present (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)

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.

ANTH-02 Sociocultural Anthropology (3)
COMM-30 Introduction to Intercultural Communication (3)
ENGL-04A Introduction to World Literature:
Ancients to 1650 (3)
ENGL-04B Introduction to World Literature:
1650 to Present (3)
FREN-01 Elementary French I (5)
FREN-02 Elementary French II (5)
FREN-03 Intermediate French I (5)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
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<tr>
<td>FREN-04</td>
<td>Intermediate French II</td>
<td>5</td>
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<tr>
<td>HIST-04A</td>
<td>History of Civilization: Part I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIST-04B</td>
<td>History of Civilization: Part II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HIST-23</td>
<td>The History of Hispanic-Americans in the Southwest US</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOC-01</td>
<td>Introduction to Sociology</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Units toward the Major: 23-25

Total Units that may be double counted: 10

General Education (CSU-GE or IGETC) Units: 37-39

Elective (CSU transferable) Units: 1-5

Total Degree Units: 60

Important note:
SPAN-03 is only offered in the fall semester.
SPAN-04 is only offered in the spring semester.

The entry level course for heritage speakers of Spanish is SPAN-10.

**SPANISH (SPAN)**

**SPAN-01 ELEMENTARY SPANISH**

(C-ID SPAN 100) (CSU breadth area C2) (IGETC area 6)
5 units: 5 hours lecture.
Advisory: ENGL-84.
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 how to express in Spanish the most basic functions of everyday life. This course is not recommended for native speakers – native speakers should enroll in SPAN-10. (10/03)

**SPAN-02 ELEMENTARY SPANISH II**

(CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: SPAN-01 or two years of high school Spanish.
SPAN-02 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**

(C-ID SPAN 200) (CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: SPAN-02 or SPAN-11. Advisory: LRNR-30.
SPAN-03 is the continuation of SPAN-02 and SPAN-11. This course reviews and further develops grammatical concepts introduced in Spanish-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. (3/10)

**SPAN-04 INTERMEDIATE SPANISH**

(C-ID SPAN 210) (CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: SPAN-03. Advisory: LRNR-30.
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**

(C-ID SPAN 220) (CSU breadth area C2) (IGETC area 3B/6)
5 units: 5 hours lecture.
Prerequisite: SPAN-02 or the equivalent. Advisory: LRNR-30.
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**

(CSU Breadth C2) (IGETC area 3B/6) (C-ID SPAN 230)
5 units: 5 hours lecture.
Prerequisite: SPAN-10 or two years of “Spanish for Spanish Speakers.” Advisory: LRNR-30.
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)

STGV-33A  STUDENT GOVERNMENT I
2 units: 1 hour lecture, 3 hours lab.
Advisory: ENGL-85.
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
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: STGV-33A. Advisory: ENGL-85.
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
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: STGV-33B. Advisory: ENGL-85.
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
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: STGV-33C. Advisory: ENGL-85.
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)

TUTORIAL (TUTR)

TUTR-35  TUTORIAL SEMINAR
1 unit: 3 hours lab.
Advisory: ENGL-85
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)
### CERTIFICATE

**Virtual Office**  
**ALLIED HEALTH, BUSINESS, AND PUBLIC SAFETY**

#### Virtual Office Professional  
**Social Media (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.

<table>
<thead>
<tr>
<th>Core</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIRT-51</td>
<td>Social Influence Media</td>
</tr>
<tr>
<td>VIRT-53</td>
<td>Effective Blogging</td>
</tr>
<tr>
<td>VIRT-54</td>
<td>Podcasting</td>
</tr>
<tr>
<td>VIRT-55</td>
<td>Social Media Strategist</td>
</tr>
<tr>
<td>Total Units</td>
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</tbody>
</table>

### Gainful Employment Disclosure Metrics

Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

### Certificate (11/14)
**Virtual Office Professional (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.
- B. Construct a virtual office business plan in order to create and manage a virtual office.
- C. Utilize appropriate social media for clients and their own business.
- D. Use web page design knowledge to create web sites for clients and their own business.

**Career Opportunities**

Virtual business owner, virtual assistant, executive assistant, web designer, social media coordinator.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>AOM-58</td>
<td>Web Site Development</td>
</tr>
<tr>
<td>CPSC-30</td>
<td>Computer Applications</td>
</tr>
<tr>
<td>VIRT-50</td>
<td>Virtual Office</td>
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</tr>
<tr>
<td>Total Units</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended Sequence:** Certificate Virtual Office Professional (05800.CE)

**Fall 1:**

- VIRT-51: Social Influence Media 3
- VIRT-53: Effective Blogging 0.5
- VIRT-54: Podcasting 0.5
- VIRT-55: Social Media Strategist 3

**Spring 1:**

- AOM-58: Web Site Development 1
- CPSC-30: Computer Applications 3
- VIRT-50: Virtual Office 3
VIRTUAL OFFICE (VIRT)

VIRT-50 VIRTUAL OFFICE
3 units: 3 hours lecture.
Advisories: BUS-10; CPSC-30.
Learn how to become an independent contractor/freelancer in the virtual world. (11/14)

VIRT-51 SOCIAL INFLUENCE MEDIA
3 units: 3 hours lecture.
Advisories: CPSC-30.
The student will learn how to use social influence media tools (for example, Twitter®, blogs, facebook® fan pages, YouTube® videos and apply them to a business web site effectively. (10/13)

VIRT-53 EFFECTIVE BLOGGING
.50 unit: 1/2 hour lecture.
Limitation on enrollment: Enrollment is limited by technology and number of work stations. Advisories: AOM-60.
This course focuses on creating effective content for a blog site, how to understand the blogosphere and how to set up a blog to connect with the online world. (12/14)

VIRT-54 PODCASTING
.50 unit: 1/2 hour lecture.
Limitation on enrollment: Enrollment limited by number of work stations in the classroom. Advisories: VIRT-51
Students will learn how to design and produce their own audio podcasts using free internet based podcasting tools. (5/12)

VIRT-55 SOCIAL MEDIA STRATEGIST
3 units: 3 hours lecture.
Limitation on enrollment: Limited to available NISM-certified Social Media Strategist instructor at time of course offering.
This course prepares the student for the role of a Social Media Strategist and for the National Institute for Social Media strategist certification examination. (12/14)

VIRT-56 INTRODUCTION TO SEARCH ENGINE OPTIMIZATION
1 unit: 1 hour lecture.
Advisory: AOM-58
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)
WATER/WASTEWATER TECHNOLOGY  (WWT)

WWT-60  WATER TREATMENT PLANT OPERATIONS
  3 units: 3 hours lecture.
  Advisories: READ-81, ENGL-84; 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. (3/11)

WWT-61  INTRODUCTION TO WASTEWATER TREATMENT
  3 units: 3 hours lecture.
  Advisories: READ-81, ENGL-84; 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)

WWT-62  WATER/WASTEWATER CALCULATIONS
  3 units: 3 hours lecture.
  Advisories: READ-81, ENGL-84; MATH-80.
  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
  3 units: 3 hours lecture.
  Prerequisite: WWT-60. Advisory: READ-81.
  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
  3 units: 3 hours lecture.
  Prerequisite: WWT-61. Advisory: READ-81.
  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 waste water treatment plant, including aeration, maintenance of microbe populations, sludge digestions, and chemical removal. This course is designed for students who are in grades III and IV of state certification and satisfies eight educational points towards certification as a wastewater treatment operator. (5/11)
Welding Technology

CAREER AND TECHNICAL EDUCATION

DEGREE
A.A. - Welding Technology

CERTIFICATE
Advanced Welding and Metal Fabrication
Entry Level Welding

Gainful Employment Disclosure Metrics
Gainful Employment provides students information useful in determining which school to attend for 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 address: Merced College Gainful Employment

Program Description
The Merced College Welding Technology Program prepares participants for employment in structural welding, welding repair, job shop welding, and production welding. The program is also designed to retrain and update persons presently employed in welding and related trades.

The program includes welding and related skills in the areas of (OAW) oxyacetylene welding, (OFC-A) oxyacetylene cutting, (SMAW) shielded metal arc welding, (GMAW) gas metal arc welding, (FCAW) flux cored arc welding, (GTAW) gas tungsten arc welding, (PAC) Plasma Arc Cutting, (CAC-A) air carbon arc cutting, and equipment used in metal fabrication. Basic welding processes are introduced and related skills are developed in the WELD-06 and WELD-07 courses. The WELD-40 courses are designed to develop skills in design, layout, selection of materials, and production welding. WELD-46 is structured to prepare students for and pass the structural, (Limited Thickness, Steel) AWS qualification test. The curriculum used in the welding program is competency based.

Students are required to furnish their own safety glasses, welding gloves, pliers, measuring tape and text.

Students who wish to construct personal welding projects in WELD-40A & WELD-40B are required to pay for the cost of their materials.

An Associate in Arts Degree in Welding Technology is available for students who complete the graduation requirements and successfully complete the courses required with a minimum grade point of 2.0 in each course.

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.

Core:
- DRFT-44 Print Reading & Sketching ........................................ 3
- DRFT-59 Basic Drafting .......................................................... 3
- WELD-06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding ......................................................... 3
- WELD-40B* Advanced Welding Design and Construction .......... 3
- WELD-46** Advanced Arc Welding Procedures ....................... 1

*Offered in the fall semester as a night class only. Offered in the spring semester as a day class only.

**Offered in the spring semester as a night class only.
CERTIFICATE (2/13)
Advanced Welding and Metal Fabrication
(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.

Core:  Units
DRFT-44  Print Reading & Sketching  .......... 3
DRFT-59  Basic Drafting  .................. 3
WELD-06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding  .... 3
WELD-07  Fundamentals of T.I.G. and M.I.G. 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

*Offered in the fall semester as a night class only. Offered in the spring semester as a day class only.
**Offered in the spring semester as a night class only.

Recommended Sequence: A.A. - Welding Technology (09800.AA) and Certificate Advanced Welding and Metal Fabrication (09810.CL)

Fall 1
DRFT-59  Basic Drafting  .......... 3
WELD-06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding  .... 3
WELD-07  Fundamentals of T.I.G. and M.I.G. Welding  .... 3

Spring 1
WELD-40A*  Introduction Welding Design and Construction  .... 3
WELD-46**  Advanced Arc Welding Procedures  ............ 1

Fall 2
WELD-40B*  Advanced Welding Design and Construction  .... 3

*Offered in the fall semester as a night class only. Offered in the spring semester as a day class only.
**Offered in the spring semester as a night class only.

CERTIFICATE (11/13)
Entry Level Welding (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 work force.
E. Demonstrate the ability to pass the workmanship tests using common welding processes.

Core:  Units
DRFT-44  Print Reading & Sketching  .......... 3
WELD-06  Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding  .... 3
WELD-07  Fundamentals of T.I.G. and M.I.G. 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

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Recommended Sequence: Entry Level Welding (09780.CE)

Core:  Units
DRFT-44  Blue Print Reading Drafting  .......... 3
MATH-85  Applied Mathematics  .......... 3
WELD-06  Fundamentals of Oxy-Fuel & Shielded Metal Arc Welding  .... 3
WELD-07  Fundamentals of T.I.G. and M.I.G. Welding  .... 3
WELD-40A  Welding Design & Construction  .... 3
WELD-40B  Welding Design & Construction  .... 3
WELD-46  Advanced Arc Welding Procedures  ............ 3

3
WELDING TECHNOLOGY (WELD)

WELD-06  FUNDAMENTALS OF OXY-FUEL WELDING AND SHIELDED METAL ARC WELDING (ALSO: MECH-06)
3 units: 2 hour lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; 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)

WELD-07  FUNDAMENTALS OF T.I.G. AND M.I.G. WELDING
3 units: 2 hours lecture, 3 hours lab.
Advisories: READ-81, ENGL-84; MATH-80 or MATH-85.
This course emphasizes the development of minimum skill standards in welding. The Gas Metal Arc Welding (GMAW)/(MIG), Gas Tungsten Arc Welding (GTAW)/(TIG) and Plasma Arc Cutting (PAC) processes are studied as prescribed in the American Welding Society (AWS) Training Qualification (QC 10) entry-level standards. (2/13)

WELD-40A  INTRODUCTION WELDING DESIGN AND CONSTRUCTION
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: WELD-07. One-way corequisite: MATH-85. Advisories: READ-81, ENGL-84.
This course covers basic metal fabrication skills as well as the design and construction of special industrial and agricultural equipment. (9/14)

WELD-40B  ADVANCED WELDING DESIGN AND CONSTRUCTION
3 units: 2 hours lecture, 3 hours lab.
Prerequisite: WELD-40A. Advisories: READ-81, ENGL-84.
This course is a continuation of WELD 40A. It covers basic and advanced metal fabrication skills as well as the design and construction of special agricultural and industrial equipment. (2/13)

WELD-46  ADVANCED ARC WELDING PROCEDURES
1 unit: 3 hours lab.
Advisories: MATH-80 or MATH 85; WELD-06 or MECH-06, WELD-07.
This course is designed to emphasize the skills and techniques of Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, Air Carbon Arc Cutting and Oxyacetylene flame cutting as related to pipe and structural members. Included will be welding assembly print interpretation, weld symbol interpretation, and weld joint preparation. Students will be prepared to take an AWS Welder Certification Test during this course. (2/13)

WELD-51  INTRODUCTORY PIPE WELDING
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: MECH-06 or WELD-06; WELD-07. Advisories: MATH-85; READ-81, ENGL-84.
This course is an introduction to pipe and tube fitting and welding. Industry standards established by the American Welding Society (AWS) and the American Petroleum Institute (API) are used as the basis for instruction. This course meets the needs of the food processing and liquid/gas material handling industries. (2/15)

WELD-52  ADVANCED PIPE WELDING AND FITTING
2 units: 1 hour lecture, 3 hours lab.
Prerequisite: WELD-51. Advisories: MATH-85; READ-81, ENGL-84.
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)
Continuing Education (Noncredit)

CERTIFICATES
Basic Skills
Court Interpreter
ESL Beginning Skills Program
ESL Intermediate Skills Program
Medical Assistant
Technical Office Occupations

Web site
www.mccd.edu/programs/cont_ed/index.html

Program Description
The Merced College Continuing Education (Noncredit) Program is located in the Merced Educational Center (formerly the Tri-College Center). This program offers a wide variety of classes to the community with no registration fees. Classes are offered to assist students seeking employment, help them relearn skills and meet current job requirements, and promote skills for physical and emotional well-being. Call Janet Lyle, Director, at (209) 381-6540 for further information.

Career Opportunities
- Court Interpreter
- Medical Assistant
- Technical Office Occupation

Highlights
Noncredit Adult Continuing Education - Lifelong Learning for all Californians is part of the community colleges system of instruction. As a key aspect of lifelong learning, noncredit instruction:
Serves as a gateway to college and/or a career path
Assists parents in developing the skills needed to help their children succeed in school and life;
Provides programs for immigrants to actively engage in the economy and civic life;
Supports persons with disabilities to develop ways to be self-sufficient;
Increases community awareness of health, safety, family and consumer issues;
Provides access to basic skills and English as a Second Language; and
Keeps older adults active and healthy.

CERTIFICATE (5/08)
Basic Skills Certificates of Completion (49165.NC)
The basic skills program consists of a sequence of courses to provide instruction for individuals in elementary and secondary-level reading, writing, computation and problem-solving skills in order to assist them in achieving their academic, vocational, and personal goals.

Program Student Learning Outcomes
Upon completion of the basic skills program the student will be able to address the content and proficiency at levels through the twelfth grade and may incorporate a high school diploma.

- SOCL-760 Career and Life Planning
- SOCL-761 Vocational Life Planning
- EDU-110 Reading and Computers
- EDU-111 Reading and Computers II
- GED-101 Basic Skills Development and GED Preparation
- EDU-112A Skills Acquisition for Student Success - General
- EDU-112B Skills Acquisition for Student Success - Math
- GUI-101 Introduction to College
- GUI-102 Probation Solutions - Level 1

CERTIFICATE (5/08)
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.

- BUSN-752 Introduction to Microcomputers
- LAW-765 Spanish Language Interpreter for Court and Administrative Hearings
BUSN-749  Microcomputers and Business
BUSN-752  Introduction to Microcomputers

BUSN-752  Medical Assisting
EDU-112C  Skills Acquisition for Student Success - Allied Health
MED-717  Medical Assisting

CERTIFICATE  (6/08)
Technical Office Occupations Certificate Of Competency (07744.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 Technical Office Occupations program the student will prepared to seek employment directly related to the Technical Office Occupations career pathway.

ENG-801  Beginning ESL Skills
ENG-802  Advanced-Beginning ESL Skills

CERTIFICATE  (4/12)
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.

ENG-813  Low-Intermediate ESL Skills
ENG-815  Intermediate ESL Skills

CERTIFICATE  (5/08)
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.

BRAIN-752  Introduction to Microcomputers
EDU-112C  Skills Acquisition for Student Success - Allied Health
MED-717  Medical Assisting

CERTIFICATE  (5/08)
Elementary and Secondary Basic Skills
EDU-110  Reading and Computers
Course duration: 288 hours; open entry format.
This course is best suited for adult learners below the third grade reading ability that need individual attention, encouragement, and reinforcement while learning basic phonics, reading, spelling, and vocabulary skills. The student can learn at his/her own rate of speed with computer assisted instruction. (9/13)

EDU-111  Reading and Computers II
Course duration: 288-324 hours, open entry format.
Advisory: EDU-110.
This course is best suited for adult learners at third grade reading and vocabulary level up to approximately sixth grade level that require individual attention and reinforcement while reviewing basic phonics, improve reading, spelling, and vocabulary skills. (5/13)

EDU-112A  Skills Acquisition for Student Success - General
Course duration: 90 hours; open entry format.
Enrolled credit students may take this course for a maximum of 90 hours per term. The course provides a supervised learning experience for students who can benefit from individualized instruction in study skills and study habits in a laboratory setting. The study skills and study habits learned depend on the needs of the individual students and include educational computer applications, knowledge of college resources, and application of composition skills across the curriculum. (10/13)

EDU-112B  Skills Acquisition for Student Success - Math
Course duration: 90 hours; open entry format.
Enrolled credit students may take this course for a maximum of 90 hours per term. The course provides a supervised learning experience for students who can benefit from individualized instruction in study skills and study habits in a laboratory setting. The study skills and study habits learned depend on the needs of the individual students and include educational computer applications, knowledge of college resources, and application of computation skills across the curriculum. (10/13)

EDU-112C  Skills Acquisition for Student Success - Allied Health
Course duration: 27-36 hours; open entry format.
This course is designed to provide students the opportunity to improve and enhance their allied health skills through any number of training exercises that assist in the clinical development of and reinforcement of the practical allied health skills. The course is in a lab setting enriched with a resource library, manikins (for skills practice), and computer stations. Course duration is 27-36 hours. (3/11)

ENG-121  College Prep English 1: Reading
Course duration: 45-63 hours; open entry format.
Advisory: 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
Course duration: 45-63 hours; open entry format.
Advisory: 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)
GED-101  BASIC SKILLS DEVELOPMENT AND GED PREPARATION
Course duration: 324 hours; open entry format.
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)

GUI-101  INTRODUCTION TO COLLEGE
Course duration: 1.5 hours; open entry format.
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
Course duration: 1.5 hours; open entry format.
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 attaining their academic goals. (10/13)

TUT-106  SUPERVISED TUTORING
Course duration: 102 hours; open entry format.
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. (1/14)

EDUCATION COURSES FOR PERSONS WITH SUBSTANTIAL DISABILITIES
SKLS-210  DAILY LIVING SKILLS
Course duration: 435-455 hours; open entry format.
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)

FAMILY AND CONSUMER SCIENCE
SEW-402  BEGINNING QUILTING
Course duration: 54 hours; open entry format.
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
Course duration: 54 hours; open entry format.
This 54 hour course provides instruction in knitting, crocheting, stitchery and sewing with an emphasis on: making needlecrafter 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)

ARTS-512  CHORAL DYNAMICS
Course duration: 54 hours; open entry format.
Limitation 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. (1/14)

EDU-508  MATURE DRIVER IMPROVEMENT
Course duration: 8 hours; open entry format.
This course is designed primarily for drivers age 55 and older. Students receive classroom instruction on driving safety, road courtesy, improving driving performance, and safe driving techniques for emergencies. This course is 8 hours in duration. (10/13)

BUSN-749  MICROCOMPUTERS AND BUSINESS
Course duration: 720 hours; open entry format.
Advisory: 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
Course duration: 24 hours; open entry format.
This course will introduce students to microcomputers and the Windows software environment. Students will learn to identify the components of desktop screens, 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)

LANG-716  SPANISH IN THE WORKPLACE
Course duration: 54 hours; open entry format.
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
Course duration: 108 hours; open entry format.
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)
MED-717  MEDICAL ASSISTING
- Course duration: 960 hours; open entry format.
- Advisory: 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)

SOCL-760  CAREER AND LIFE PLANNING
- Course duration: 435-455 hours; open entry format.
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
- Course duration: 8 hours; open entry format.
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)

TRNG-768  BUS DRIVER TRAINING/RECERTIFICATION
- Course duration: 36 hours; open entry format.
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)

ENGLISH AS A SECOND LANGUAGE (ESL)
ENG-801  BEGINNING ESL SKILLS
- Course duration: 204-255 hours; open entry format.
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)

ENG-802  ADVANCED-BEGINNING ESL SKILLS
- Course duration: 204-255 hours; open entry format.
- Advisory: ENG-801.
This course is for preliterate and nonliterate ESL students who have minimal English language skills. Emphasis in this course is on aural and oral skills with visual reinforcement. The student will be introduced to reading, writing and math skills. (3/11)

ENG-813  LOW-INTERMEDIATE ESL SKILLS
- Course duration: 204 - 255 hours.
- Advisory: ENG-802.
This course is designed for low-intermediate level students who need more practice with English skills. This course includes practice in listening, speaking, reading, and writing. (3/11)

ENG-815  INTERMEDIATE ESL SKILLS
- Course duration: 204 - 255 hours.
- Advisory: ENG-813.
This course is 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. This course will prepare students to take credit courses at Merced College. This course includes practice in listening, speaking, reading, and writing. (3/11)
AKERS-PORTER, TINA  
Mathematics  
A.S., Modesto Junior College;  
B.A., California State University, Stanislaus;  
M.S., Missouri State University

ALBANO, VALERIE  
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B.S., University of Washington;  
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BELL, STEPHEN  
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B.S., M.S., California Polytechnic State University, San Luis Obispo

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BRACE, KIRSTY  
Child Development/Early Childhood Education  
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B.S., Huron University

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M.A., Colorado Technical University

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M.S., University of Phoenix

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M.A., California State University, Sacramento;  
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B.A., M.A., University of South Carolina;  
Ph.D., Tulane University

HAMILTON, AARON  
*Electronics*  
B.S., California State University East Bay

HARDCASTLE, CINDY  
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M.S., California State University, Fresno

HAUGEN, ANNETTE  
*Business/Management*  
B.S., San Jose State University;  
M.B.A., California State University;  
Stanislaus

HEIDELBACH, CARIN  
*Theatre*  
B.A., California State University, Stanislaus;  
M.F.A., Humboldt State University

HELGOTT, SUSAN  
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M.A., California State University, Fresno

HENNINGSGAARD-VIERRA, JILL  
*Counseling*  
A.A., Merced College;  
B.A., California State University, Stanislaus;  
M.S., California State University, Fresno
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Education Details</th>
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<tbody>
<tr>
<td>HICKS, TRAVIS</td>
<td>Philosophy</td>
<td>B.A., University of St. Thomas; M.A., Loyola Marymount University</td>
</tr>
<tr>
<td>HOBBS, LEE ANNE</td>
<td>Communication Studies</td>
<td>B.A., University of California, Davis; M.A., California State University, Fresno</td>
</tr>
<tr>
<td>HUDDLESTON, ALLEN</td>
<td>Head Coach, Women’s Basketball; Physical Education</td>
<td>A.A., Merced College; B.A., California State University</td>
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<tr>
<td>HUNDRY, AMY</td>
<td>English</td>
<td>B.A., M.A., University of California, Irvine</td>
</tr>
<tr>
<td>HUNTINGTON, PAMELA L</td>
<td>English with Emphasis in Reading</td>
<td>A.A., American River College; B.A., M.A., University of California, Davis</td>
</tr>
<tr>
<td>IGO, MEGAN M.</td>
<td>Biology</td>
<td>B.S., University of California, Riverside; M.S., University of California, Los Angeles</td>
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<td>JOHNSTON, MARK</td>
<td>Administration of Justice/Criminal Justice</td>
<td>A.A., Pasadena City College; B.S., California State University, Los Angeles; J.D., Southwestern Law School</td>
</tr>
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<td>JORDAN, LAN</td>
<td>Mathematics, Physics</td>
<td>B.A., University of the Pacific; M.A., California State University, Stanislaus</td>
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<td>KAHLEHT, SHIRLEY</td>
<td>English</td>
<td>B.A., California State University, Hayward; M.A., San Francisco State University; Ph.D., University of California, Los Angeles</td>
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<tr>
<td>KANEMOTO, KATHLEEN D.</td>
<td>Computer Science/Computer Applications</td>
<td>B.S., M.S.E., M.B.A., San Jose State University</td>
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<td>KEHOE, JULIE</td>
<td>Mathematics</td>
<td>B.A., M.A., California State University, Fresno</td>
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<td>KELLER, SUSAN</td>
<td>Anatomy, Physiology</td>
<td>B.S., University of California, Riverside; M.A., California State University, Fresno</td>
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<td>KHOUBIAR, TATIANA</td>
<td>Counseling</td>
<td>B.A., M.A., California State University, Fresno</td>
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<td>LUCEY, VICKI</td>
<td>Psychology</td>
<td>A.A., Las Positas College; B.A., Humboldt State University; M.A., San Francisco State University</td>
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<tr>
<td>MACIAS, MIREYA</td>
<td>Biology</td>
<td>A.S., Merced College; B.S., University of California, Davis; M.S., California State University, Fresno</td>
</tr>
<tr>
<td>MAPLES, INGA</td>
<td>Counseling</td>
<td>B.A., California State University, Stanislaus; M.A., Hampton University; Ph.D., Capella University</td>
</tr>
<tr>
<td>MARQUEZ, MARTINA</td>
<td>Early Childhood Edu.</td>
<td>B.S., University of California, Davis; M.A., California State University, Fresno</td>
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<tr>
<td>McBRIDE, JENNIFER</td>
<td>English</td>
<td>A.A., Merced College; B.A., M.A., California State University, Sacramento</td>
</tr>
<tr>
<td>McCALL, SCOTT</td>
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</tr>
<tr>
<td>McCALL, TOM</td>
<td>Emergency Medical &amp; Fire Technology</td>
<td>B.S., University of Phoenix</td>
</tr>
<tr>
<td>MEIDINGER, MAI</td>
<td>Mathematics</td>
<td>B.A., California State University, Fullerton; M.S., University of Arizona</td>
</tr>
<tr>
<td>MEIDINGER, STEPHAN</td>
<td>Mathematics</td>
<td>A.A., Rancho Santiago College; B.A., M.A., California State University, Fullerton</td>
</tr>
<tr>
<td>MERRITT, JOSELLE</td>
<td>Reference Librarian</td>
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</tr>
<tr>
<td>MITCHELL, PATRICK T.</td>
<td>Mathematics</td>
<td>B.A., The College of New Jersey; M.S., University of Delaware</td>
</tr>
<tr>
<td>MODAFFERI, EDWARD</td>
<td>Microbiology</td>
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</tr>
<tr>
<td>MONTOYA, JOHN</td>
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</tr>
<tr>
<td>MORIMOTO, DEBRA</td>
<td>Geography</td>
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</tr>
<tr>
<td>MORRIS, RALPH</td>
<td>Political Science, History</td>
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</tr>
<tr>
<td>MUMFORD, JEREMY</td>
<td>English</td>
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<tr>
<td>MURPHY, JOEL</td>
<td>Psychology</td>
<td>A.S., Community College of the Air Force; B.A., M.S., California State University Stanislaus</td>
</tr>
<tr>
<td>NAVARRO, IVAN</td>
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<tr>
<td>NEAR, DELIA</td>
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<td>B.A., University of California, Riverside; M.L.S., University of California, Berkeley</td>
</tr>
<tr>
<td>NELSON, CURTIS</td>
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<tr>
<td>NELSON, KEVIN</td>
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</tr>
<tr>
<td>NOBLETT, DAVID</td>
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</tr>
<tr>
<td>NORRIS, SUZZETTE</td>
<td>Criminal Justice</td>
<td>A.A., Merced College; B.A., Chapman University</td>
</tr>
</tbody>
</table>
ORTIZ, KERI
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M.S.W., California State University, Fresno

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A.S., Merced College;  
B.S., California Polytechnic State University, San Luis Obispo

TAYLOR, CANDACE  
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B.A., Westmont College;  
M.A., University of California, Los Angeles;  
Ph.D., University of California, Davis

TENN, BRANDON  
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B.A., University of Hawaii;  
Ph.D., University of California, Davis

THORNBURGH, JAMES  
Drafting  
A.S., Sierra College;  
B.S., M.S., Ed.D., California State University, Fresno

VANG, NGIA GINA  
Counseling  
B.A., M.S., California State University, Fresno

VANGAY, JONAS  
Counseling, International Students, Hmong  
A.S., University of Lyon;  
M.S., Academy of Versailles;  
B.S., M.S., California State University, Stanislaus;  
Ed.D., California State University, Fresno/University of California, Davis

VELASQUEZ, ANDREA  
Nursing/Clinical Practice  
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B.S.N., California State University, Stanislaus

VILHAUER, CRAIG  
Accounting  
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M.B.A., California State University, Stanislaus
WALLS, WILLIAM  
_Drafting, Electronics, Industrial Technology_  
A.A., A.S., Merced College;  
B.S., California State University, Fresno

WEATHERS, APRIL  
_Chemistry_  
B.S., M.S., California State University, Stanislaus

WEEPERS, MICHAEL  
_Automotive Technology_  
A.A., Merced College

WHITE, ANTHONY  
_English_  
B.A., M.A., California State University, Sacramento;  
M.A., Portland State University

WILSON, KRISTA  
_Chemistry_  
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B.S., California State University, Stanislaus;  
Ph.D., University of California, Davis

WITHERS, MARGARET R.  
_English_  
A.A., American River College;  
B.A., Notre Dame de Namur University;  
M.A., M.F.A., San Francisco State University

YANAGI, CARY  
_Computer Studies_  
B.A., Southern Methodist University;  
M.A., Pepperdine University;  
M.S., Golden Gate University

YOUNG, JANEE  
_Communication Studies_  
B.A., M.A., California State University, Fresno

ZELINSKY, CHERYL  
_Sonography_  
B.A., Saint Mary’s College of California;  
M.M., Southern Oregon University
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