Greetings and welcome to Modesto Junior College!

It is our hope that this catalog will provide you with the information you need to help you make informed decisions about your academic career here at Modesto Junior College. As a student at Modesto Junior College you will discover outstanding faculty, staff, and administrators who are unconditionally committed to academic excellence, personal enrichment and diversity.

Modesto Junior College offers a wide range of academic and vocational programs. Our academics are rigorous and our vocational programs utilize the practical learn by doing philosophy. We are committed to providing our students with the highest quality of education possible.

For more than eighty-three years, Modesto Junior College has played a unique and vital role in educating students of all ages and backgrounds. We continue to work hard at providing our diverse community with a healthy, enjoyable learning environment. One significant project that helps us meet this goal is our active participation in the Yosemite Community College District’s nationally acclaimed Beyond Tolerance Initiative. With this initiative serving as the foundation, you will have many opportunities to participate in activities that will increase your appreciation for the many cultures that are represented in our community.

I encourage you to take a few moments of your time and explore the multitude of educational opportunities, services and resources that are available at MJC. We look forward to helping you realize your plans for a bright and promising future!

Dr. James H. Williams
President
Modesto Junior College
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**FALL SEMESTER**

August 30............Fall semester begins
September 6...........Labor Day holiday (College closed)
September 12........Last day to drop and be eligible for a refund
September 26........Last day to withdraw without a W
September 28........Last day to file for CR/NC option
November 11.........Veterans Day holiday
November 19..........Last day to withdraw from a full-term class
November 24..........No night classes
November 25-26.....Thanksgiving break
December 13-18.....Final examinations week
December 18..........Last day of the Fall semester
December 23-31.....College closed

**SPRING SEMESTER**

January 3............Offices open
January 10..........Spring Semester begins
January 17..........Martin Luther King Jr. holiday (College closed)
January 23..........Last day to drop and be eligible for a refund
February 4..........Last day to withdraw without a W
February 11..........Last day to file for CR/NC option
February 18..........College closed for Lincoln Day
February 21..........College closed for Washington Day
April 14..............Last day to withdraw from a full-term class
April 25-30..........Final examinations week
April 29..............Graduation!
April 30..............Last day of the Spring semester
I am...

a designer of aliens
an imaging specialist
an astronomical artist

...I am MJC.

"I am curious by nature. I love the atmosphere of inquiry and spontaneity I've found at Modesto Junior College."

- Joel Angen
MJC Professor
About Modesto Junior College

History of MJC

Modesto Junior College, one of the oldest community colleges in the state, was organized in 1921 to serve the first junior college district established under a State Legislature Enabling Act.

Modesto Junior College was established to meet the needs of the community. Today the college strives to maintain the same objective—that of dedication and service to the community.

The College began with a charter enrollment of 61 students. Through the years registration has increased until today more than 17,000 day and evening students are enrolled. In addition, more than 9,000 community participants take advantage of the ever-growing Community Education program.

To complement student growth, the campus, too, has grown. The college holds the distinction of having erected the first junior college classroom building in the state. From this modest beginning, MJC has grown until it now provides an outstanding learning environment on two sites: the original MJC-East on College Avenue and MJC-West on Blue Gum Avenue northwest of Modesto. In addition to the two sites, more than 20 community sites are used to meet particular educational needs.

The area boundaries have also changed. In 1964, by action of the electorate, the boundaries were enlarged to include nearly 4,000 square miles, encompassing high school districts in Stanislaus and Tuolumne Counties, the Ripon High School District in San Joaquin County, the Gustine and Hilmar High School Districts in Merced County and the Harney Elementary School District in Santa Clara County. The district also includes the Bret Harte Union High School District, the former Copperopolis Elementary School District and the former Salt Spring Valley Elementary School District in Calaveras County.

A Board of Trustees was elected in 1964 to govern the affairs of the expanded district. In 1965 the name Yosemite Junior College District was selected. It was later changed to Yosemite Community College District.

The Yosemite Community College District also includes Columbia College, located in Columbia, California.

MJC Mission Statement

Modesto Junior College has a mission of student-centered learning and success. MJC is committed to serving its diverse and multi-cultural community through the provision of high quality, transferable, general, and vocational education programs. The college also offers activities designed to improve the quality of life for citizens of the Yosemite Community College District.

MJC offers comprehensive educational and support programs enabling students to achieve personal as well as academic potential. Particular attention is given to groups and individuals with special needs.

Modesto Junior College staff members are committed to meeting student needs by:

- Recognizing our students as individuals requiring responsive, diverse and flexible educational, career preparation, personal development and life-long learning opportunities.
- Providing excellence in instruction and support services.
- Creating an intellectually and culturally stimulating atmosphere for students, staff and community.
- Advancing the College’s role in the economic development and quality of life in our community.
- Continuing personal and professional development for all employees.

MJC’s Statement of Objectives

- Transferable courses will be offered for students who later wish to earn a baccalaureate degree.
- Courses will be offered for students who wish to earn AA/AS degrees.
- Programs will be offered to prepare students to enter specific occupations.
- Courses and programs will be offered to improve workers’ job performance, to upgrade job skills, to prepare workers for expanding information bases and changing skills requirements, and to assist persons in transition to new occupations.
- Guidance and counseling services will be offered to assist students in making decisions that may affect their education, career, cultural advancement and general well being.
- Opportunities will be made available for students to become involved in school activities and governance.
- Equal educational access will be insured for disabled as well as academic and economically disadvantaged individuals. Support services and classes will be offered to meet their special needs.
- Activities and special events will be offered which encourage alumni involvement in MJC and acknowledge their contributions to school traditions.
• Special services designed to improve the quality of life in
  the community and to promote life-long learning will be
  available.
• MJC staff will make global education experiences available
  through international curriculum, study abroad, and the
  presence of foreign students on campus.
• The College will continue faculty and staff recruitment
  programs to identify, locate and hire members of
  under-represented groups, and to increase affirmative
  action employment.
• The best possible instructional and support services –
  including, but not limited to, adequate supplies, sufficient
  and appropriate facilities, and technologically current
  equipment--will be maintained.
• Programs and opportunities to develop employees’
  professional knowledge and abilities will be maintained.
• The College will make efforts to implement legislative
  mandates, in a timely and effective manner, as well as
  other directives placed upon it by federal, state and local
  policy-making bodies.
• Recommendations from the accreditation process will be
  addressed.
• The state-mandated matriculation plan will be continued to
  insure student success.
• Annual special priorities will be established.

**Accreditation**

Modesto Junior College is accredited by the Western Association of
Schools and Colleges and approved by the State Department of
Education for training veterans. MJC is authorized under Federal
law to enroll non-immigrant, alien students.

Students who complete appropriate lower division courses are
given full credit on transfer to the California State Universities,
the University of California, and other four-year colleges and
universities which maintain articulation agreements with the
college.

**A Comprehensive Community College**

Consistent with its philosophy of serving the educational needs
of all people who reside in the area served by the College, a wide
range of programs and individual courses has been developed.

Credit and non-credit courses are offered day and evening as well
as on Saturdays on the college sites and at locations throughout
the college district. Some courses are also offered online and on
video or via video-streaming.

Credit courses fulfill requirements leading to degrees, diplomas
and certificates.

Non-credit courses are designed for members of the community
who wish to develop or improve their skills and supplement their
general knowledge. These courses do not fulfill requirements
leading to degrees, diplomas or certificates.

Community Education classes, tours and trips are participant
fee-funded and carry no unit value. Such classes may be offered
in the areas of a vocational, recreational, and inservice training
interests of the participants.

**Types of Awards**

**ASSOCIATE DEGREES**

Classes leading to the Associate in Arts degree or the Associate in
Science degree are offered during the day, in the evening, and on
Saturday. Students must apply for a degree during the semester
they plan to graduate. Applications can be completed online or in
the Evaluations Office, Morris 205.

**CERTIFICATES OF ACHIEVEMENT**

Certificates are awarded to students in recognition of their
completion of specialized work in many areas such as agriculture,
supervisory training, real estate, fire science, dental and medical
assisting, Shakespeare studies, and speech communication. Students must apply for the certificate in the Evaluation Office
after registering for the semester in which they are completing
the requirements. The catalog section on Instructional Programs
gives further details. Applications can be completed online or in
the Evaluations Office, Morris 205.

**Academic Programs**

The College offers courses designed to meet many diverse
interests, educational needs, and vocational needs of its students.
College programs are designed to meet particular needs and may
consist of one course or a series of courses leading to a certificate,
an associate degree, or providing the first two years toward a
bachelor’s degree.

Courses in art, literature, humanities, foreign languages,
music, drama and speech provide cultural enrichment for MJC
students and the community. Music instruction, for example, is
offered for beginners as well as for those who already have a
high level of proficiency, and performances by such groups as
the Masterworks Chorus and Jazz Ensemble are examples of
the cultural events offered to the community. All students are
encouraged to participate in college community activities such
as student government, athletics, debates, art shows, music
programs, journalism, and tutoring.

Those who wish to broaden their horizons and to become more
aware of themselves and the world about them, will be drawn to
offerings in health education, consumer education, psychology,
child development, sociology, speech, conservation, valley plant
life, science, art appreciation, and physical activities.

Agricultural offerings include technician training courses as
well as courses designed for persons anticipating employment
or already employed in the field of agriculture. An advisory
committee also serves the community services program.

Business courses which meet occupational requirements of the
community are offered in office administration, clerical training,
accounting, computer science, computer graphics applications (desktop publishing and microcomputer graphics), and business operations. Certificate programs are available in several areas.

Public service instruction is provided in administration of justice, allied health, criminology, and fire science.

Vocational programs prepare students for entry employment in such fields as law enforcement, animal husbandry, crop production, agricultural mechanics, office administration, computer science, computer graphics applications (desktop publishing and microcomputer graphics), printing, automotive technology, electronics, nursing, machine shop, vocational accounting, human services, engineering technology, dental assisting, and broadcasting. Advisory committees serve the college in the development of vocational programs by helping to determine the need for and the content of occupationally-oriented courses. Industrial technology programs are available in apprenticeship and technical fields. Courses are geared to the needs of industry and are modified as community needs change.

Other courses are designed to assist the individual in skills development. These include, among others, reading improvement, effective study skills, listening improvement, career awareness, job employment skills, introduction to mathematics, and pre-algebra. English-as-a-Second-Language is offered for non-native speakers of English who desire to learn English or to improve their proficiency.

Each year several hundred students transfer to four-year colleges and universities to continue their education toward bachelors’ degrees. Modesto Junior College has earned a strong reputation statewide for its lower division preparation. Students who properly plan courses of study in their major and general education requirements are able to continue into their junior year in most majors with no loss of time or credit.

Community Education

The Modesto Junior College Community Education offers fully fee-funded, not-for-credit vocational classes and programs, and educational, recreational and cultural programs for all ages which lie beyond formalized classroom instruction to meet the needs and interests of the community through our regular Community Education classes, College for Kids and Teens, Older Adult Program, Modesto Institute for Continued Learning (MICL) and Educational Travel Program. See our website at www.gomjc.org/communityed.

Course Audit
(formerly Community Participant Process)

Persons who have met the limit of repetition of credit courses as stated in the catalog may audit the course with approval of the instructor. Auditors receive no credit for class work, no grade, and no record is kept of their performance in class. Enrollment is allowed after the first day of instruction. An Audit Enrollment Form can be obtained in the Admissions Office after verifying that the limit has been reached. This form must be signed by the instructor and the student and turned in to the Community Education Office along with a payment of $15.00, unless already enrolled in other credit classes that require the health fee.

Workforce Training Center

The Modesto Junior College Workforce Training Center assists the college in reaching its mission of enhancing economic development and life-long learning in our community through three programmatic areas:

Corporate Training & Corporate College - Customized training and performance consulting services provided at low cost for all sizes of businesses, government agencies and nonprofits. Customized curriculum, organizational development, supervisory training, business plan development, cost reduction strategies, and return on investment evaluations all offered at competitive pricing by a well respected local provider of training services. Manufacturing customized training includes state-of-the-art accelerated courses in PLC Troubleshooting, Adjustable Frequency Drives, Industrial Controls, Forklift Training, and MUCH MORE. Company focused degree and certificate programs are also offered on a fee-for-service basis at the company’s site. For information call (209) 575-6386.
SERVICE LEARNING THROUGH AMERICORPS
The Center promotes service-learning opportunities to 140 MJC students through the AmeriCorps National Service program. There are two AmeriCorps programs on campus. The Foster Youth Mentoring Program serves foster youth (ages 14-18) assisting them with independent living skills to help prepare them for emancipation. The Early Childhood Literacy Program serves pre-school children (ages 3-5) in literacy programs throughout the county.

INTERNATIONAL CONTRACT PROGRAMS
The Center coordinates grant funds which provide international education programs to visiting scholars and business persons. Currently, MJC subcontracts with the Agency for International Development via Georgetown University to provide degree programs to visiting students from Central America and the Caribbean.

For more information about any of our customized offerings please contact Paul Vantress, Director, at (209) 576-6944 on campus or at vantressp@yosemite.cc.ca.us via e-mail, or Judith Monast at monastj@yosemite.cc.ca.us.

WELFARE TO WORK
The Center is a key provider of services to welfare recipients on and off campus. Services include: customized training, GED preparation, work experience, job retention training, and specialized vocational training.
Applying for Admission to MJC

Who is Eligible for Admission?

Any person who meets at least one of the following requirements is eligible to attend Modesto Junior College:

- Has graduated from an accredited high school
- Has passed the California High School Proficiency or the G.E.D. test
- Is a non-high school graduate 18 years of age or older who is able to benefit from instruction
- Is a kindergarten - 12th grade student who has met all established special conditions set forth in the policies of Yosemite Community College District, has written permission from the high school principal (or elementary, junior high school superintendent) and parent or legal guardian.
- Is an international student who has completed admission procedures for international students.

How to Apply for Admission

New and former MJC students who have not attended MJC during the past year must submit an Application for Admission on the form provided by the MJC Admissions Office. Students can apply by completing an Admissions Application available in the Admissions Office or by completing an Admissions Application on the Web: gomjc.org. When the application has been completed, it should be submitted electronically, submitted in person, or mailed directly to the Admissions Office, Modesto Junior College, 435 College Avenue, Modesto, CA 95350-5800.

Kindergarten - high school students, international students, and students being readmitted following dismissal should follow admission requirements on p. 11-12.

In order to determine California residency during the application process, students are sometimes required to submit copies of INS documentation or documentation showing intent to make California their permanent residence. See “California Residency Requirement.”

Students should arrange to have one official transcript of all previous high school and college work mailed to the MJC Records Office. High school seniors may request their schools to send the transcripts at the close of their graduating semester.

The MJC Records Office will accept hand-carried transcripts that are in an unopened and sealed envelope. Transcripts received by MJC become the property of the college and will not be returned or copied for the student.

Students who are concurrently enrolled at Columbia College and who wish to enroll at MJC should consult the Columbia College Admissions Office. They will make arrangements with MJC for authorization. Columbia students may use Columbia College assessment scores to satisfy MJC assessment requirements.

California Residency Requirement

New and returning students are classified as either a California resident or a California non-resident for tuition purposes. Residency is determined when a student applies for admission to the college.

Residency is determined by the length of physical presence in the State of California (minimum of one year and one day prior to the first day of the semester or summer session) and the “intent” to make California one’s residence. Students who have resided in California fewer than two years must prove “intent.” To prove intent, students who have lived in California fewer than two years should submit two proofs of the following with their Admissions Application:

- Owning or renting residential property in California for personal use
- Registering to vote in California
- Paying California State income taxes
- Possessing a California driver’s license or identification card
- Registering a motor vehicle in California
- Having an active checking and/or savings account in a California bank
- Other proofs of intent may be considered by the college

Active duty military students and their dependents residing in California are considered California residents. Credentialed employees and their dependents, migrant agricultural workers and their dependents may also be considered California residents for educational purposes.

Non-citizen students, if their visa does not preclude them from establishing residency in the United States, may be classified as residents if they have resided in California more than one year and if INS documents were issued or approved more than one year prior to the beginning of the term.

Examples of INS documentation that may be requested include:

- Resident Alien Card
- Permanent Resident card
- I-94 Form
- Visa
- passport
- Temporary Resident Card

Students whose INS documents were issued less than one year and one day prior to the start of the semester will be considered non-residents for tuition purposes.

Non-resident students, who meet all of the following requirements, can be exempted from paying non-resident tuition. Students who are exempted from paying non-resident tuition (pursuant to section 68130.5 of the California Education Code) do not become residents for eligibility purposes for any state-funded program.
Students who meet all of the following criteria may be exempted from paying non-resident tuition:

1) The student must have attended a California high school for three or more years.
2) The student must have graduated from a California high school or attained the equivalent thereof.
3) In the case of a student without lawful immigration status, an affidavit must be filed with the college that indicates the student has applied for legalization or will do so as soon as the student is eligible to do so.

Students who are non-immigrant aliens (the most common being the F series student visas and B series visitor visas) are not eligible for this exemption.

Members of the armed forces who were stationed in California on active duty for more than one year prior to being discharged from the service may be classified as resident for up to one year if they live in California after being discharged.

Intent must also be provided if student has resided in California fewer than two years.

A “non-resident” is a person who has not resided in California for the full one-year period before the residence determination date (first day of classes for each semester). Nonresident students are required to pay $149 per unit tuition, in addition to their other fees. Non-resident tuition is refundable upon withdrawal from classes, in accordance with the tuition refund policy.

**How to Appeal Residency Status**

Prospective students wishing to appeal residency status requirements must first complete an Admissions Application, and a Residency Consideration Form. Once residency has been determined by the Admissions Office, the student may then appeal their status in the Admissions Office, 435 College Avenue, Modesto, CA 95350-5800. Appeals will be answered in writing and will be final. International students whose visas preclude establishment of residency will not be granted an appeal. For questions about residency, telephone the MJC Admissions Office at (209) 575-6653.

**Admission of Kindergarten through 8th Grade Students**

Advanced admission is granted for academically superior Kindergarten through 8th grade students. In order to be eligible to enroll in college-level courses (credit courses numbered 100 or higher and Math 90 Intermediate Algebra), K-8th grade students must have met all the established special conditions set forth in the Yosemite Community College District Board Policy.

The school district principal or designee must determine that the petitioner is capable of benefiting from advanced scholastic or vocational (college level) work.

K-8th grade students may be determined to be eligible for advanced admission in MJC college-level courses (MJC credit courses numbered 100 or higher, or Math 90 Intermediate Algebra) after they have submitted a Modesto Junior College Application for Admission, a completed Petition for Advanced Admission form, a letter of recommendation signed by their principal, and they have demonstrated an English 101 ability on the MJC Assessment Test, and if the school district of residence does not provide courses of advanced, scholastic or vocational study to benefit the petitioner. All students must satisfy class prerequisites, if necessary.

K-8th grade students who wish to enroll in 12 units or more must have formal approval from their school’s Board of Trustees and approval of the Modesto Junior College President prior to enrollment.

Home study K-8th grade students must include with their Admissions Application a certification letter (Private School Affidavit) from their County Schools’ Office or the State of California. Home study K-8th grade students must also demonstrate an English 101 ability level by completing the MJC Assessment.

K-8th grade students are subject to all college regulations regarding attendance, conduct, scholarship and fee payment. Courses attempted and units earned will be recorded on the student’s permanent record and will be used toward meeting graduation, transfer or certification requirements at Modesto Junior College.

**NOTE:** It is expected that all K-8th grade students enrolling in college courses have the maturity to function effectively on a college campus. No special arrangements for additional supervision of underage students are available. College courses are designed for adult students. In a very small number of disciplines, course content may be unusually frank in order to deal with scholarly discussion of behavioral, artistic, human or other issues. Unlike K-12 schools, colleges do not contact parents in advance to inform them of these issues. Parents are hereby notified that it is their responsibility to assure that their student is able to handle the college environment, as well as the content of the courses in which the student enrolls. Parents may wish to investigate the curriculum prior to enrolling their student if they have any questions or concerns.

**Admission of High School Students**

Advanced admission is granted for academically superior 9th through 12th grade students. In order to be eligible to enroll in college level courses (credit courses numbered 100 or higher and Math 90 Intermediate Algebra) 9th-12th grade students must have met all the established special conditions set forth in the Yosemite Community College District Board Policy.

The school district principal or designee must determine that the petitioner is capable of benefiting from advanced scholastic or vocational (college level) work.
High school students may be determined to be eligible for advanced admissions in MJC college-level courses (MJC credit courses numbered 100 or higher and Math 90: Intermediate Algebra) if they meet one of the following eligibility criteria and if the school district of residence does not provide courses of advanced scholastic or vocational study to benefit the petitioner:

1) the student has a 3.0 or higher cumulative high school grade point average; or

2) the high school principal or designee has identified a special ability that will assist the student in successfully completing the MJC course (ability must be indicated on the advanced admission form.)

High school students admitted in this category are subject to all of the college regulations including attendance, conduct, scholarship and fee payment. Courses attempted and units earned will be recorded on the student’s permanent record and will be used toward meeting graduation, transfer, or certification requirements at Modesto Junior College. High School students who wish to enroll in 12 units or more must have formal approval from their school’s Board of Trustees and approval of the Modesto Junior College President prior to enrollment.

In the event that a high school student wishes to receive high school credit for a course taken at MJC, a student can request that transcripts be sent to the high school. Students may request transcripts in the Records Office, Morris Memorial, Room 105, during final exam week or later. Each high school will make the determination of whether or not college credits can be used at the high school.

Home study students must include with their Admissions Application a certification letter (Private School Affidavit) from their County Schools’ Office or the State of California.

High School students must submit a Modesto Junior College Application for Admission and the completed Petition for Advanced Admission form. All students must satisfy class prerequisites, if necessary. High school students who plan to enroll only in Physical Education or Guidance classes are exempt from the scholastic requirement. Concurrently enrolled high school seniors are required to complete a new application upon graduation from high school. NCure to do so may delay registration.

NOTE: It is expected that all high school students enrolling in college courses have the maturity to function effectively on a college campus. No special arrangements for additional supervision of underage students are available. College courses are designed for adult students. In a very small number of disciplines, course content may be unusually frank in order to deal with scholarly discussion of behavioral, artistic, human or other issues. Unlike K-12 schools, colleges do not contact parents in advance to inform them of these issues. Parents are hereby notified that it is their responsibility to assure that their student is able to handle the college environment, as well as the content of the courses in which the student enrolls. Parents may wish to investigate the curriculum prior to enrolling their student if they have any questions or concerns.

Admission of International Students

Modesto Junior College welcomes qualified international (non-immigrant) students to its academic, vocational and technical programs. The administration believes that the presence of international students enriches the academic environment for all of its students while providing a quality education for students from all parts of the world. The following is required for admission of all international, non-immigrant, applicants:

- International Student Application
- Certification of Finances
- Proof of English competency comparable to a 450 (133 computer based) TOEFL
- High School Graduation (official transcripts from all secondary and post-secondary institutions must be provided with English translations)

International students are required to pay non-resident tuition. For more information and/or application forms contact: Coordinator of International Student Program, Modesto Junior College, 435 College Avenue, Modesto, CA 95350 or call (209)575-6012 or e-mail sturbainb@yosemite.cc.ca.us.

Admission into Special Academic Programs

Programs such as Nursing, Respiratory Care, Medical Assisting, Dental Assisting, the Law Enforcement Academy and Fire Academy require special program admission in addition to regular admission to the college. This can be accomplished by submitting a completed Admissions Application to the Admissions Office, and by contacting the Allied Health Division (209) 575-6362 for information about admission into Nursing, Respiratory Care, Dental Assisting, and Medical Assisting. For information about the Law Enforcement Academy, students should phone the Criminal Justice Training Center (209) 525-4701; for the Fire Science Academy, phone (209) 549-7028.

Readmission After Dismissal

A student who has been academically dismissed (see p. 26, Academic Probation and Dismissal) may petition for readmission by completing a Petition for Readmission any time after receiving notice of dismissal. Forms are available in the Counseling Center, Morris Memorial, Room 103. Petitions will be reviewed by the Dean, Student Services, and counselors. The student may be readmitted if there is strong evidence showing promise of success.
The Dean, Student Services, upon granting readmission to a dismissed student, may impose certain restrictions, such as unit load, periodic grade reviews, etc., which are felt to be in the best interests of the student. A readmitted student is subject to immediate dismissal should he/she fail, at any time, to meet the conditions stipulated by the Dean, Student Services. If the petition is denied, the student may apply for readmission after one year has passed since dismissal.

**Interdistrict Attendance**

The Yosemite Community College District maintains a free exchange of students with all community college districts in the State of California. No interdistrict permit is necessary to attend Modesto Junior College from any other community college district in California.

**Priority Registration Appointments**

Continuing students register on a priority basis in the following order: (1) eligible students with disabilities and eligible EOPS students, (2) students with 99 to 0 units in descending order, and (3) students with 100 units or more.

New and returning students receive a first-come, first-served registration appointment based on the date their complete admission application is received. Students who have Bachelor Degrees or higher register after all priority registration appointments have been honored. Registration appointment cards will no longer be mailed. They are available on the web or via touchtone as of the following dates (This procedure is currently under review by the college.)

<table>
<thead>
<tr>
<th>Season</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Session</td>
<td>March 1</td>
</tr>
<tr>
<td>Fall Semester</td>
<td>July 1</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>November</td>
</tr>
</tbody>
</table>

**Advanced Registration**

Modesto Junior College no longer accepts petitions for Advanced Registration. Students will register for all courses following the order described in the section on Priority Registration Appointments above. These registration procedures are in accord with Title 5 §8108 of the California Code of Regulations.

**Wait Lists**

When available class seats are filled, a class is closed to further enrollment. However, students may (at the time of registration) place their name on a WAIT LIST. Students may be added to only one wait list in a particular subject and only if they are not already enrolled in the same class (i.e. one English 101 class, one Math 90 class, etc.) Being on a wait list does not mean that the student is enrolled in the class. It means that the student is on a waiting list should additional seats become available once the class has begun. When classes begin, the wait list student should attend the first class session and talk with the instructor. When a seat becomes available in the class, the instructor will give the student an add card according to wait list order. Instructors will add only students who meet eligibility requirements for the class. To officially enroll in the class, the student must add the class using PiratesNet, T-REG or bring the add card to the Admissions Office on either campus.

Instructors will advise students regarding their chances of being added to the class and whether or not wait list students should return to subsequent class meetings.

Students who have placed themselves on an online class wait list should immediately submit an Electronic Add-Card for the online class. If the instructor allows the student to add the class, they will email the student providing instructions as to how to add the class online. To ensure a priority wait list number, students must complete the electronic add-card procedure.

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**Getting the Most Out of MJC**

**Setting Educational and Career Goals**

Some students have already decided on their educational or career goals before entering MJC. Others are exploring different educational or career paths, and may not enter MJC with an educational goal or major.

We encourage students to use our counseling, assessment, and career services to help set and reach educational and career goals. We also encourage students to build relationships with faculty who teach in their areas of interest. These instructors can provide students with the information, support and guidance to help them reach their goals. Counselors are not assigned to students. Students who need assistance from a counselor should contact the Counseling Center, Morris Memorial Building room 103, 575-6080.

**Assessment**

Math and English/Reading assessments are required of ALL STUDENTS who are completing courses for a degree, certificate, transfer program, job skill improvement, career development, or who are undecided; as well as students who have completed 15 units, regardless of their goal.

To be admitted to a test session, a current admissions application must be on file in the Admissions Office. Picture ID will be required for test admittance. Seating is on a first-come, first-served basis. Tests begin promptly, and students may not enter after a test has begun. Students with disabilities who need special testing accommodations should notify Testing Center staff of their needs at least 10 days before their scheduled test date.
Students who may be exempt from testing are welcome to take the assessment tests and to participate in the assessment process. There is no pass or fail, and these tests do not determine admission to the college. The results are used to assist students in selecting the appropriate level of course work. Placement in courses is not based solely on test scores. Counselors may use test scores, high school and/or previous college transcripts, and information gained during the counseling appointment to determine course recommendations. Students are encouraged to discuss results with a counselor prior to registration.

Students who are required to take assessment tests prior to registration who choose not to test, must complete a Matriculation Release Form, available in the Admissions Office or in the Welcome Center. Students who do not complete required assessment testing or who do not complete a Matriculation Release Form may forfeit their registration priority appointment.

Once a student receives a placement recommendation by the college’s assessment process AND the student enrolls in the recommended course, the student may not re-test into a higher level course.

NOTE: All Math and English Composition courses require assessment or prerequisite course completion.

EXEMPTIONS
Students may be exempt from testing if they:

• Have an Associate or higher degree; or
• Have taken Advanced Placement or other California community college assessment tests and have submitted test results and other information (college catalog description with course description) to MJC Testing Center at least 10 days prior to registration appointment; or
• Have taken other college math, chemistry, English composition or ESL classes and have submitted official transcripts to the Records Office, at least 10 days prior to registration appointment; or
• Are enrolling only in activity classes, apprenticeship classes, employer-required classes, personal growth/enrichment classes, classes to maintain a certificate or license, or high school diploma or other non-credit classes only, and have completed fewer than 15 units.

Also, students may not test if they have:

• Completed an English, reading or math class at MJC.
• Dropped an English, reading or math class after two weeks.

Advisors will use test scores and other information to insure that students take appropriate MJC courses. ALL students should have high school and/or previous college transcripts on file in the MJC Records Office, and ALL students should discuss course selections with a counselor or Advisor before registration. MJC’s assessment tests provide current skill level information that will be used in combination with transcripts and other assessment methods to plan a successful course of study.

MATHEMATICS ASSESSMENT
Students Can Choose From Four Exams:
Level 1 - Basic Math Competency
Level 2 - Elementary Algebra Competency
Level 3 - Intermediate Algebra Competency
Level 4 - Precalculus Competency

In order to assist in advising, retesting on lower exams may be required of students if scores on the higher exam are significantly low. To eliminate this need, students should be sure of their appropriate Math level when taking the tests.

ENGLISH AND READING ASSESSMENT
There are two sections that make up the English/Reading exam:
1) Reading Comprehension
2) Sentence Skills

Students who are taking the test for English advisory purposes must take all three sections. The Reading section alone will only be given to students who have previously taken the English assessment exam, or who have completed an English course, but still need to satisfy the reading requirement. Some program admission requirements, such as nursing, are partly satisfied by the reading assessment. Check with an advisor for other program needs.

ENGLISH-AS-A-SECOND-LANGUAGE (ESL) ASSESSMENT
Students who plan to enroll in "credit” ESL classes must take the MJC ESL assessment test prior to registration. The assessment consists of:
• a 45-minute multiple choice test;
• general information questionnaire; and
• ESL advising

This assessment process takes approximately three hours, and includes ESL advising. Students who would like additional information about Testing, should visit the Testing Center, MJC West Campus, Yosemite Hall at the intake desk, or phone (209) 575-7728. Students who will be enrolling in non-credit ESL courses (ESL 901, 902, 903, 904) are not required to take the ESL assessment test.
Orientation

All new and returning students who do not have an Associate Degree or higher and who have not previously attended an MJC College Orientation or completed an MJC Guidance class are required to attend orientation prior to their registration appointment. Orientation familiarizes each new MJC student with campus policies, procedures, and student rights and responsibilities. Students who are exempt from Orientation are welcome to attend an Orientation session.

Arrangements can be made for students with disabilities and limited English-speaking students who require accommodations. To make accommodations, students should contact the Welcome Center, East Campus Student Center, (209) 575-6789.

Advising

Advising is required for all new students who indicate on their admissions application that they:
1. Have an Associate Degree and are pursuing another Degree, a Certificate, or transfer;
2. Plan to earn an Associate Degree;
3. Plan to earn a Certificate;
4. Plan to transfer to a four-year university; or
5. Plan to learn job skills or prepare for career advancement.

Advising is available prior to each new student's registration appointment either as part of the student's orientation appointment or in the Student Center on a drop-in basis.

Students who are required to meet with a counselor or Advisor prior to registration who choose not to be advised must complete a Matriculation Release Form, available in the Admissions Office or in the Student Information Center. Students who do not complete advising or who do not have an approved Release Form may forfeit their registration appointment.

Students who are exempt from advising are welcome to attend an advising session. All MJC students are welcome to make an appointment with a counselor in Morris Memorial Building room 103, (209) 575-6080.

Educational Plans

All students who have earned 15 or more units should develop an educational plan with a counselor during the semester following enrollment in their 15th unit. An educational plan is a guide that lists the courses and student support services that are either required or recommended for the successful completion of a student's goal.

All students who indicate on their admissions application that they are undecided will be provided with assistance in choosing a realistic goal. Undecided students are encouraged to choose a goal upon earning 15 units.

To develop an educational plan, MJC students should make an appointment with a counselor in Morris Memorial Building room 103, (209) 575-6080.

Fees, Costs, and Refund Information

Expenses

Enrollment Fee: California residents must pay an enrollment fee of $18 per unit per semester (subject to change by the California State Legislature). Enrollment fees may be waived for students who qualify for the Board of Governors Grant Fee Waiver Program and for those who enroll in Apprenticeship courses. Dependents of service-connected disabled or service-connected deceased veterans may be eligible for a waiver of fees. Please contact the campus Veteran's Office in Morris Memorial Building room 104 for assistance. For fee waiver information students should contact the Financial Aid Office (see p. 38).

Non-Resident Tuition: A U.S. citizen who is not a legal resident of California and all others who are classified as non-residents are required to pay a non-resident tuition fee of $149 per unit per semester. The international student tuition fee is $149 per unit per semester. The tuition fee is in addition to the Enrollment Fee.

Health Fee: A $12 Health Fee must be paid each semester ($9 Summer) by students who enroll in a credit course that is longer than 16 hours, held on campus or off-campus within the district, or those enrolled in non-credit courses held on campus, or those enrolled in on campus contract education courses. The Health Fee may be waived for students who qualify for the Board of Governors Grant Fee Waiver Program, for students who are indented apprentices enrolled in Apprenticeship classes only, or for those who depend exclusively on prayer for healing, with approval of the Vice President for Student Services.

Student Center Fee: A Student Center Fee of $1.00 per unit to a maximum of $10.00 per academic year is assessed to be used to construct a new student center building on West Campus. Students voted spring 2000 to assess the fee.

Student Representation Fee: A $1 fee established by two-thirds vote of the student body. Money collected will be used by ASMJC to represent student concerns at local, state, and federal government levels. Students may refuse to pay the fee for religious, political, financial, or moral reasons. A refusal to pay the fee must be submitted in writing to the Business Services Office.

Student Activity Fee: A $5 optional fee that transforms the Student I.D. card into a valuable discount card for services on campus and off-campus merchants.

Parking Fee: Student parking permits are available for $20 a semester or $1 per day. (Summer term is $7.50). Motorcycle fee is $7.50 per semester. The parking fee is not required for disabled students with disabled DMV placard. Parking permits must be picked up in person. Picture ID required.

Debts To The College: Any individual who has incurred, but not paid, a debt to the college may be denied grades, transcripts, degrees, some services, and registration privileges.

Materials Fees: Serves as payment for required instructional and other materials which are of continuing value to the student.
outside of the classroom setting and which the student must procure or possess as a condition of registration, enrollment, or entry into a class; or any material which is necessary to achieve the required objectives of a course.

Other Expenses: Textbooks, stationery and supplies will amount to approximately $200 to $300 per semester.

Transcript Verification - The first two transcripts are provided free. A fee of $5 per transcript is charged after the first two, payable at the time of the request. A $10 fee is charged for 24-hour Transcript service.

Enrollment Verification - The first two verifications are provided free. A fee of $3 per verification is charged after the first two, payable at the time of the request. No charge is made for loan deferment or financial aid GPA verifications.

Course Audit Fee: Individuals enrolling in courses as community participants must pay an enrollment fee of $15 per unit. See p. 8 for Course Audit procedure.

Other Authorized Fees: Fines for overdue library books or other equipment, and parking fines are among special charges authorized by the Board of Trustees.

Field Trip Fees

Appropriate fees will be charged for those field trips scheduled to destinations outside California and for some long distance field trips outside the Yosemite Community College District.

Refund Policy

Class(es) must be dropped at the admissions office, online at www.gomjc.org, or by touchtone phone at (209)549-7000 on or before published deadline dates prior to requesting a refund.

The Parking Fee and Student Activities Fee are refundable only if class is dropped by the last business day before class begins, and if the parking permit and Student Activities card are returned prior to the first day of the term. Parking permits paid for and not picked up will only be refunded during the refund-filling period.

A. Drop Deadlines to be eligible for a refund - Class(es) must be dropped during the first two weeks of the term, except for short-term classes. Short-term classes must be dropped by the 10% point of the length of a class with the exception of those classes that have either five or fewer meeting days or meet 20 or fewer hours. In these cases, the last refund date is defined as the day before the first class meeting. If the last day in any of these periods falls on a weekend or holiday, the final drop date is the preceding college business day.

B. Refund Request Form - A Refund Request Form (available in the Business Services Office, online at www.gomjc.org, the Admissions Office, and the current schedule of classes.) MUST BE FILED in the MJC Business Services Office by the end of the fourth week of the term, except for short term classes. The refund request must be filed within two weeks of the drop date.

Community Services class participants file refund requests in the MJC Community Services Office, Morris Memorial Administration Building, Room 204. In accordance with the California Code of Regulations, Section 58508, refunds with an enrollment credit of at least $10.00 will be assessed a $10.00 administrative processing fee.

C. Classes Canceled by the College - Refunds are made for classes canceled by the college, but refunds ARE NOT AUTOMATIC. The student must submit a completed Refund Request Form to the Business Office.

Checks for approved refunds are mailed approximately six (6) weeks after the term begins or four (4) weeks from the filing date, whichever is later. If fees or tuition were paid by check, the refund is not made until the check has cleared the bank.

D. Outstanding Credit - Credit for which a refund has not been filed as specified in (B) above will not be refunded. Continuing students with an outstanding credit can carry this credit from the summer and/or fall semesters into the succeeding fall and/or spring semesters where such credit is then applied against fees and charges in those respective terms. ANY CREDITS REMAINING AT THE END OF THE SPRING SEMESTER, HOWEVER, ARE FORFEITED; they are not carried into the next academic year.

Community Education and Services Fee-Funded Classes: A full (100 percent) refund will be given for classes, trips, tours and other activities which are full at the time registration is received or those that the college finds necessary to cancel. Refund requests for classes/seminars must be received by the Community Services Office at least three (3) working days prior to the first meeting. For trips/tours, refund advance notice must be given within the following guidelines:

- One day excursion ........................................ 7 days
- Pre-purchased tickets included .......................... 30 days
- Overnight accommodations included ............. 45 days

No refunds are issued after a class, seminar, trip, or tour has started. All student-requested refunds are subject to a $15 drop fee.

NOTE: Fees are subject to change through State Legislation and Governing Board implementation as judged to be in the best interest of the California Community Colleges and the students at Modesto Junior College.

Debts Owed to the College

Debts occur when a student NCs to repay money borrowed from the college, violates a student financial aid contract, NCs to pay tuition and/or registration fees, library fines, bookstore merchandise, NCs to reimburse the college for an “insufficient funds” check or for a disapproved credit card transaction, NCs to return or account for athletic uniforms and equipment, or NCs to pay scheduled fees for other services provided by the college. Modesto Junior College reserves the right to withhold all further services until the debt is paid. Grades and transcripts may be withheld until all financial obligations are cleared.
NOTICE TO STUDENTS

STUDENT RESPONSIBILITIES

Admission/Matriculation

Modesto Junior College strives to make students aware of the varied educational programs that are offered and to provide smooth access to these programs. Once enrolled, the college provides many services to ensure success. Each student is required to:

- Express at least a broad educational intent upon admission
- Declare a specific educational goal by the time 15 units are earned
- Participate in assessment, orientation, counseling and advising prior to registration
- Complete an educational plan with a counselor in the semester following the completion of 15 units
- Diligently attend class
- Complete assigned work
- Abide by the Student Code of Conduct
- Read and obey all published college rules and regulations
- Complete courses and maintain progress toward an educational goal according to standards established by the college

College Records

It is the responsibility of each student to:

- Inform the Admissions and Records Office of changes in personal data (name, address, major goal, educational status, etc.)
- Complete each class or withdraw officially
- Submit legal, not fraudulent documents

Open Courses/Prerequisites

Unless specifically exempted by statute, every course, 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, Division 2, part VI, Title 5 of the California Administrative Code, 51820-51823.

Prerequisite Challenge

Any student may challenge a prerequisite on the grounds that (1) it was not established in accordance with the District’s policy; (2) it is in violation of Title 5; (3) it is discriminatory; (4) student can succeed even though student has not completed the prerequisite; or (5) student will be subject to undue delay because the prerequisite has not been made reasonably available. To challenge a prerequisite, the student must complete a prerequisite challenge form (available in the Records Office, Morris Memorial, Room 107) and state the basis for the challenge. A committee from the Division in which the class is offered will review each petition and render a decision within five working days. It is the responsibility of the student to provide information that supports the challenge.

Challenging a Math or English Recommendation

If a student disagrees with his/her English or Math assessment recommendation, he/she may petition for a review of the recommendation. Students should complete a prerequisite challenge form (available in Morris Memorial, Room 107) and submit it at least five days prior to the student’s registration appointment. A committee will review each petition. The student will be informed of the committee’s decision within five days of the filing of the petition. It is the responsibility of the student to provide information that supports the challenge.
Academic Regulations

Student Classifications

Continuing: has enrolled in one or more classes within the past year. Continuing students are automatically assigned registration appointments each semester. For catalog rights, continuous enrollment is defined as earning college credit for enrollment in at least one term (Fall or Spring) of the school year.

Returning/Former: has not enrolled in a class within the past year.

New: has never enrolled in a class at MJC.

Full-time: registered in 12 or more units.

Part-time: registered in fewer than 12 units.

Freshman: has completed fewer than 30 units.

Sophomore: has completed 30 units or more.

Required Study Loads

To qualify for full governmental assistance, a student must carry a program load as indicated below:

1. Veterans under Chapter 31—as required by Veterans Administration counselor.
2. Veterans and veterans' dependents under Chapter 30, 32, 35, and 1606—12 units.

To qualify in other categories, a student must carry a minimum program load as shown below:

1. International students—12 units.
2. Student body officers—9 units with a 2.3 grade point average.
3. Varsity athletes—must be enrolled in at least 12 units at all times; of the 12 credit units, at least 9 shall be attempted in courses counting towards the Associate Degree, remediation, transfer, and/or certification. To be eligible for the second season of a sport, the student athlete must complete and pass 24 semester units between seasons of competition and; of the 24 semester units to be completed, eighteen (18) semester units shall be in course work counting toward the Associate Degree, remediation, transfer, and/or certification. The student must also maintain a 2.0 grade point average at all times.

Recommended Study Loads / Excessive Units

A typical student load is 12 to 16 units of work per semester. A heavier or lighter study load may be recommended by a student’s adviser or counselor. In no case will a student be enrolled for more than 18 (12 units for summer) units of work without approval of the Petitions Committee. Students with less than a C average may not carry more than 18 units of work without special permission.

Students on probation or dismissed status may be limited to the work load judged most suitable for them. Petition forms can be obtained in Morris Memorial Building Room 107 or 103.

Open Class Policy

Unless specifically exempted from statute, every course, section, or class, the average daily attendance of which is to be reported for state aid, is open to enrollment and participation by any person who has met the eligibility requirements for admission to the college and who meets such prerequisites as may be established.

Exception to this policy will be made where health, safety, legal requirements, or the facility is a limiting factor in the conduct of the course. Students denied enrollment by this policy may appeal to the Vice President for Student Services.

Attendance Policy

All students enrolled at Modesto Junior College are expected to be punctual and attend classes regularly. Instructors are encouraged to announce to their students their policies regarding excessive absences or tardiness at the beginning of the semester. When an instructor determines that a student’s absences are excessive, the instructor may drop the student from the class.

It is the student's responsibility to discuss anticipated and/or extensive absences with the instructor. No absence relieves the student of the responsibility of completing all work assigned.

Any student who NCs to attend class regularly or during the first session may be dropped; however, it is the responsibility of the student to complete the course or to officially withdraw from a class.

Tardiness may be treated as an absence.

Withdrawing From Class

Students are responsible for officially dropping classes. Even if an instructor promises to drop a student, the student is responsible for officially dropping the class.

Students who do not officially drop a class may receive an "F" in the class. Students may drop classes during published times (see current Class Schedule) using PiratesNet or Telephone Registration or by submitting a Drop Form to the Admissions Office.

- If a student drops a full-term course within the first four weeks of the semester, no notation will be recorded on the student's permanent record.
- If a student drops a class from the end of the fourth week through the 12th week (or 75% of the class, whichever is less) a grade of "W" will be recorded.
- A student cannot withdraw from class after the published drop deadline.
- For short-term class requirements, contact the Admissions Office.
A student is responsible to pay all fees according to written regulations. A student who enrolls in a course and NCs to pay fees is responsible for all outstanding debts to the college. Future services and registration will be denied until full payment has been made.

Once the deadline to withdraw from class(es) has CRed (75 percent of a class’ duration), neither a student nor an instructor may request a withdrawal. However, a student may petition to withdraw after the deadline based upon extenuating circumstances. Petitions are available in Morris Memorial Room 107.

**Military Withdrawal**

A student called for active duty may receive a military withdrawal at any time during the semester. Military withdrawals will not be factored into progress probation. To drop classes using a military withdrawal option, student must submit a copy of military activation papers along with a drop form for each class to the Admissions Office.

**Course Numbering and Transferability**

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 49</td>
<td>Non-degree courses. (Students who completed courses numbered 1 - 49 prior to Fall 1989 may use these courses towards a degree.)</td>
</tr>
<tr>
<td>50 - 99</td>
<td>Courses certified for Associate Degree credit.</td>
</tr>
<tr>
<td>100 - 199</td>
<td>Courses certified as appropriate for Baccalaureate or Associate Degree credit.*</td>
</tr>
<tr>
<td>200 - 299</td>
<td>Vocational courses certified as appropriate for Baccalaureate or Associate Degree credit.*</td>
</tr>
<tr>
<td>300 - 399</td>
<td>Associate Degree credit vocational courses.</td>
</tr>
<tr>
<td>500 - 599</td>
<td>Contract Instruction. (Non-degree applicable)</td>
</tr>
<tr>
<td>700 - 799</td>
<td>Fee-Funded courses. (Non-degree applicable)</td>
</tr>
<tr>
<td>800 - 899</td>
<td>Non-credit courses. (Non-degree applicable)</td>
</tr>
<tr>
<td>900 - 999</td>
<td>Basic education. (Non-degree applicable)</td>
</tr>
</tbody>
</table>

*All certified courses (courses numbered 100-299) are accepted by the California State University System. A list of courses transferable to the University of California is available in the Counseling or Career Transfer Center.

**Remedial Course Limit**

Students may not receive credit for more than 30 units of remedial coursework (courses numbered 1-49). However, this limit shall not apply to the following students:

1. Students enrolled in one or more courses of English-as-a-Second-Language.
2. Students identified by a college in the district as having a learning disability.

Students may be granted a waiver to the limitation upon petition to a college in the district. Waivers will be granted only when the student shows significant and measurable progress toward the development of skills necessary for college-level courses. Such waivers will be given only for a specified period of time or for a specified number of units.

**Semester Offerings**

The courses listed in this catalog constitute the curriculum of the college. The college reserves the right to add, delete, or change any existing course throughout the year. The listing of a course in the catalog does not constitute a commitment to offer that course during the year.

The notation of either fall or spring denotes that the course is generally offered only during that semester: however, circumstances may require changes during the year.

**Catalog Rights**

Continuous enrollment is defined as earning college credit for enrollment in at least one term (Fall or Spring) of the school year.

A student remaining in continuous enrollment will retain catalog rights for graduation under the year of initial enrollment. Any academic record symbol entered on a transcript (A through F, CR, NC, I, W) shall constitute a record of continuous enrollment.

**Articulation Agreements (2+2)**

Modesto Junior College has entered into articulation agreements with a number of local high schools. Students earn college credit for specified high school courses once they have enrolled at MJC and have completed specified requirements of the agreement. 2+2 credit is entered on student’s records when he or she has completed one semester.

"Catalog Rights" play an important role in a student’s education.
A student completing articulated courses should have received a certificate acknowledging the completion and giving instructions on how to secure credit. Questions concerning articulation agreements should be directed to the Articulation Officer, Morris Memorial Building, Room 205D, at (209) 575-6713.

Acceptance of Credit

Lower division credit will be accepted from institutions listed as accredited by accrediting bodies that MJC recognizes only or as candidates for accreditation in the publication “Accredited Institutions of Higher Education” provided the institution giving the courses accepts them towards its own degree.

Veterans who have served over one year will receive three units of Health Education credit and two units of Physical Education credit upon presentation of their separation papers. Credit for military schools will be granted if recommended in “Guide to the Evaluation of Educational Experiences in the Armed Services.” Credit for USAFI courses will be granted if appropriate (18 units maximum).

Modesto Junior College does not evaluate international transcripts. Lower division courses will be accepted if recommended by the Credentials Evaluation Service, Inc., P.O. Box 66940, Los Angeles, CA 90066, or the Foreign Educational Document Services, P.O. Box 4091, Stockton, CA 95201. The request forms for these companies can be picked up in Morris Memorial Building, Room 104. The cost of this evaluation is the responsibility of the student.

In accordance with District policy, official college transcripts received by MJC will be evaluated for college credit. Transcripts received become the property of MJC.

Credit by Examination

A student may petition for “credit by examination” in appropriate courses as determined by the Academic Division or area, provided the student has evidence of training and/or experience in that subject area.

To challenge a course for credit, a student must be in good standing as evidenced by:

1. registration in other Modesto Junior College credit course(s) at the time the course is challenged.
2. a cumulative grade point average of 2.0 (C) or better for any previous college units earned.

CAUTION: Please note that four-year college/university policies on awarding credit for courses taken on a credit by examination basis vary from campus to campus.

Credit by examination will not be granted for a course:

1. if the units granted would cause the student to have completed more than 30 units of credit by examination
2. in which a student is currently enrolled
3. in which a student has received a grade notation or “W”

To begin the credit by examination process, a student must:

1. Confer with the Academic Dean of the course subject area.
2. The Academic Dean sends the form to the Records Office, Morris Memorial Building, Room 107. A student who wishes to file for the credit-no credit option must submit this request at the time the credit for examination petition is filed. After the Records Office acts on the Petition for Credit by Examination to complete. The form is given back to the Dean for action.
3. Student pays an enrollment fee of $18 per unit* to the MJC Business Office and brings receipt to the Records Office.
4. Student and Academic Dean, or instructor designated by the Dean, arrange a time and location for the examination.

Units earned by examination do not count towards the residence requirement for graduation nor do they count toward full-time status. Petitions must be filed no later than seven weeks before the end of the semester. An enrollment fee of $18 per unit* will be charged for each course challenged. (A waiver of fee may be granted based on Financial Aid Office criteria.)

*Fee subject to change pending action by the CA State Legislature
Advanced Placement Credit

Modesto Junior College awards credit for successful completion of Advanced Placement Examinations (AP). Students may earn up to six semester units of baccalaureate credit for each AP examination of the College Entrance Examination Board on which he/she receives a score of 3, 4, or 5.

CAUTION: Four-year college/university policies on awarding credit towards a major vary from campus to campus. Students should check with the campus of their choice for its policies on awarding AP credit.

Advanced Placement credit will not be included in the 14 unit CR/NC graduation limitation established by MJC or the 30 unit credit by examination limitation on challenge exams for MJC courses. Units earned by Advanced Placement do not count toward full-time status.

CLEP, International baccalaureate units, and DANTES are not accepted.

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<thead>
<tr>
<th>EXAMINATION</th>
<th>SCORES</th>
<th>CSU GE CREDIT</th>
<th>IGETC CREDIT</th>
<th>UNITS AWARDED</th>
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<td>Lang &amp; Comp</td>
<td>3, 4, 5</td>
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<td>C.2</td>
<td>3.B</td>
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</tr>
<tr>
<td>Spanish</td>
<td>3, 4, 5</td>
<td>C.2</td>
<td>3.B</td>
<td>6</td>
</tr>
<tr>
<td>Spanish Lit</td>
<td>3, 4, 5</td>
<td>C.2</td>
<td>3.B</td>
<td>6</td>
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<tr>
<td>Humanities</td>
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<tr>
<td>Art Studio</td>
<td>3, 4, 5</td>
<td>C.1</td>
<td>3.A</td>
<td>6</td>
</tr>
<tr>
<td>Art History</td>
<td>3, 4, 5</td>
<td>C.1</td>
<td>3.A</td>
<td>6</td>
</tr>
<tr>
<td>Music Theory</td>
<td>3, 4, 5</td>
<td>C.1</td>
<td>3.A</td>
<td>6</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Math/Calc AB</td>
<td>3, 4, 5</td>
<td>B.4</td>
<td>Area 2</td>
<td>3</td>
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<tr>
<td>Math/Calc BC</td>
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<td>B.4</td>
<td>Area 2</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3, 4, 5</td>
<td>B.4</td>
<td>Area 2</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td></td>
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<td></td>
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<tr>
<td>Biology</td>
<td>3, 4, 5</td>
<td>B.2</td>
<td>5.B</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry</td>
<td>3, 4, 5</td>
<td>B.1</td>
<td>5.A</td>
<td>6</td>
</tr>
<tr>
<td>Physics</td>
<td>3, 4, 5</td>
<td>B.1</td>
<td>5.A</td>
<td>6</td>
</tr>
<tr>
<td>Physics C</td>
<td>3, 4, 5</td>
<td>B.1</td>
<td>5.A</td>
<td>6</td>
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<tr>
<td>Environmental Science</td>
<td>3, 4, 5</td>
<td>B.2</td>
<td>5.A</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
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<td></td>
</tr>
<tr>
<td>* American Govt &amp; Politics</td>
<td>3, 4, 5</td>
<td>D.8</td>
<td>Area 4</td>
<td>6</td>
</tr>
<tr>
<td>American History</td>
<td>3, 4, 5</td>
<td>D.6</td>
<td>Area 4</td>
<td>6</td>
</tr>
<tr>
<td>European History</td>
<td>3, 4, 5</td>
<td>D.6</td>
<td>Area 4</td>
<td>6</td>
</tr>
<tr>
<td>Economics</td>
<td>3, 4, 5</td>
<td>D.2</td>
<td>Area 4</td>
<td>6</td>
</tr>
</tbody>
</table>

Students who want their AP results to be forwarded to Modesto Junior College must so indicate on their AP registration form. AP results will be forwarded to the MJC Records Office by the College Entrance Examination Board.

Unit of Credit

Credits awarded for a course depend on the number of lecture, lab, and lecture/lab hours in the course. Typically, 17.5 hours of lecture, 52.5 hours of lab, produce one unit of credit.

Grading System

Grades are assigned by instructors based on classwork and tests. Grades are assigned as follows:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DEFINITION</th>
<th>GRADE POINTS PER UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>CRing, less than satisfactory</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>NCing</td>
<td>0</td>
</tr>
<tr>
<td>CR</td>
<td>Credit, at least satisfactory: A,B,C</td>
<td>units not counted in GPA</td>
</tr>
<tr>
<td>NC</td>
<td>No Credit, less than satisfactory, or NCing D,F</td>
<td>units not counted in GPA</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>units not counted in GPA</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
<td>units not counted in GPA</td>
</tr>
<tr>
<td>RD</td>
<td>Report Delayed</td>
<td>units not counted in GPA</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawn</td>
<td>units not counted in GPA</td>
</tr>
</tbody>
</table>

In-Progress Status (IP)

When a class is scheduled to meet beyond the published "end" of the semester, the symbol (IP) will be recorded on the transcripts to indicate work is in progress. The final grade and unit credit will appear on the student’s permanent record for the term in which the class is scheduled to end.

Report Delayed

When there is a delay in reporting the grade of a student due to circumstances beyond the control of the student, the temporary symbol (RD) will be assigned by the Records Office staff and will be replaced by a permanent grade as soon as it is reported by the instructor.

Examinations

Examinations or evaluations will be conducted as indicated in the course outline. A final examination or evaluation will be held during the scheduled final examination period at the end of the semester unless otherwise authorized by the President or designee.
Incomplete Grades

An Incomplete (I) grade will be given only in cases in which course work could not be completed because of illness or for a cause judged unavoidable by the instructor. NCure to complete regular course work by the end of the semester will not be reason for giving an Incomplete (I) grade.

Instructors will submit to the Records Office a written record of the conditions for removal of the (I) and the grade to be assigned when the work is completed. A copy of this record and instructions will be mailed to the student.

When the student has completed the course work, the instructor will assign the appropriate grade in the official rollbook stored in the Records Office.

At the end of one year following the term in which the (I) was assigned, if the student has not completed the conditions for removal, the (I) will be changed to the "grade in lieu of removal" assigned by the instructor.

CR/NC (Credit/No-Credit)

A student may enroll in most courses with the option of one of two grading systems: (1) letter grade (GR) or (2) Credit/No Credit (CR/NC). The student must elect the CR/NC option no later than the first 30% of the class. The deadline to file CR/NC for a full-term or short-term class is 30% of the class. If 30% falls on a weekend or holiday, the deadline to file CR/NC forms in the Admissions Office is the preceding business day. (Forms are available in the Admissions Office on online at www.gomjc.org.) Unless otherwise stated by "GR'' or (CR/NC), all courses are available in the Admissions Office is the preceding business day. (Forms are available in the Admissions Office on online at www.gomjc.org.)

Because transfer institutions often do not accept CR/NC grades in a student’s major, the college recommends that courses in the major be taken for a letter grade.

Instructors are required to give all students who complete the course a letter grade (A-F) unless the course is offered only for CR/NC grading.

None of the units attempted under the CR/NC grading option are used in computing the student’s grade point average. However, units attempted for which "NC" is recorded are counted in determining progress probation and progress dismissal.

Fourteen units of CR/NC may be used toward graduation. An evaluation on a "CR/NC" basis may not later be changed to a letter grade, nor may the reverse occur. (Section 55752 Title V, Effective Spring 1985.)

CAUTION: Some schools may consider "NC" the same as "F".

Credit courses fulfill requirements leading to degrees, diplomas and certificates.

Non-credit courses are designed for members of the community who wish to develop or improve their skills and supplement their general knowledge. These courses do not fulfill requirements leading to degrees, diplomas or certificates.

Grade Point Average

To graduate and to transfer to other collegiate institutions, the student must have at least a C average (2.0), based on the total grade points earned divided by the total number of units attempted. Students need higher than a 2.0 to transfer to a University of California. Check with a Counselor.

A course or unit attempted is any course or unit which in any semester appears on the official records. Courses with an Incomplete (I) grade, a Withdrawal (W grade), Credit (CR grade) or No Credit (NC grade) do not count in the grade point average. All other courses attempted are included in the average.

Report Cards

Enrollment and grade verifications will be issued upon written request from the Admissions Office. Students should allow at least ten (10) working days for the processing of verifications. Verifications are not processed during registration periods. Verification requests submitted during registration periods will be available the third week of the term. After the close of the term, grades will be available online at www.gomjc.org.

Academic Renewal Regulation

Modesto Junior College regulations permit the removal of work completed at MJC which is substandard and not reflective of a student’s present scholastic ability and level of performance. The grades so removed will be disregarded in the computation of grade point averages.

1. Substandard work completed at MJC (grades of "D", "F", and/or "NC") may be removed from a maximum of two terms under the following conditions:
   a. A period of at least two years has elapsed since the work to be removed was completed.
   b. The work to be removed does not include courses previously used to establish eligibility for transfer, graduation, or certificates of achievement.
   c. Courses that have been repeated do not qualify for academic renewal.
   d. The student has completed at MJC or another accredited college, since the work to be removed was completed, at least 15 semester units with at least a 3.0 GPA, 30 semester units with at least a 2.5 GPA, or 45 semester units with at least a 2.0 GPA.
   e. The terms need not be consecutive.
   f. If satisfactory course work has been completed in a semester where unsatisfactory course work has also been completed, the student can elect to have only the unsatisfactory course work removed.

Continued ➤
2. Students wishing to use the academic renewal procedure should submit an application for academic renewal. Applications are available in Morris Building, Room 107.

3. When work is removed under (1) above, the permanent academic record shall be annotated in such a manner that all work remains legible, insuring a complete academic history.

**Improvement of Grades**

Beginning with the Summer 2004 term, courses in which substandard grades of “D”, “F”, “No Credit,” or “W” were earned may be repeated only once. Students will be blocked from registering a third time for the same course if two substandard grades (D,F, NC, or W) have been recorded in previous grading periods. A student will not be permitted to enroll again in the course except under unusual circumstances and upon approval by the Petitions Committee. Petitions are available in Morris Memorial 107.

When a course in which a D grade was received is repeated, the student will receive the new grade and grade points earned but will receive no additional units for the course.

When a course in which an F, W, or NC grade was received is repeated, the student will be given both the units and grade points earned.

Courses in which the student has earned a (C) or better (including CR) may not be repeated for improvement of grade.

**Challenge of Academic Record Symbols**

To conform to the provision of Section 55760(a) of the California Administrative Code, Title 5, the determination of the student's grade by the instructor shall be final in the absence of mistake, fraud, bad faith, or incompetency.

Modesto Junior College procedures for challenging a final grade are as follows: (1) The correction of grades given in error shall include expunging the incorrect grade from the record; (2) THERE SHALL BE A TWO YEAR TIME LIMIT FOR CHALLENGING ANY EVALUATIVE OR NON-EVALUATIVE SYMBOL. This limit will begin at the end of the session in which the symbol was assigned. Forms to challenge academic record symbols are available in the Records Office, Morris Memorial 107.

**Official Transcripts**

Official transcripts will be issued upon written request to the Records Office. Processing time is 3-5 working days. To comply with the student privacy laws, transcripts cannot be sent in response to telephone requests. Transcripts cannot be issued without written consent or release signed by the student with the exception of transcripts being sent directly to another educational institution. Official transcripts are provided for a fee of $5 per transcript payable in advance. The first two transcripts are free of charge. Official transcripts will be provided within 24 hours on an emergency basis for a fee of $10, and on-the-spot transcripts will be available for a fee of $20.

Official transcripts will not be issued for students who have a financial obligation to the college or any other type of hold on their records. Any financial obligation to the college should be resolved in the Business Office. For information on requesting MJC academic transcripts, students may go to the Morris Memorial Building, Room 105, or call (209) 575-6018.

**Enrollment and Grade Verification**

Enrollment and grade verifications will be issued upon written request to the Admissions Office. Students should allow at least ten (10) working days for the processing of verifications. Verifications are not processed during registration periods. Verification requests submitted during registration periods will be available the third week of the term.

To comply with student privacy laws, students must request verifications by completing and signing a Verification Request Form, available in the Admissions Office. Official verifications are provided for a fee of $3 per verification payable in advance. The first two verifications are free of charge. Verifications will be provided within 24 hours for a fee of $10, or on an emergency basis for a fee of $20.

Verifications will not be issued for students who have a financial obligation to the college or any other type of hold on their records. Any financial obligation to the college should be resolved in the Business Office. For information on requesting MJC verifications, students may go to the Admissions Office in the East Campus Student Center, or West Campus, Yosemite Hall Room 147, or phone (209) 575-6853.

**Petition Appeals**

Student appeals may be made by scheduling an appointment with the Petitions Committee (comprised of a representative of the Records Office, a representative of the Dean for Special Programs, a representative of the Vice President of Instruction, a representative of the Vice President of Student Services, and faculty representatives). Appointments can be scheduled in the Records Office, Morris Memorial 107.
Application for Associate Degree or Certificate of Achievement

A candidate for an Associate in Arts degree, Associate in Science degree or a certificate of completion must file an application for the degree or certificate at the Evaluations Office, Morris Memorial Room 205. An application for an evaluation for a degree or certificate of achievement will be accepted when a student is in his or her last semester of potential completion. No student is a candidate for graduation until the application is completed. Graduation ceremonies for degree candidates are held at the end of the spring semester each year. Diplomas will be dated at the end of the semester or summer session in which requirements are met. Diplomas and certificates are available to successful candidates approximately two months after fulfilling graduation requirements.

Multiple Degrees

A student may earn more than one AA and/or AS degree from Modesto Junior College. A course used for a prescribed graduation requirement or to meet general education requirements may count toward more than one degree. However, a student may earn a degree in General College or General Education, but not in both. In addition, a student may not earn an AA and an AS in the same program.

Difference Between AS and AA Degrees

The major difference between the Associate in Science degree and the Associate in Arts degree is in the purpose underlying the programs. The AA assumes the completion of a mid-goal in a preparation for the bachelor’s degree or a termination of an effort which is general education or liberal arts-oriented.

The requirements of the AS degree approximate a program based upon specific, designated courses which tend to be sequential and lead to the attainment of well-defined performance goals or skill proficiencies.

It is the responsibility of the student to consult with a counselor regarding the proper sequence in which courses should be taken to satisfy graduation requirements.

Requirements for AA and AS Degrees and Certificates

The Board of Trustees of the District shall award the Associate in Arts degree, the Associate in Science degree, and the certificate of completion to applicants upon the satisfactory completion of the requirements as listed in this catalog section.

It is the student’s responsibility to be aware of degree and certificate requirements and of the student’s standing in regard to those requirements. Students are urged to consult a counselor regarding any questions about degree or certificate requirements for the catalog year the student selects. All references to credit units which appear in this section are to semester units.
Student Records & Privacy Act
For the purposes of this policy, Modesto Junior College (MJC) uses the following definitions of terms. Student - any person who attends or has attended Modesto Junior College (MJC). Education records - any record (in handwriting, print, tapes, film, or other medium) maintained by MJC or an agent of the college that is directly related to a student, except:

1. A personal record kept by a staff member, if it is kept in the personal possession of the individual who made the record, and information contained in the record has never been revealed or made available to any other person except the maker’s temporary substitute.

2. An employment record of an individual whose employment is not contingent on the fact that he or she is a student, provided the record is used only in relation to the individual’s employment.

3. Records maintained by MJC Security if the record is maintained solely for law enforcement purposes, is revealed only to law enforcement agencies of the same jurisdiction and does not have access to education records maintained by the College.

4. Records maintained by Health Services if the records are used only for treatment of a student and made available only to those people providing the treatment.

5. Alumni records containing information about a student after he or she is no longer in attendance at the college and the records do not relate to the person as a student.

Annual Notification
Students will be notified of their Family Educational Rights and Privacy Act (FERPA) rights annually by publication in the Pirate’s Log and the college catalog.

Procedure To Inspect Records
Students may inspect and review their education records upon request to the appropriate record custodian. Students should submit to the record custodian or an appropriate college staff person a written request identifying as precisely as possible the record or records he or she wishes to inspect.

The record custodian or an appropriate college staff person will make the needed arrangements for access as promptly as possible and notify the student of the time and place where the records may be inspected. Access must be given in 15 days or less from the receipt of the request.

When a record contains information about more than one student, the student may inspect and review only the records that relate to him or her.

Right to Refuse Access
MJC reserves the right to refuse student access to the following records:

1. The financial statement of the student's parents.
2. Letters and statements of recommendation for which the student has waived his or her right of access, or which were placed in file before Jan. 1, 1975.
3. Those records which are excluded from the FERPA definition of education records.

Refusal To Provide Copies
MJC reserves the right to deny transcripts or copies of records not required to be made available by FERPA if the student:

1. lives within commuting distance of the college.
2. has an unpaid financial obligation to the college.
3. has an unresolved disciplinary action against him or her.

Fees for Copies of Records
The fee for copies will be 10 cents per page. Subpoenas are $15.00. For transcript and verification fees, see p. 16.

Disclosure of Education Records
MJC will disclose information from a student’s education records only with the written consent of the student, except:

1. To college officials who have a legitimate educational interest in the records. A college official is:
   a) A person employed by the college in an administrative, supervisory, academic, research or support staff position.
   b) A person elected to the Board of Trustees.
   c) A person employed by or under contract to the college to perform a special task, such as the attorney or auditor.

2. Information is defined as directory information. A college official has a legitimate educational interest if:
   a) Performing a task that is specified in his or her position description or by a contract agreement.
   b) Performing a task related to a student’s education.
   c) Performing a task related to the discipline of a student, or
   d) Providing a service or benefit relating to the Student or student’s family, such as health care, counseling, job placement or financial aid.

2. To officials of another school or college, upon request, in which a student seeks or intends to enroll.
3. To certain officials of the U.S. Department of Education, the Comptroller General and state and local educational authorities, in connection with certain state or federally supported education programs.

Continued ➤
4. In connection with a student’s request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid.

5. To organizations conducting certain studies for or on behalf of the college.

6. To accrediting organizations to carry out their functions.

7. To parents of an eligible student who claim the student as a dependent for income tax purposes.

8. To comply with a judicial order or a lawfully issued subpoena.

9. To appropriate parties in a health or safety emergency.

**Record of Requests for Disclosure**

MJC will maintain a record of all requests for and/or disclosure of information from a student’s education records. The record will indicate the name of the party making the request, any additional party to whom it may be disclosed and the legitimate interest the party had in requesting or obtaining the information.

**Correction of Education Records**

Any student may file a written request with the President to correct or remove information recorded in his student records which he or she alleges to be (1) inaccurate; (2) an unsubstantiated personal conclusion or interference; (3) a conclusion or interference outside of the observer’s area of competence; or (4) not based on the personal observation of a named person with the time and place of the observation noted. This procedure does not include the correction of a grade.

**The Solomon Amendment**

Federal statute (public law 104-208 and public law 104-206, commonly known as the Solomon Amendment) require that community colleges provide student directory information to the Department of Defense, including military recruiters, upon request.

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**Academic Standards**

**Graduation with Honors**

Graduating students achieving a cumulative grade point average of 3.5 or higher in all degree-applicable coursework, including transfer work, will graduate with honors. This honor will be indicated on the transcript and the diploma.

**President’s List**

To be eligible for the President’s List (formerly Dean’s List), the student must complete a minimum of 12 degree applicable units at MJC and have a grade point average (GPA) of 3.5 or better with no grade lower than a C. See Honor Society, p. 40. The student receives a personal letter of commendation.

**Good Standing**

A student is in good standing academically when the grade point average is 2.0, a C average, or better, and the student has completed at least 50% of courses attempted.

**Academic Probation and Dismissal**

A student will be placed on academic probation for the following semester when the cumulative grade point average falls below 2.0 on a minimum of 12 units attempted. Computation of the GPA is based on all units attempted excluding those taken on a CR/NC basis.

A student is dismissed from attending MJC for one year if in any term of attendance while on academic probation after having attempted 12 units:

1. The term GPA is less than 1.5, or
2. The cumulative GPA is below 1.75.

(For information on Readmission after Dismissal, see p. 12).

**Progress Probation and Dismissal**

A student who has enrolled in a total of at least 12 semester units shall be placed on Progress Probation for the following semester when the percentage of all units in which the student has enrolled and for which “W”, “I”, and “NC” are recorded reaches or exceeds fifty percent (50%).

A student is dismissed for one year from attending any class offered by Modesto Junior College if in any term of attendance while on Progress Probation the percentage of units for which the student has been enrolled for which entries of “W”, “I” and “NC” are recorded reaches or exceeds fifty percent (50%). (For information on Readmission after Dismissal, see p. 12).
Regulations

A student enrolling at Modesto Junior College assumes an obligation to conduct oneself in a manner compatible with the published college regulations and with the college’s function as an educational institution. Students may take part in any orderly, authorized activity which takes place in the name of Modesto Junior College so long as the activity does not in any way interfere with the primary function of the college-education.

The following misconduct for which students are subject to college discipline at all times, on campus and applies to any off-campus functions sponsored or supervised by the college.

1. Dishonesty, such as cheating, plagiarism, or knowingly furnishing false information to the college.
2. Forgery, alteration, or misuse of college documents, records or identification.
3. Obstruction or disruption of teaching, research, administration, disciplinary proceedings, or other college activities, including its public service functions, or other authorized activities. Pagers, cellular telephones and other similar electronic devices must be turned off in classrooms and at campus sponsored events unless authorized by the appropriate faculty or staff member.
4. Physical or verbal abuse of any person or conduct which threatens or endangers the health or safety of any such person.
5. Theft of or willful damage to property of the college; its officers, employees, students, or visitors.
6. Unauthorized entry or use of college facilities.
7. Violation of District policies or College regulations including regulations concerning student organizations, the use of college facilities, or the time, place, and manner of public expression.
8. Intoxication from the use of alcohol or being under the influence of unlawful drugs, or unlawfully distributing, selling, or possessing same on college property or at events sponsored by the college.
9. NCure to comply with the directions of college officials acting in performance of their duties.
10. Gambling on college property.
11. Hazing or any act that injures, degrades, or disgraces or tends to injure, degrade, or disgrace any fellow student or person attending the college.
12. Violation of campus parking and traffic regulations.
13. Willfully defacing or damaging in any way real or personal property of the district.
14. Smoking in non-designated areas.
15. Disorderly or lewd, indecent, or obscene conduct on college-owned or controlled property or at college-sponsored or college-supervised functions.

Disciplinary Action

The following forms of disciplinary action may be taken against a student found to be in violation of any of the foregoing regulations.

1. **Reprimand**—A person receiving a reprimand either oral or written, is hereby notified that continued conduct of the type described may result in formal disciplinary action against the student.
2. **Disciplinary Probation**—Formal disciplinary action resulting in any one or all of the following:
   a. Ineligibility to hold college organization offices
   b. Removal from any college organization office held
   c. Revocation of the privilege of participating in college and/or student-sponsored activities
3. **Instructor Removal**—An instructor may remove a student from his or her class for the day of the removal and the next class meeting.
4. **Suspension**—Formal disciplinary action denying a student all campus privileges for a specified period of time. A suspended student cannot occupy any portion of the campus and is denied all college privileges including class attendance and privileges noted under "disciplinary probation" for a specified, limited period of time. There shall be two classes of suspensions. "Summary suspension," is to protect the school from the immediate possibility of disorder or threat to the safety of students. "Disciplinary suspension," serves as a penalty against a student as a result of the NCure of his/her conduct to meet standards expected at the college.
5. **Expulsion**—Formal action taken by the Board of Trustees terminating a procedure may be obtained from the Vice President of Student Services, Morris, 212.

All disciplined parties have the right to appeal. Copies of the appeal procedure may be obtained from the Vice President of Student Services, Room 212, Morris Administration Building.

Academic Freedom

Students have the right to listen, the right to decide, the right to choose, the right to reject and the right to express and defend individual beliefs. As members of the MJC community, students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth.

The educational purpose of the college is best served by this freedom of expression. Students are free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Student performance will be evaluated on a broad academic basis, not on opinions or conduct in matters unrelated to academic standards.
Academic Integrity

VIOLATIONS
All faculty, administrators and some staff share the original jurisdiction for conduct violations in the area of academic integrity. The Academic Senate at MJC has defined academic integrity and identified possible means for maintaining academic integrity at the College. The following are violations of academic integrity.

Cheating: Intentionally using or attempting to use unauthorized materials, information or study aids in any academic exercise; misrepresenting or non-reporting of pertinent information in all forms of work submitted for credit.

Facilitating Academic Dishonesty: Intentionally or knowingly helping, or attempting to help, another to violate a provision of the institutional code of academic integrity.

Plagiarism: The deliberate adoption or reproduction of ideas, words or statements of another person as one’s own, without acknowledgment. This includes all group work and written assignments.

MAINTAINING ACADEMIC INTEGRITY
1. Academic areas may develop for their faculty and students a statement of the application of the Academic Integrity Procedure in their courses; and
2. Each faculty member is encouraged to include in his/her introduction to a course:
   a. A statement of the application of the Academic Integrity Procedure within his/her course.
   b. A statement notifying students that violations of the Academic Integrity Procedure will be reported.

CONSEQUENCES
The grading of a student’s work rests on the fundamental idea that an instructor is evaluating a student’s own work, so cheating or plagiarism demonstrates a NCure to complete this most basic requirement of any course. thus a faculty member may administer academic consequences for violating the Academic Integrity Policy ranging from partial or no credit on an exam or assignment to an F in the course.

The instructor may also consider that a students violation of academic integrity should be a consideration for disciplinary measures, such as suspension or removal from the course or the college. Disciplinary action for violating academic integrity is administered through the Office of the Vice President of Student Services under Board Policy 5007 (Student Code of Conduct).

DUE PROCESS PROCEDURAL SAFEGUARDS:
1. Students shall be given notice of the violation and,
2. Students shall be given an opportunity to respond to the allegations.

Student "Right-to-Know"

Student "Right to Know" Rates

<table>
<thead>
<tr>
<th>Completion Rate</th>
<th>Transfer Rate</th>
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<td>34.6</td>
<td>18%</td>
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1999 COHORT Data

In compliance with the Student-Right-to-Know and Campus Security Act of 1990 (Public Law 101-542), it is the policy of the Yosemite Community College District and Modesto Junior College to make available its completion and transfer rates to all current and prospective students. Beginning in Fall 1999, 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 below. These rates do not represent the success rates of the entire student population at Modesto Junior College, nor do they account for student outcomes occurring after this three-year tracking period.

Based upon the cohort defined above, 34.6 percent attained a certificate or degree or became ‘transfer-prepared’ during a three-year period, from Fall 1997 to Spring 2002. Students who are ‘transfer-prepared’ have completed 56 transferable units with a GPA of 2.0 or better.

Based on the cohort defined above, 18 percent transferred to another postsecondary institution, (UC, CSU, or another California Community College) prior to attaining a degree, certificate, or becoming ‘transfer-prepared’ during a five-semester period, from Spring 2000 to Spring 2002.

Student Nondiscrimination Policy

It is the policy of Modesto Junior College to provide an environment free of unlawful discrimination. Discrimination on the basis of ethnic group identification, religion, age, sex, sexual orientation, color, or physical or mental disability in the College programs, activities, and work environment is unlawful and will not be tolerated by the College.

The College strongly forbids any form of discrimination and has enacted the following procedures to recognize and eliminate unlawful discrimination. These regulations provide for the investigation of alleged unlawful discrimination in its programs or activities. The College will seek to resolve the complaints in an expeditious manner.

For more information, see the Student Policy of Non-Discrimination on the inside front cover of this catalog.

Definitions

1. “Color or Ethnic Group Identification” means the possession of the racial, cultural, or linguistic characteristics common to a racial, cultural, or ethnic group or the country or ethnic group from which a person or his or her forbears originated.

(22 California Administrative Code Section 98210(b).)
2. The term “religion” includes all aspects of religious observance, practice and belief, including duties of the clergy or elders. A belief is religious if sincerely held and, in the scheme of the believer, holds a place analogous to that filled by the deity of those people whose religion may be more orthodox or more widely accepted. (22 California Administrative Code Section 98220.)

3. “Age” means how old a person is, or the number of elapsed years from the date of a person’s birth. (22 California Administrative Code Section 98230(b).)

4. “Sex” discrimination includes:
   a. any rule, policy, or practice concerning actual or potential parental, family, or marital status which differentiates on the basis of sex or sexual orientation;
   b. any rule, policy, or practice concerning disability due to pregnancy, childbirth, recovery from childbirth or termination of pregnancy, or other psychological conditions related to the capacity to bear children not applied under the same terms and conditions and in the same manner as any other rule, policy, or practice relating to any other temporary disability except as otherwise provided by the Fair Employment Practice Act;
   c. any rule, policy, or practice which treats men and women differently for purposes of any program or activity on the basis of aggregate statistical characteristics of men or women, whether founded in fact, belief or statistical probability;
   d. any rule, policy, practice, or incident which conditions the receipt of any benefit upon entering into, or maintaining, a sexual relationship or participation in sexual activity, or subjects a person to sexual harassment or intimidation such as unwelcome sexual advances, requests for sexual favors or other verbal or physical conduct of a sexual nature. (22 California Administrative Code Sections 98240, 98242, 98244.)

5. “Physical or Mental Disability” means any physical or mental impairment which substantially limits one or more major life activities.
   a. “Disabled person” means any person who has a physical or mental impairment which substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment.

**Sexual Harassment Policy**

Sexual harassment is a form of unlawful sexual discrimination and will not be tolerated by the College.

**SEXUAL HARASSMENT INCLUDES:**

1. submission to conduct which is explicitly or implicitly made a term or a condition of an individual’s employment, academic status, or progress;
2. submission to, or rejection of, conduct by an individual which is used as the basis of an employment or academic decision affecting the individual or has the purpose or effect of having a negative impact upon the individual’s work or academic performance, or of creating an intimidating, hostile, or offensive work or educational environment; and
3. submission to or rejection of, conduct by the individual which 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. (Education Code Section 212.5.)

The College strongly forbids any form of sexual harassment, including acts of nonemployees. Disciplinary action will be taken promptly against any student or employee, supervisory or otherwise, engaging in sexual harassment.

**Student Discrimination Complaint Procedure**

In the pursuit of academic studies and other college-sponsored activities that promote intellectual growth and personal development, the student should be free of unlawful discrimination by any member of the academic community. (Students disturbed by the acts of another student have recourse through the Student Code of Conduct.)

Modesto Junior College ensures that its programs and activities, including employment, are available to all qualified persons without regard to ethnic group identification, religion, age, sex, sexual orientation, color, or physical or mental disability.

Discrimination complaints may be initiated by a student against an instructor, an administrator, or a member of the classified staff. When a student feels he/she has suffered unlawful discrimination, he/she shall within one year of the occurrence of the incident(s) meet with the Vice President of Student Services.

Students are advised to obtain written instructions for the filing of a complaint from the office of the Vice President of Student Services.

The Americans with Disabilities Act (ADA) Coordinator can be contacted at (209) 575-6861 (voice) or (209) 575-6863 (TTY).
Campus Safety Program

Campus safety officers provide 24-hour protection throughout the college’s East and West campuses, including parking areas. Each student is asked to assist in the control of vandalism, burglary and other crimes by reporting suspicious conditions to the Campus Security Office, in South Hall 151, West Campus, (209) 575-6351.

Campus Safety Statistics

The Crime Awareness and Campus Security Act of 1990 requires institutions to report data for certain criminal acts that occur on campus. The Yosemite Community College District’s traffic and security office reported the following crimes on the Modesto Junior College campus for 2003.

- Aggravated Assault - 0
- Auto Burglaries - 16
- Bicycle Theft - 1
- Bomb Threat - 0
- Burglary - 19
- Drug Abuse Violation - 3
- Liquor Law Violations - 0
- Motor Vehicle Theft - 1
- Murder - 0
- Robbery - 1
- Sexual Assault - 0
- Weapons Possession - 4

Campus Security Act

Annual reports of criminal activity on campus and procedures for prevention of campus crime are listed below, and are available on request from the campus security and safety department.

Drug and Alcohol Abuse Policy

Through the Drug-Free Schools and Communities Act Amendments of 1990, learning institutions are required to implement drug prevention programs. This includes the annual notification of the following drug and alcohol use policy.

MJC is committed to the success of all students. Drug and alcohol use can be a major hindrance to achieving a successful school career. There are physical and psychological health risks associated with drug and alcohol use, including but not limited to, exhaustion, decreased immunity, depression, and decreased coordination. Generally, persons who use illegal drugs and/or abuse alcohol can expect a decline in their quality of life.

MJC Health Services and Wellness Programs offer education and information on drug use and also can refer students to community agencies for counseling or rehabilitation.

According to MJC’s Student Code of Conduct, students are subject to disciplinary action for the use or distribution of illicit drugs and alcohol on college property or during college-related activities. This can include expulsion from college and/or punishment under local, state and federal law.

Emergency Call Boxes

They are small orange boxes, with a blue light above each one, located in most of the college parking lots. The call boxes may be used to call (1) for a security escort, (2) for a battery jump or door unlock, (3) for any type of emergency service on campus, and (4) to report day pass machine malfunctions.

Escort Service

Campus security officers are available during day and evening hours to escort students to their cars. An escort may be requested by calling (209) 575-6351 or using one of the parking lot call boxes.

Emergencies

To report emergencies, call Campus Security, (209) 575-6911, or 911 (direct police/fire emergency line) or use a call box. To report on-campus accidents, contact the college nurse, (209) 575-6037.

Lost and Found

Lost and found property found on the East Campus should be turned in to the Business Office in the Student Center within 24 hours. Property found on the west campus should be sent to Campus Security in South Hall 151. Unclaimed property held in the Business Office will be sent to Campus Security after one week. Lost and found property can be claimed at the East Campus Business Office or at Campus Security on the West Campus.

Personal Safety & Prevention

In the interest of ensuring personal safety, students are encouraged to observe the following precautions:

- Avoid isolated places, day or night
- Always walk in pairs. There is safety in numbers.
- Be security-conscious. Watch out for others and their property.
- Be responsible. Report all crimes and unusual activity to Campus Security.
- Use well-lighted walkways.
- Park in well-lighted areas, away from shrubbery and trees.
- Always lock your car and take your keys.

Sexual Assault

Sexual activity without mutual and expressed consent is sexual assault. Acquaintance/date rape is a serious problem on college campuses. Awareness and clear, assertive communication are the best tools for prevention. For more information on this problem, contact the Health Services Office, Morris Memorial Building, Room 108.
Throughout the year there are a variety of workshops, speakers and seminars sponsored by the center. These events and activities are open to students and community members.

The Transfer Center assists MJC students in making a smooth transition to four-year colleges and universities. The Center supports students who plan to transfer with an array of resources and services. Special support is provided to students who have been historically underrepresented. Some of the Transfer activities sponsored by the Center are:

- **Assistance with admission procedures and referral to academic advisement.**
- **Resources such as college catalogs (1,200 catalogs available for check-out).**
- **Fee waivers, electronic applications and articulation agreements.**
- **Field trips to universities and four-year colleges and universities**
- **Personalized contacts with representatives from four-year colleges and universities**
- **Transfer Admission Agreements (TAA) to designated four-year universities**
- **Annual Transfer Day/College Night with over 60 college and universities represented**

The Career Development and Transfer Center is open Monday through Thursday 8:00am to 4:00pm during regular semester and Monday through Thursday from 7:30am to 5:00pm during the summer*. For additional information, please stop by the career Development and Transfer Center or call (209) 575-6239. The student Employment Job Hotline is (209) 575-6821.

*subject to change

The Child Development Center provides quality child care (for ages six weeks until they start Kindergarten). Priority is given to MJC students while they attend class, study and/or work. The Center is located on the West Campus with operating hours as follows: Monday through Thursday 7:30 AM - 5:30 PM and Friday 7:30 AM to 4:00 PM. Fees may be charged based on the student’s income and family size.

Trained teachers provide creative art activities, small group music, movement and stories, outdoor activities and help promote the child’s social, emotional and physical development.

Financial assistance for child care is available to qualified students. Additional information may be obtained by calling the Child Care Services Office at (209) 575-6398 located in South Hall 157.
Welcome Center

The Welcome Center is located in the Student Center on East Campus. The Center houses MJC Outreach and assists students and community members with college information throughout the year. The Center distributes brochures, pamphlets, and literature describing MJC services and programs. Campus and city maps and bus schedules are also available in the Welcome Center.

In addition to providing resource materials, the Welcome Center serves as the college’s link with faculty and instructional divisions during registration. The Center can answer registration questions. Staff are knowledgeable about all registration procedures and assist students with the registration process. The Welcome Center provides information and referrals to students regarding campus policies, campus activities, services, and events; assists new students with campus orientation and registration; makes referrals for students needing special assistance from MJC’s support services; and carries out the college’s outreach plan.

Students may walk-in without appointments to obtain campus-related information. The Welcome Center is open Monday - Friday from 8 a.m. until 5 p.m. during the Fall and Spring semesters, and Monday through Thursday, 7:30AM until 5:30 PM during the summer, and can be reached by calling (209) 575-6789.

Disability Services

The Disability Services Program is a system of support services and classes available to students with verified disabilities.

Disability Services and classes are designed to meet the individual needs of the students, allowing them an equal opportunity to benefit from their educational experiences. Supportive help may include program-planning assistance, priority registration, in-class aides, reader service, note-taking help, sign language interpreting, mobility assistance, and assistance with alternate media. Job development help is available for qualified students, as well as an adaptive computer technology program.

Further information is available in the Disability Services Center, Journalism Building, Room 160, or by calling (209) 575-6225; (voice) telecommunications device (T.T.Y.) is (209) 575-6863. The campus A.D.A. Coordinator can be reached at (209) 575-6861 (VOICE) or (209) 575-6863 (T.T.Y.).

Emergency Locating Service

The Emergency Locating Service offers students the ability to leave an MJC telephone number (209) 575-6700 with family members, child care provider, or employers in case of an emergency. If an emergency call for a parent occurs, the Locating Service tells MJC where the student “should” be, and a staff member is dispatched to contact the parent in his/her class. To be a part of the Emergency Locating Service, a student provides his/her current class schedule to the Service on a special form. (Class schedules must be updated each semester). Emergency Locating Service Forms are available in the Student Development and Campus Life Office, located in the Student Center. Without an Emergency Locating Service form on file, a message cannot be delivered to a student.

Extended Opportunity Program and Services (EOP&S)

The goals of EOP&S are to recruit low income students who are under-prepared for college and to assist them with enrollment, to support their academic achievement through instructional and student services, to help them transfer to four-year colleges or to make the transition into a career.

Services offered by EOP&S include: outreach; registration assistance; academic and personal career counseling and academic advising in one-on-one or group settings; tutoring; grants; child care allowances; book vouchers; and emergency loans. New and continuing students must apply for EOP&S every year. New applicants must take an assessment tests through MJC Testing Center. For more information, visit the EOP&S Office in Morris Memorial Bldg. Rm. 112, or call (209) 575-6251 (voice) or (209) 575-6633 (T.T.Y.).

Parking

The District and College provide parking facilities for vehicles for the sole purpose of conducting college business. All persons parking on campus must pay fees as prescribed by the Board of Trustees.**

Students: All full or part-time students who have paid the required fee are eligible for first-come, first-served parking in designated student parking areas.

Staff: All full-time and part-time staff who have paid the required fee are eligible for parking in specific assigned areas marked in blue on a first-come, first-served basis. The term STAFF does not include tutors, student employees, or student assistants, but applies only to contract employees of the Yosemite Community College District.

Citations: All vehicles, operated or parked in violation of these regulations will be cited with a Municipal Court citation under authority of 21113a of the California Vehicle Code. All citations are payable by mailing them to:

YCCD Parking Management Bureau
801 West Monte Vista Avenue
Turlock, CA 95382-0299

Parking Enforcement Hours/Days: Enforcement of parking and traffic regulations is continuous (24 hours a day, seven days a week). Parking fee and staff reserve regulations are not in effect from 5 p.m. on Friday to 7 a.m. on Monday and on college holidays and exempt days.

The visitor parking areas on North and South Drive adjacent to the Morris Memorial Administration Building are restricted to 30-minute parking for guests of the college, as are all visitor parking zones on east and west campus. Parking permits are NOT valid in visitor parking areas.

**The District and College provide parking facilities for vehicles for the sole purpose of conducting college business. The District/
College does not take custody of vehicles and only rents space. No responsibility is assumed for fire, theft, damage, or loss to vehicles, their occupants, or contents while on District/College property.

TRIO/Educational Talent Search

TRIO/Educational Talent Search is designed to help young people stay in school, improve their GPA, graduate from high school, and go to college. It is funded by the U.S. Department of Education and is designed to help low-income, first-generation college-bound students enter post-secondary education. The Modesto Junior College TRIO/Education Talent Search Program serves over 600 students from Hanshaw Middle School, Mark Twain Junior High School, Elliott Education Center, Modesto High School and Downey High School. A variety of academic and cultural activities are available to TRIO/Education Talent Search students.

For more information, visit The Educational Talent Search Office in the Morris Memorial Building, Room 209 or call (209) 575-6715.

TRIO/Upward Bound

The purpose of the TRIO/Upward Bound Program is to identify disadvantaged young people with potential for post-secondary education, and to offer them a comprehensive program of intervention activities designed to generate the skills and motivation necessary for success in college. The program serves 50 students from three local high schools (Davis, Johansen and Ceres). Workshops, presentations, tutoring, field trips, Saturday school and a summer academic school are offered. For more information, contact TRIO/Upward Bound at (209) 575-6715.

TRIO/Student Support Services Program

The Student Support Services Program is designed for first-generation college students to promote student success, retention, graduation and transfer to a four-year college or university. TRIO/Student Support Services Program provides innovative academic and supportive services specifically designed to meet the needs of transfer students. Program services include: academic and personal counseling; tutoring services; cultural activities, college and university campus tours; information about financial aid and scholarships; career advising; and workshops to develop and enhance academic and personal skills.

For additional information, visit our office located in Library Basement, Room 40 or call (209) 575-6189.

Health Services - "We Care for You"

The College Health Services Program was established to contribute to the success of the students by promoting physical and emotional well-being, with strong emphasis on preventative health care.

Registered nurses are available on both campuses to provide first aid, confidential counseling on communicable diseases, nutrition, exercise and weight management, family planning, and all aspects of personal health. Letters of referral are given upon the request of a student to a local community provider by appointment only. General health services, which are provided, include vision and hearing screening, blood pressure monitoring, tuberculosis screening, pregnancy tests, and immunizations. Non-prescription medications are available for minor aches, pains, colds, sore throats, allergies, and upset stomachs, as are pamphlets and brochures, and health-related video presentations. In case a student is ill or would like to catch up on some needed rest, the cot room is available at various times during the semester.

Students with chronic health problems of a serious nature (diabetes, seizure disorders, cardiac problems) are advised to inform the Health Services office so that the best possible help can be rendered in case of an emergency.

In case of injury on campus when the college is in session, or in any college-related activity, students should contact Health Services to determine eligibility for insurance coverage.

In case of illness, the College provides care in the form of first aid and/or referral service. Physician services are available on a limited basis to students upon referral of one of the college nurses.

- Stanislaus County Public Health and Family PACT Group provides family planning, and some STD screening once a week.
- Mental Health: Referral for group counseling is available for students expressing the need for minor mental health concerns.
- STARPoint, an eating disorder program, offers individual appointments to MJC students who have eating disorders. Elevator keys are provided by Health Services to students with short or long-term physical disabilities. Special parking permits are provided to students with short-term physical disabilities.

Informational health insurance brochures are available through Health Services Offices.

For the benefit of the student, Health Services works closely with agencies within our community, including but not limited to Center for Human Services, Stanislaus County Faculty Group, Public Health, Modesto City Schools, Project Clean Air, Health Services Agency of Stanislaus County and Women’s Haven Center.

Students may be seen by a nurse on a drop-in basis as well as by appointment at the following locations. Call for hours:

EAST CAMPUS: MM108, Phone (209) 575-6037
WEST CAMPUS: SH154C, Phone (209) 575-6360
CalWORKs

California Work Opportunity and Responsibility to Kids is a Social Service program that provides cash aid, educational opportunities and other services to needy California families.

Program participants are students who have been referred by the county welfare office or are self-initiated participants (SIP’s). The office is located on the West Campus, Yosemite Hall 147, (209) 575-7770, (209) 575-7768, or call (209) 575-6080 and ask to speak with one of the MJC CalWORKs counselors.

Scholarships

The Modesto Junior College Scholarship Program offers over 150 scholarships annually to eligible students in amounts ranging from $200 to $2,000. Incoming, continuing and students transferring to a four-year college are encouraged to apply for scholarships at MJC. The scholarships are sponsored by the MJC Foundation, private donors, community agencies and businesses whose aim is to help students achieve their educational goals.

To receive scholarship consideration, students must have a minimum grade point average of 3.0 and plan to attend Modesto Junior College full-time for the fall semester. Students currently enrolled in the MJC Nursing Program are considered full-time students. Selections are based primarily on academic performance and may include other criteria such as major, residency, organizational affiliation and community service.

Scholarship applications are available in the Financial Aid/Scholarship Office, located in Yosemite Hall, Room 151, West Campus (209) 575-7715. The “priority” application period is October 1st through January 2nd. Applications can still be submitted after the priority deadline. However, the final deadline for the academic year is the last day of Spring semester for continuing and transferring students and the last school day in September for new students.

Student Development and Campus Life

The Student Development and Campus Life Office is located in the East Campus Student Center. It is home to the student government (Associated Students of Modesto Junior College) and all campus clubs. Student ID cards are taken free of charge, the Emergency Locating Service, Housing Referral, Student Bulletin, Student Activities Program, Student Leadership Trainings, Student Lobbying and campus posting approvals are located here. The Student Development Office coordinates many campus activities and special events.

The Housing Referral Program has been developed to help students and staff find out about affordable and available housing within the city. Housing Referral brochures are available with apartments listings. A Housing Bulletin Board is available for renters seeking student tenants to list rooms, houses or apartments for rent. Students in need of housing check the board regularly.

The Student Development and Campus Life Office produces the weekly Student Bulletin to inform students about important campus sponsored events, services, or important information. Stop by to pick up a bulletin or find out how to announce your activity in the bulletin.

The Student Activity Sticker Program is an optional program where students purchase a $5 activity sticker which is placed on the back of your ID card. The special sticker will afford you special discount prices at local businesses and campus events. Your Activity Sticker entitles you to free faxes, copies, scantrons, pencils, local phone calls and more in the Student Development Office. It pays for itself in just one use.

Graduation

The Student Development and Campus Life Office is responsible for coordinating the graduation commencement exercise. Instructions for graduating will be outlined in an early spring edition of the Graduation Newsletter. The Graduation Newsletter includes information about commencement exercise, student speakers, graduation luncheon, graduates with honors, graduation fees, caps, gowns and announcements. The Graduation Newsletter includes information about graduate photos, awards, and other accomplishments. Graduation tee-shirts may be purchased from the Student Development and Campus Life office.

Announcements and Advertisements

Only on-campus organizations and divisions and off-campus non-profit organization will be provided space for posting material in academic buildings. Commercial and personal ads may be posted on the East Campus on the Student Center hallway bulletin board and on the Student Center and Library kiosks.

All posted materials except commercial and personal ads must be stamped with approval from the Student Development and Campus Life Office, located in the East Campus Student Center or with a personalized stamp from a certificated manager. Certificated Management Staff shall be allowed to determine appropriate posting approval for materials being distributed by their respective department, divisions or unit.

Student ID Cards

Student ID cards are issued free to new students during registration. I.D. cards are used for transactions in the Admissions and Financial Aid departments, as well as in the Library and Computer Labs. Students should carry their ID cards to enhance campus safety and security. Students may purchase a $5.00 activity sticker to be placed on the ID card for special discounts with local services and activities. Students may go to the Student Development and Campus Life Office located in the Student Center, Monday-Thursday, 8AM to 7PM, and Fridays, 8:00 AM-5:00PM to have an ID card made. Call (209) 575-6700 for more information.
Testing Services

The Testing Center administers standardized tests in basic skills and typing. These tests provide students with results that help them understand their individual ability levels.

Testing is one of many measures used by college personnel to assist students in determining course placement in mathematics, English, reading, chemistry, and ESL courses. Assessment tests are scheduled throughout the year, and should be taken as soon as possible to insure that the results will be available for advising and registration appointments.

Assessment testing is a free service; however, other tests offered through the Testing Center will require a fee. To inquire about test dates and fees, please contact the Testing Center at (209) 575-7728 or at gomjc.org.

Veterans’ Services

Modesto Junior College is an approved college for the training of veterans and veteran’s dependents under the various public laws of the United States Department of Veterans Affairs and the California Department of Veterans Affairs. Students eligible for veteran’s benefits are urged to contact the MJC Veterans Affairs Office, well in advance of registration, so that necessary arrangements may be made to activate benefits.

Modesto Junior College recognizes credit and grants credit to veterans and reservists for service and training completed in the armed forces. Veterans and reservists will receive three units of Health Education credit and two units of Physical Education credit upon presentation of their separation papers. Credit for military schools will be granted if recommended in the “Guide to the Evaluation of Educational Experiences in the Armed Services.” Credit for these courses will be granted if appropriate (18 units maximum). Dependents of service-connected disabled or service-connected deceased veterans may be eligible for a waiver of fees. Please contact the campus Veteran’s Office for assistance.

For information or assistance regarding veterans benefits, contact the campus Veterans’ Services Office in the Morris Memorial Building, Room 104, or call (209) 575-6017. Office hours are M-Th 8:00am-4:30pm, Fri. 8:00am-12:00.

Learning Support Services

Tutoring Center

The Tutoring Center is a free service for MJC students who need extra help with academic work, no matter what the subject or class. Tutors are experienced learners, and will be happy to provide students with the kind of help and support they need. Tutors will assist students who are preparing for specific examinations, as well as those who wish to strengthen their overall study skills. Students who seek help at the Tutoring Center often improve their overall academic performance by learning to study more efficiently. The East Campus Tutoring Center is located in the Library Basement, room 10, and is open from 8 a.m. - 5 p.m., Monday-Friday (209) 575-6839. The West Campus Tutoring Center is located in Yosemite Hall room 118 and is open from 8 a.m. - 5 p.m. Monday through Thursday and 8 a.m. - 12 p.m. on Friday (209) 575-7731.

Book Loan Programs

A variety of book loan programs are available to assist eligible students with the purchase of textbooks each semester. Eligibility guidelines include minimum GPA and unit requirements, income level, and major. Students borrow books for the semester and are required to return them at the end of the semester for future student use. Funds are limited, so students should apply early. The book loans are funded through the Carl D. Perkins Vocational and Applied Technology Act and Temporary Assistance for Needy Families.

Learning Communities

Learning Communities are unique learning programs that allow you to take courses with a community of people who share your goals and interests. Learning Communities are clusters of courses that revolve around a theme or major, and you enroll in them as a package. Because other students are doing this as well, you will support each other in all of the courses. You’ll learn to make critical connections between subjects and courses, and gain critical thinking skills that will be of great value to you in this and future learning endeavors. Your instructors will work together to highlight connections between the different subjects you are studying. This unique approach to learning will not only provide you with valuable skills in the classroom, it will give you a chance to take charge of the way you learn. For more information on Learning Communities at MJC, call the MJC Instruction Office at (209) 575-6894.

Math Drop-in Center

At the Math Drop-In Center, math assistants are available to help understand your math homework, as well as aid you in understanding math concepts. This is the place where you can bring your short, quick questions, and get prompt responses. The goal of the Drop-In Center is to help you get your homework finished as quickly and accurately as possible.
Center for Learning Assistance

At the CLA, you can use self-paced tutorials to help you improve your reading, writing, and grammar skills. Take a one-unit course and work at your own pace. Computerized exercises will give you the opportunity to review and reinforce what you learn in class. You can also meet with basic skills tutors and CLA instructors for additional practice and explanations. If you are interested in CLA offerings, register for ENGL 44, ENGL 46, or READ 45.

Writing Center

At the Writing Center, you can get the support you need to improve your writing skills. Tutors will work with you on any writing-related tasks to help you understand your assignment, gather ideas, focus on the topic, and organize the paper. Tutors work with you in 30-minute sessions. Please be prepared to make an appointment for assistance.

Financial Aid

Modesto Junior College administers a comprehensive 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 the individual’s need and resources. Funds are awarded on a first-come, first-served basis.

Financial aid awards are based on calculated financial need as determined by the Free Application for Federal Student Aid (FAFSA). Students are encouraged to apply online at www.fafsa.ed.gov. Paper applications are available in the Financial Aid Office in Yosemite Hall 147.

Standards for Satisfactory Academic Progress

Financial aid recipients must adhere to satisfactory academic progress standards—maintain a minimum 2.0 cumulative GPA and complete at least 67% of all attempted courses.

Students’ satisfactory academic progress will be reviewed when they apply for financial aid and again at the end of each summer term, which is the end of the academic year for financial aid purposes.

Withdrawals, Incompletes, and/or Units Not Counted:

Grades of F, NC, IP, I and RD are not counted as satisfactory academic progress and will not be counted toward total units completed. Bridged classes or open-entry/open-exit classes (IP) will be counted as eligible units for financial aid only during the first semester the class is attempted.

Probation/Disqualification Status

Students who have not met all satisfactory academic progress will be placed on Financial Aid Probation and must meet with a counselor to complete or update an Educational Plan, sign a Probation Notice, and return a copy to the Financial Aid Office.

NCure to do so could result in loss of financial aid.

Students who have not met all satisfactory academic progress standards at the end of the probationary period will be placed on Financial Aid Disqualification. This status will remain in effect until all requirements for satisfactory academic progress are achieved. Students must notify the Financial Aid Office to request reinstatement once these standards are met. Under no circumstances will students be paid retroactively for any ineligible semesters.

Petition for Reinstatement

Unusual or mitigating circumstances may warrant special consideration of a disqualified student’s individual situation. A Petition for Reinstatement, available in the Financial Aid Office, must be filed if such a review is desired. Allowable conditions for consideration may include:

- Student illness or death in immediate family;
- Family stress;
- Medical or emotional disability;
- Other, for which student can demonstrate good cause.

In order for a petition to be considered, students must submit a Petition for Reinstatement form, a current Educational Plan, and any supporting documentation to the Financial Aid Director. If approved, a letter will be sent to the student, which will clearly identify the conditions for reinstatement and continued financial aid eligibility.

Federal Programs

To be eligible for federal aid, students must meet certain requirements:

- U.S. citizen or eligible non-citizen
- be registered with the Selective Service, if applicable.
- be enrolled in an eligible program leading to a certificate, degree, or transfer program at MJC,
- have a high school diploma or equivalent, or pass an “Ability-to-Benefit” test prior to receipt of Federal funds,
- have “financial need” as determined through the application process
- not owe a refund on a Federal grant or be in default on a Federal education loan
- be making satisfactory academic progress

Funding Limitations

Funding from financial aid resources at Modesto Junior College is limited to 90 attempted units and/or completion of a college degree. Students exceeding these limits may file an appeal if extenuating circumstances have prevented them from completing their program within these limitations. Appeal forms are available in the Financial Aid Office. Students are required to complete the forms and meet with a counselor.
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (FSEOG)
These federal grants are designed to assist students with exceptional financial need by supplementing other financial aid sources.

FEDERAL WORK-STUDY PROGRAM (FWS)
Federal Work Study provides part-time employment for students who demonstrate financial need. The Financial Aid Office will assist in placing students in jobs on campus or at off-campus non-profit agencies, as available. Students must not work until an official agreement is on file with the Financial Aid Office and may not work more than 20 hours per week, except during weeks that school is not in session. Current pay is $7.25 per hour.

LOANS
Loans are part of a financial aid package that provides an opportunity to defer education costs by borrowing now and paying later. Interest is charged on the amount borrowed; rates vary each year. Repayment begins after the borrower ceases to be enrolled or is enrolled less than half time. Loans are awarded on a first-come, first-served basis to eligible students with the greatest need. Eligibility is determined from information provided on the FAFSA.

NOTE: MJC does not participate in any Direct Loan or Federal Family Loan Program.

THE FEDERAL PERKINS LOAN PROGRAM
This program provides low-interest, long-term loans. No interest is charged, nor is repayment required while the borrower is enrolled in school at least halftime. Repayment begins nine months after graduation or leaving school. Up to 10 years may be allowed to repay the loan. Five percent interest will be charged on the unpaid balance of the loan principal during the repayment period. Award amounts depend upon financial need and are limited to $1,500 at Modesto Junior College.

Students must complete an entrance interview before the first check is released and an exit interview before the end of the academic year.

NURSING STUDENT LOANS
Nursing Student Loans may be available to students in the Associate Degree Nursing Program who demonstrate financial need. Loans range from $300 to $2,000 per academic year.

BUREAU OF INDIAN AFFAIRS GRANTS (BIA)
Bureau of Indian Affairs Grants are provided to help eligible Native American students. Contact your Tribal Agency or the Financial Aid Office for more information.
STATE PROGRAMS

BOARD OF GOVERNOR’S FEE WAIVER PROGRAM (BOGW)
The BOGW waives the enrollment fee as well as exempts students from the health fee. The BOGW is effective for an entire academic year (Summer/Fall/Spring). There is no minimum unit requirement. Students taking non-credit courses will not be exempt from health fees even if they qualify for a fee waiver. Students may apply by filling out the fee waiver application; however, Modesto Junior College encourages students to use the FAFSA application as they may qualify for other additional aid.

CAL GRANTS
Cal Grants are state-funded grants, which are awarded to eligible students to help meet college expenses. Students must file a FAFSA application and submit a GPA Verification Form. The application-filing deadline is March 2nd preceding the award year. A second deadline of September 2nd is available for students on a competitive basis who are planning to attend a community college during the award year.

Cal Grant A assists with tuition and fees for California residents at qualifying institutions offering baccalaureate degree programs. Awards may be held in reserve while attending a community college. There are two types of Cal Grant A awards – Entitlement and Competitive. Every current or previous year high school senior who has at least a 3.0 GPA, meets the financial and academic requirements and applies on time (March 2nd deadline) will receive a Cal Grant A Entitlement award. Other eligible students who have at least a 3.0 GPA may apply for a Cal Grant A Competitive award. Selections are based on a composite score that considers family income, parents’ educational level, GPA, time out of high school, single-family household, and former foster youth.

Cal Grant B provides a living allowance and tuition and fee assistance for low-income students. Beginning with the sophomore year, this award also helps pay tuition and fees at a qualifying institution offering baccalaureate degree programs. There are two types of Cal Grant B awards – Entitlement and Competitive. Current or previous year high school seniors with at least a 2.0 GPA who meet the financial and eligibility requirements and apply on time (March 2nd deadline) will receive a Cal Grant B Entitlement award. Other eligible students with at least a 2.0 GPA may apply for a Cal Grant B Competitive award. Selection is based on a composite score based on family income, parents’ educational level, GPA, time out of high school, single-parent household and former foster youth.

Cal Grant C provides assistance with costs for occupational and vocational programs. Selections are based on financial need, vocational aptitude and enrollment in an eligible program at a California community or independent college or vocational school that is at least four months long. Additional information may be obtained in the MJC Financial Aid Office, Yosemite Hall, Room 147 or by calling (209) 575-7700.

CALIFORNIA CHAFEE GRANT
The Chafee Grant Program awards grants of up to $5,000 annually to foster youth and former foster youth to use for college courses or vocational school training. To be eligible the applicant must have been in foster care on their 16th birthday and be no more than 22 years old. The applicant must also file a FAFSA, available at www.fafsa.ed.gov as well as the California Chafee Grant Program Application, available at www.csac.ca.gov.

Scholarships
The Modesto Junior College Scholarship Program offers over 150 scholarships annually to eligible students in amounts ranging from $200 to $2,000. Incoming, continuing and students transferring to four-year colleges are encouraged to apply for scholarships at MJC. Funded by the MJC Foundation, private donors, community agencies and businesses, the scholarships are intended to help students achieve their educational goals.

Applicants must have a minimum grade point average of 3.0 and plan to attend full time. The application filing period for graduating high school seniors is October-April and October-December for all other students. Check with the Scholarship Office located in Yosemite Hall 151 for specific dates and deadlines.
The East Campus Student Center is the focal point of campus life. The Student Information Center, Admissions Office, Business Office, Bookstore, Cafeteria, Student Lounge and Student Development and Campus Life Office are located there. Video games, ATM machine, vending machines, a coin changer, and lockers are also available. Whether you are sharing a meal, attending a noon-time concert or lecture, volunteering for ASMJC, or just socializing with friends, the Student Center provides numerous opportunities for personal development of students.

The Student Development and Campus Life program offers opportunities for students to develop leadership skills, prepare for civic responsibility, explore diverse cultures and build a strong sense of college community. The program reflects the needs and interests of students. The program is divided into the following areas:

**STUDENT GOVERNMENT/ASMJC**

Associated Students of Modesto Junior College (ASMJC) is the official representative body of Modesto Junior College students. Student Government officers and senators must have a 2.3 GPA and have completed at least nine units to meet eligibility requirements. ASMJC is completely student-funded, student-elected, and student-regulated, functioning within the framework of policies adopted by the Yosemite Community College District Board of Trustees. ASMJC is the primary forum through which student concerns are channeled.

Since virtually all major decisions that are made on the Modesto Junior College campus affect students in some way, student input into the various decision-making bodies has become increasingly relevant, necessary and welcomed. ASMJC is the officially recognized “student voice” to the faculty and administration.

ASMJC is also responsible for planning, budgeting and coordinating activities for student enjoyment outside the classroom. Activities range from free noon-time concerts on the Quad, to current events, lectures, recreational trips, cultural presentations, comedy shows, and more. ASMJC’s goal is to expose students to a diverse calendar of events for their enjoyment and leadership development.

**STUDENT CLUBS AND ORGANIZATIONS**

The Office of Student Development and Campus Life is responsible for advising and coordinating the activities and programs of student clubs and organizations. Students are encouraged to broaden their horizons by participating in club activities at Modesto Junior College. Clubs are organized to involve students in specialized fields of interest or service to the college and community. If a club does not exist which deals with a student’s special interest, a new club can be formed. Ten MJC students and a faculty advisor are needed to charter a new club. They are approximately 27 existing clubs on campus.

**STUDENT ACTIVITY FEE**

Students can purchase an optional Student Activities Sticker for $5 a semester. This sticker transforms their MJC Student ID Card into a discount card. The Student Activities Sticker entitles students to valuable discounts on and off campus. The Activity Fee funds collected are used to help ASMJC support activities and programs such as scholarships, Club Development activities, College Hour events, lectures, and the Student Bulletin. The Student Activity Fee is payable during registration, and Activity Stickers and Discount Booklets may be picked up in the Student Development and Campus Life Office.

**STUDENT REPRESENTATION FEE**

The Student Representation Fee was amended into the California Education Code by Assembly Bill 2576 in late 1988. The student representation fee is a $1 optional fee that can be implemented on any California Community College campus through a student body election. In April of 1993, the Associated Students held a general student body election with the Student Representation Fee on the Ballot. The fee was introduced. Eight hundred forty-five (845) students voted in the election, and 563 were in favor of the Student Representation Fee.

The Student Representation Fee is collected together with all other fees at the time of registration, and is deposited in a separate fiduciary fund. Money collected is used by ASMJC to represent student concerns at local, state and federal government levels. A student may refuse to pay the Student Representation Fee for religious, political, financial or moral reasons. The refusal must be put in writing.

The Tutoring Center, above, is a free service for MJC students who need extra help with academic work, no matter what the subject or class.
Modesto Junior College is a member of the Central Valley Conference for both men’s and women’s sports. The men compete in baseball, basketball, cross country, football, golf, soccer, swimming, tennis, track and field, water polo and wrestling. Women compete in basketball, cross country, soccer, softball, swimming, track and field, tennis, volleyball, water polo and golf.

Other Central Valley Conference members are: Columbia College, Sonora; Fresno City College, Fresno; Reedley College, Reedley; Merced College, Merced; Porterville College, Porterville; College of Sequoias, Visalia; Taft College, Taft; and West Hills College, Coalinga.

Since 1937, MJC has hosted an annual statewide basketball tournament in December. It is the oldest community college invitational basketball tournament in the state.

Art Gallery

Located within the Art Department on the East Campus across from Founder’s Hall the Art Gallery is the college’s original exhibition space. Each year the Art Gallery presents an average of six exhibits representing a wide range of art styles, media, techniques and conceptual ideas. The exhibitors include emerging and more established artists from California and elsewhere, as well as, annual exhibit events for MJC art students and the art faculty.

Students enrolled in Gallery Operation and Management (Art 150) assist in the gallery operations and learn techniques of gallery preparation and art installation for the various exhibits. Students involved in Work-Study programs may apply for positions as gallery sitters or docents.

Forensics - Competitive Speech

With a proud tradition of state champions, Modesto Junior College competes with other colleges and universities in forensics. Students participate in parliamentary debate and various individual events. The competition occurs in state, national and international arenas.

Music

Students from all areas are welcomed to participate in MJC’s active performance program. Instrumental performance opportunities include Guitar Orchestra, Community Orchestra, Symphonic Band, Community Concert Band, Jazz Bands and Pep Band, plus brass, percussion, woodwind, and string ensembles.

Vocal performance opportunities include Masterworks Chorus, small vocal ensembles, Musical Theatre, and vocal jazz/pop ensembles.

Elementary, intermediate and advanced piano, organ, guitar, instrumental, and voice are classes available to both music majors and non-music majors.

The music theory and musicianship programs are among the strongest in the area. Students wishing to transfer as music majors to a four-year institution are strongly encouraged to enroll.

Radio - TV - Film

MJC students operate an online wave radio station KRJC as part of a professionally oriented program. Each student programs his/her own radio hour each week. KRJC can be heard campus wide and is also picked up over the local cable system and on line. Many former student DJs have gone on to professional radio work on the West Coast, from Seattle to Los Angeles. The Golden Microphone Awards is a yearly MJC student DJ competition, judged by radio professionals, honoring the best in radio. Television students produce a half-hour program highlighting campus life. Film students produce a variety of work, which is aired on cable and on-line. The video, Camera & Radio Awards is a yearly MJC student competition, which honors the best work in the areas of Radio, Television and Film.

Theatre Arts

Four to five productions make up the performance season for MJC theatre. Shows are produced in the 946-seat auditorium, the 94-seat Little Theatre, and the black box theatre, Cabaret West. A show is usually produced during the summer session. Students are active in all aspects of the theatrical arts with academic credit available in acting, lighting, costuming, and scenic techniques.

Honor Societies

The Upsilon Chapter of Alpha Gamma Sigma, Inc., the California Community College Honor Society, is open to qualified MJC students. Initial membership requires completion of 12 units in a maximum of 3 semesters with a cumulative grade point average of 3.0. First semester students who are life members of the California Scholarship Federation are eligible to become temporary members. Continuing membership requires a cumulative GPA of at least 3.0, or a current GPA of 3.0 or above. Active participation in club activities is required.

Permanent membership is granted to graduates with a cumulative GPA of 3.5 or above who have at least one semester of previous membership, or to graduates with a cumulative GPA of 3.25 or above who have 2 or more semesters of membership in AGS. Membership information and applications are available in the Student Development and Campus Life Office.

Phi Theta Kappa is present at MJC with the Beta Mu Theta chapter. Phi Theta Kappa is the largest international honor society in American higher education with more than 1.5 million members and 1,200 chapters located on community college
campuses throughout the fifty states, U.S. territories, Canada, and Germany. Phi Theta Kappa’s mission is twofold: 1) recognize and encourage the academic achievement of two-year college students and 2) provide opportunities for individual growth and development through participation in honors, leadership, service, and fellowship programming. New members will receive a membership pin, diploma seal, and transcript notation of membership. Members are automatically nominated for inclusion in the prestigious National Dean’s List biographical publication and are accorded the privilege of wearing the society’s gold stole and tassel at graduation. Chapter members will be eligible for Phi Theta Kappa scholarships and are automatically enrolled in the society's transfer database, one of the nation’s leading scholarship engines that links four-year institutions offering scholarships to Phi Theta Kappa members. Members are also eligible for nomination to the USA Academic Team. For more information, call Terry Lyle, program advisor at (209)-575-6388.

Publications

The Pirates' Log is MJC’s award-winning campus newspaper, a biweekly publication written, edited, and produced by students enrolled in journalism classes. In recent years, Pirates' Log staffers have won over 20 writing and layout awards, competing with other student journalists from around the state. The local media has picked up stories "broken" in the Log. Working on the Log provides an invaluable opportunity to experience the rhythms, challenges, pressures and rewards of newspaper journalism, to build a portfolio of published stories or photographs, to gain work experience and form lasting friendships. The editorship of the Pirates Log is now a paid Work-Study position for qualified applicants. Many former Log writers and editors are found today in the ranks of local media professionals. Participation is open to any student enrolled in Journalism 120 (photographers) or 146 (writers) who has CRed Journalism 100.
Library

Library and information services are located on both the East and West Campuses and can also be accessed through the MJC Library web page. The Library staff welcome questions and are happy to help users access and use the many library resources available to them.

The Library’s collection includes books, magazines, newspapers, journals, videos, and a variety of online research databases. MJC students have access to Columbia College Library materials via the Library’s intercampus loan service, and students can obtain research materials from non-YCCD libraries using the Library’s interlibrary loan service.

Campus library services include individual reference and information services, instruction on library research methods, self-guided library instruction, computer labs, copy machines, study space for individuals and groups, and course reserves. Off-campus use of library resources is facilitated by the Library’s web page. CRwords for off-campus access to the Library’s online databases are available, and users can submit reference questions from remote locations by using the “Ask A Librarian” feature.

All students, faculty, and staff have full library privileges. MJC Alumni, Library Friends, and the local community may obtain library cards for borrowing MJC Library materials.

LIBRARY INSTRUCTION

Learning Resources offers a variety of learning opportunities to support the information competencies applicable to college-level research and lifelong learning. Students can complete a self-guided Library Skills Program, participate in curriculum specific instructional sessions arranged by their instructors, or enroll in formal Library Research courses emphasizing skills that can be used in many research and information applications.

Distance Education

TELE COURSES/DIRECT BROADCAST COURSES

The Telecourse Office, located on the East Campus, Library 120, assists students with MJC telecourses. Office hours are 8 a.m. to 4:30 p.m., Monday through Friday, with special hours during the summer session. A drop-box is located just outside the office door for students who need to turn in assignments after 4:30 p.m.

Telecourse classes are listed in the MJC Schedule of Classes each semester. Several telecourses are available for viewing on Charter Cable; however, most telecourses need to be watched by either checking out video tapes from MJC Media Services, Classroom Annex 102; watching the tapes in the MJC Library Reserve Area; or by viewing them over high-speed Internet at http://gomjc.org/mjcvideo. On-campus meetings are usually required, but most assignments can be done at home or elsewhere. For more information, view the orientation videotape in the MJC Library, contact the Telecourse Office at (209) 575-6236, or check the most recent Schedule of Classes for MJC.

ONLINE/TELEWEB COURSES

Online learning at MJC is a quality alternative to "traditional" classes. No distinction is made between the requirements and expectations for traditionally taught courses and online courses. This means that the content and outcomes of online courses are the same as those taught in the on-campus classroom. It is the flexibility of time and convenience that appeals to online students.

Online courses require a self-disciplined student - one who is an "active learner". Courses require participation through frequent online communication with instructors and other students. These courses are best suited for those who can manage time and take responsibility for their education. The student enrolled in an online class should have a basic understanding of the Internet World Wide Web and electronic mail.

Online students must have access to the Internet at home and/or in their place of employment. Additionally, they must use web-browsing software such as Microsoft Internet Explorer or Netscape. If necessary, students may gain access to the Internet and MJC online courses via one of many MJC open computer labs during regular lab hours. Locations of these labs, and their hours, are posted on the MJC learning online web site. (Certain classes have specific software and course requirements; check the web site for further information.) For additional information on all MJC learning online courses, requirements, lab locations, etc., point your Internet browser to http://gomjc.org/online.htm

Research and Information Courses

The world of information changes rapidly, so the courses emphasize skills that can be used in many research and information applications. There are self-guided "tours" of basic research databases such as OPUS, the library computer catalog, and other electronic resources.

Academic Computer Labs

There are three open computer labs to support student computing; all three labs have general programs for word processing, spread sheets, or databases. Many also have course related programs for math, computer programming, or ESL. All labs have Internet access; and through it, students can use the MJC course catalog, the Library on-line catalog (OPUS), Academic Index, and other databases found on the MJC Web page. The open labs are available to any MJC student.

The college also has specialized computer labs associated with instructional divisions such as agriculture, computer graphics, ESL, and engineering. These labs may have scheduling periods when any student can use them. Check with the division or lab supervisor for available hours.
The three open labs are listed below. Because the labs are updated frequently, check ahead of time if you need to use a specific software program.

**East Campus Library Open Computer Lab:** Located in Room 116 of the MJC Library, this lab has both Macintosh and Windows computers. The lab is open Monday through Thursday from 8 A.M. to 9 P.M.; Friday, 8 A.M. to 5 P.M.; Saturday, 9 A.M.-5 P.M. Student aides are available to answer questions.

**West Campus Library Open Computer Lab:** This is the only open lab on the West Campus. Located in the West Campus Library, Yosemite 235, the lab is open Monday-Thursday, 8:00 A.M. to 5:00 P.M.

**STaR Lab:** This lab is located in Room 124, Founders Hall. The lab has 30 computers and laser printers. The hours are Monday through Thursday from 7:30 a.m. to 8:30 P.M. and Friday from 7:30 a.m. to 4:30 P.M.

A complete listing of all MJC computer labs, including hours, hardware and software can be found at:

http://virtual2.yosemite.cc.ca.us/mjclabs/.

**Bookstore**

The bookstore carries textbooks and course materials. Also available are school and office supplies, general books, MJC collegiate fashions, gifts, greeting cards, magazines, newspapers, candy, jewelry and calculators. We also offer computer software at educational and discount prices. The Artists’ Cove section of the bookstore carries a wide variety of artists’ materials and supplies. The West Campus bookstore also carries textbooks for classes on the West Campus, as well as school supplies, snacks, and general books. MJC catalogs and class schedules may be obtained through the bookstore and can be mailed prepaid. For information regarding the bookstore or mailing of catalogs or schedules call (209)575-6840.

The bookstore, located on the East Campus inside the Student Center, is open from 7:30 A.M. to 7:00 P.M. Monday through Thursday; 7:30 A.M. to 3:00 P.M. on Friday. The West Campus bookstore is open Monday through Thursday from 7:30 A.M. to 4:00 P.M.; closed Friday.

Bookstore hours are extended during the beginning of each semester.

Summer hours for the East Campus Bookstore are 7:30 A.M. to 5:30 P.M. Monday through Thursday; closed Friday. West Campus Bookstore hours are 7:30 A.M. to 4:00 P.M. during the summer. Visit us at our website: bookstore.yosemite.cc.ca.us.

**Business Services Offices**

The Business Services Offices located on both campuses serve as fiscal focal points for all businesses and fund generating endeavors. Both provide check cashing services for students and staff. Business Services Office offers extended hours during the first 2 weeks of the Fall and Spring semesters. Business Services Office regular hours are:

**East Business Services Office, Student Center**

Regular hours: MTWTh 8:00 a.m. - 6:15 p.m.  
F 8:00 a.m. - 4:30 p.m.

Summer Hours: MTWTh 7:30 a.m. - 5:30 p.m.

**West Business Services Office, South Hall 154F**

Regular hours: MTWTh 8:00 a.m. - 11:30 p.m.  
12:00 p.m. - 4:00 p.m.

F 8:00 a.m. - 12:00 p.m.

Summer hours: CLOSED  
(May 5 - August 22)

**Cafeteria**

East campus cafeteria hours are 7:30 a.m. to 6:00 p.m. Monday through Thursday; 7:30 a.m. to 2:00 p.m. on Friday. East campus summer school hours are 7:30 a.m. to 2:00 p.m., Monday through Thursday. West campus cafeteria hours are 7:30 a.m. to 2:00 p.m. Monday through Thursday; closed on Friday. Vending machines are available on both campuses in the Student Centers.

West Campus features two new buildings, Sierra Hall (above) and Yosemite Hall, which house state-of-the art technology and facilities.
MJC Event Sales

Event Sales handles ticket printing, sales, staffing and accounting of most college-sponsored ticketed events. Events include football, basketball, recitals, theatre, music, dance, speech communication, and YCCD Beyond Tolerance special events. Box office facilities managed by MJC Event Sales include the Stadium, Gymnasium, Mainstage Auditorium, Little Theatre, Music Recital Hall and Dance Studio (on the MJC West Campus). Event Ticket Sales is open at sporting locations one to two hours prior to “game time” and is open for every major theatre production from 1 p.m. to 5 p.m. Tuesday - Friday, beginning 1 week prior to “opening night” and at times convenient to other events. Box office sales at theatre events also begin 1 hour prior to “curtain time” and close 30 minutes after the performance begins. The Auditorium Box Office Event Line is (209) 575-6776.

A complete list of all MJC current events is listed on the Calendar of Events at [http://mjc.yosemite.cc.ca.us/MJCCalendarofEvents.pdf](http://mjc.yosemite.cc.ca.us/MJCCalendarofEvents.pdf) and a list of upcoming Arts Division events is at [http://virtual.yosemite.cc.ca.us/adbo/](http://virtual.yosemite.cc.ca.us/adbo/).

Facilities

The college is a center for community functions of various kinds. College facilities are available for use by recognized community groups when such use does not interfere with the regular educational program.

Media Services

Media Services provides the college with various instructional and administrative technical services. These services include all telecommunications, media classroom support, computer operations, repair and maintenance functions, video and photographic productions, graphic arts, media/equipment distribution services and distance learning facilities.

Technology Services

Technology Services provides desktop support to staff and students campus-wide. This support includes setup of desktop computers in computer labs and offices, equipment repairs and installs, and in-service training on various software programs.

MJC Foundation

The Modesto Junior College Foundation, established in 1968, receives funds from private sources for college programs and activities where state funds are insufficient or unavailable. Areas which the Foundation has provided support include: scholarship, loan programs, capital improvement, guest lecturers, professional development for faculty and staff, acquisition of special equipment.

The Foundation is a non-profit, tax-exempt, 501 (c) (3) corporation and is governed by a volunteer Board of Directors. The Foundation office is located in Room 209 of the Morris Memorial Building, MJC East Campus.
**Instructional Programs**

**Associate Degrees**

Modesto Junior College offers the Associate of Arts and Associate of Science degrees. The Associate of Arts is available in a wide variety of academic and vocational areas. The Associate of Science is offered in the following disciplines: Administration of Justice, Agriculture, Allied Health, Business, Engineering, Home Economics, Nursing, Physical Sciences, and Trade and Technical Education.

**Philosophy of the Degrees**

The awarding of an Associate Degree represents more than an accumulation of units. It symbolizes the successful attempt on the part of the student to develop certain abilities and insights by following patterns of learning designed by the college. It is expected that courses used in satisfying the requirements will demand effective study and active involvement on the part of the student and that significant change and growth will result from that study and involvement.

The holder of the Associate Degree will demonstrate college-level skills in reading, writing, and mathematics. In addition to these skills, the student will develop a greater ability to understand the modes of inquiry and expression of the major disciplines in the areas of natural science, social and behavioral sciences, the humanities, English composition, and communication and analytical thinking. Finally, the graduate will evaluate educational opportunities, identify personal goals, explore areas of involvement within the campus community, and develop an understanding of the integrated physiological and psychological human being.

Central to an Associate Degree, these general education requirements are designed to introduce students to the variety of means through which people perceive, describe, and interact with the modern world. Those who earn degrees will be better prepared to address ethical and social problems and to evaluate and appreciate the physical environment, the culture, and the society in which they live.

By completing the requirements of a major, the degree-holder will gain sufficient depth in one field of knowledge to form a basis for more advanced study, to fulfill an occupational objective, or to pursue other lifetime interests.

**Certificates of Achievement**

Students who complete requirements in certain technical programs in Agriculture, Allied Health, Business, Child Development, Fire Science, Nursing, and Trade and Technical Education may earn Certificates of Achievement.

Certificates are awarded in recognition of completion of requirements specified in each area. Interested students should consult division advisers.

**Application Process for Degrees and Certificates**

Students must file an application for a degree or certificate in the Evaluations Office, Morris Memorial 205, after registering for the semester in which they are completing the requirements. Requirements may be completed during any semester or summer session. Diplomas and certificates are printed approximately 6 weeks after the term ends. The graduation ceremony will take place in April.

**International Education**

Modesto Junior College students enjoy the opportunity to pursue their studies at a number of international locations. Regularly scheduled semester long programs take place in London, Paris, and Florence, Italy. Courses offered at each of these locales meet General Education Transfer Pattern and graduation requirements, so while spending a semester in an international setting, progress continues toward completing major educational goals.

Summer programs are offered in settings such as Spain or Mexico. These locales permit students to make rapid progress in the study of Spanish and Latin American culture.

Students in the full semester programs are required to complete 12 units while the summer students earn 6-7 units of credit. For information, contact the Instruction Office at (209) 575-6058.

**Learning Communities**

Learning Communities engage students, faculty, staff and administration in a partnership for academic excellence. They support the widest range of intellectual activism and are directed at social transformation. Student Success is the result of making the right connections; Learning communities are adventures in education that connect students with success.

**LEARNING COMMUNITY GOALS**

- To foster intellectual activism among a diverse range of students.
- To integrate academic courses and learning experiences among faculty.
- To provide positive, transforming educational experiences for a diverse range of students.
- To enable students to understand connections between disciplines.
- To create opportunities for faculty development.
Independent Study and Special Problems

Modesto Junior College offers the traditional types of independent study course (numbered 199, 299 or 399). Independent study is supervised study, projects, or laboratory practice in any area sufficiently specific to permit the student to report or demonstrate its value beyond that possible to achieve within the standard curriculum. The unit value may range from 1 to 6, and a student may repeat an independent study course in a specific discipline to a maximum of 6 units. Field trips may be required.

Interested students should contact an instructor or division dean for more information.

The transfer student should consider the policy of the four-year college or university regarding the number of independent study units which may be earned each semester. (CSU) (UC-granting credit for courses in this category contingent upon a review of the end project by UC campuses)

Special Topics and Problems

Courses dealing with special topics and problems are offered with the course number of 198, 298 or 398. Each discipline may offer a special topic or problem course. The course title in the schedule of classes will identify the topic. Such courses allow participation in discussion, analysis and evaluation of a special topic or problem in a specific area of study. Topics are announced each semester in the schedule of classes. The courses are variable in hours per week and number of weeks according to the topic. The unit value may be 1/2, 1, 2, or 3. The course may be repeated. Field trips may be required. (CSU and UC-grant credit for courses in this category contingent upon a review of the course outline)

General College Major

The general college major is an A.A. Degree designed for students who seek to broaden their general education and to explore a variety of subject areas before beginning to specialize or to make occupational choices.

The major requires a total of 24 units consisting of six units in each of four of the following areas. These courses must be added to those required to satisfy basic graduation requirements.

2. Allied Health: Dental Assisting, Medical Assisting, Nursing, Respiratory Care and Health Occupations.
4. Biological Sciences: Anatomy, Physiology, Microbiology, Biology, Botany and Zoology.
7. Fine Art: Music, Drama, Art, Photography, Theater, Humanities and Film/Cinematography.
9. Physical Sciences, Engineering, Engineering Technology and Architecture: (If not taken in high school, it is desirable that this include at least one course in algebra.) Astronomy, Chemistry, Earth Science, Geology, Meteorology, Physical Science, Physics, Engineering and Architecture. Math 50 or above, but not Math 10 or 20.
### Academic Departments and Divisions

#### Agriculture & Environmental Sciences

Agriculture Bldg. 100  
(209) 575-6200

**Mark Anglin,**  
Division Dean

**FACULTY**  
Ronald Alves  
Mark Anglin  
David Baggett, PhD.  
Marlies Boyd  
John Mendes  
Mike Morales  
John Nicewonger  
Richard Niphius  
Dale Pollard

**SUPPORT STAFF**  
Gloria Wilson, Admin.Secretary  
Rhonda Wolf, Secretary II

**ASSOCIATE DEGREE PROGRAMS**  
Agriculture Business  
Agriculture Lab.  
Agriculture- Sales & Service  
Agricultural Science  
Animal Science  
Crop Science  
Dairy Industry  
Dairy Science  
Poultry Science  
Soil Science  
Environmental Horticultural Science  
Food Processing  
Forestry  
Forestry, Vocational  
Fruit Science  
Landscape Architecture  
Landscape Design Tech.  
Mechanized Agriculture

### Agriculture & Environmental Sciences (Cont’d from previous column)

**CERTIFICATE PROGRAMS**  
Agriculture Lab. Tech.  
Agriculture- Sales & Service  
Artificial Insemination Tech.  
Dairy Industry Tech.  
Commercial Floristry Tech.  
Food Processing Tech.  
Forestry Tech.  
Landscape and Park Maintenance Tech.  
Landscape Design Tech.  
Mechanized Agriculture Tech.  
Nursery Production  
Recreational Land Management.

**OTHER INSTRUCTIONAL PROGRAMS**  
Interdisciplinary Studies  
Environmental Studies

#### Allied Health

**South Hall 258V**  
(209) 575-6361, (209) 575-6362

**(TBA)**  
Division Dean

**FACULTY**  
Leanne Bartels  
Kelly Butler  
Shirley Buzzbee  
Gloria Coats  
Bonnie Costello  
Eileen Hale  
Robert Keach  
Libbie Lanigan  
Terry Lyle  
Vicki Nelson-Hollis  
David Nordin

**CERTIFICATE PROGRAMS**  
Dental Assisting  
Medical Assisting  
Respiratory Care  
Vocational Nurse to ADN Upgrade

**OTHER INSTRUCTIONAL PROGRAMS**  
Emergency Medical Tech.  
Vocational Nurse 30-Unit Certificate Upgrade

#### Arts, Humanities, & Communications

**Location:** Auditorium 106  
(209) 575-6081

**James L. Johnson, PhD., Division Dean**

**FACULTY**  
Lori Bryhni  
Flora Carter  
David Chapman  
Tom Duchscher  
Charles Ewing, PhD.  
Jannell Glance  
Todd Guy  
Kim Gyuran  
Terry Hartman  
Dan Keller  
Carol Lancaster  
Cherrie Llewellyn, PhD.  
Michael Lynch  
Anne Martin  
Allan McKissick  
Laura Paull  
Jerry Reilly  
Alejandro Sabre, PhD.  
Jim Sahlman, PhD.  
Richard Serros, PhD.  
Douglas Smith  
Robert Stevenson  
Stephen Stroud, PhD.  
Michael Sundquist

**SUPPORT STAFF**  
Gary Fair, Inst. Asst. II  
Ross Aldrich, Perf. Arts Production Specialist  
Yan Yan Chan, PhD., Accompanist  
Lee Bailey, Inst. Asst. II

---

**Continued ➢**
### Academic Departments and Divisions

#### Arts, Humanities, & Communications

*(Cont’d from previous page)*

**SUPPORT STAFF**
- John Giorgio, Lab Asst. I
- Donna Hale, Support Staff I
- Carol Heintz, Admin.Secretary
- Rita Perez, Support Staff III
- Anne Shanto, Perf. Arts Costume Specialist
- Dave Wallace, Accompanist
- Larry Zabel, Stage Mgmt.Specialist

**ASSOCIATE DEGREE PROGRAMS**
- Art
- Music
- Mass Communications
- Photography
- Radio Broadcasting
- Speech Communication
- Television Broadcasting
- Theatre

**CERTIFICATE PROGRAMS**
- Mass Communications
- Electronic Media
- Film
- Graphic Design/Production
- Print Journalism
- Radio
- Television
- Design/Technical Theatre
- Computer Graphics
- Speech Communication
- Theatre Performance

**OTHER INSTRUCTIONAL PROGRAMS**
- Art History & Appreciation
- Dance
- Humanities
- Interdisciplinary Studies
- Microcomputer Graphics

#### Business, Behavioral & Social Sciences

**ASSOCIATE DEGREE PROGRAMS**
- Accounting
- Administration of Justice
- Computer Information Systems
- Corrections
- Law Enforcement
- Behavioral/Social Sciences
- Bookkeeping
- Business Administration
- Business Information Systems
- Business Operations Management
- Clerical
- Computer Graphics Applications
- Computer Science
- Human Services
- Human Services - Chemical Dependency Counseling
- Marketing
- Office Administration
- Real Estate
- Supervisory Training

**CERTIFICATE PROGRAMS**
- Accounting
- Bookkeeping
- Clerical
- Computer Graphics Applications
- Professional Selling
- Real Estate
- Office Administration
- Supervisory Management
- Word Processing

**OTHER INSTRUCTIONAL PROGRAMS**
- Accounting Clerk
- Anthropology
- Computer Applications Specialist
- Computer Programming Specialist
- Computer Network Administrator
- Computer Network Tech.
- Desktop Publishing
- Economics
- Ethnic Studies
- Geography
- Gerontology
- History
- Human Services
- Interdisciplinary Studies
- International Business
- Office Computer Applications
- Office Support
- Records Management
- Data Entry
- Philosophy
- Political Science
- Psychology
- Public Administration
- Social Science
- Sociology

#### Counseling

**Dean of Student Services and Counseling**
- Kim Bailey
- Leticia Cavazos
- Chuck Cipponeri
- Pamela Crittenden
- Hector Duarte
- Alida Garcia
- Marcos Garcia
- Erik Ivory
- Hanna Louie
- Pamela Loyd
- Charles Madriaga
- Theresa Maldonado-Ballance
- Estella Nanez
- Mary Silva
- Barbara St.Urbain
- Ronald Tingley
- Dean Tsuru

**SUPPORT STAFF**
- Delia Gonzalez, Support Staff Tech II
-Arcael Ballei, General Clerk

**INSTRUCTIONAL PROGRAMS**
- Guidance
- Study Skills
Academic Departments and Divisions

Family & Consumer Sciences
South Hall 154A
(209) 575-6354

TBA
Division Dean

FACULTY
Bob Glatt
Pamela Guerra-Schmidt
Debbie Laffranchini
Ann Lowry
Margie Perez-Sesser
Laurie Prusso
Judith K. Thorkelson

SUPPORT STAFF
Valerie Erwin
Admin. Secretary III
Colleen Norby
Support Staff Tech.

ASSOCIATE DEGREE PROGRAMS
Child Development
Culinary Arts
Fashion Merchandising: General
Fashion Merchandising: Visual Merchandising
Family & Consumer Sciences
Interior Design

CERTIFICATE PROGRAMS
Associate (CLDDV)
Teacher (CLDDV)
Master Teacher (CLDDV)
Early Intervention Asst 1
Early Intervention Asst 2
Culinary Arts
Fashion Merchandising
Fashion Merchandising - Image Consultant/Personal Shopper

Learning Resources
MJC Library (East)
(209) 575-6235

Dennis Tucker
Director

LIBRARY FACULTY
Sue Adler
Iris Carroll
Kathleen Ennis

DISTANCE EDUCATION
Faculty Coordinator: TBA

COMPUTER LAB FACULTY
Le-Huong Pham

SUPPORT STAFF
Vicki Groff, Admin. Secretary
Joanne Larson, Online Help Desk
Kathy Haskin, Telecourse Office

Literature & Language Arts
South Hall 275A
(209) 575-6149

Brenda J. Robert, PhD.
Division Dean

BASIC SKILLS
J. Patrick Wall, Ph.D., Director

FACULTY
James Beggs, PhD.
Patrick Bettencourt
Ines Bucknam
Michelle Christopherson
Shelley Circle
Marcos Contreras, PhD.
Jillian Daly
Rose Engstrom
Mara Fagin
Marianne Franco, PhD.
Mari Carmen Garcia, PhD.
Janelle Gray
Annalesse Hauser-Akprovi
Timothy Hobert
Barbara Jensen
Ingrid Johnson
Dimitri Keriots
Ruth Luman
Kimberly Manner, PhD.
G. Daniel Martin
Evelyn Metcalf
Jeffrey Netto, PhD.
Jenny Netto
Daniel Ororato
Samuel Pierstorff
Rick Rivera
Lawrence Scheg
Dorothy Scully
Michael Smedshammer, PhD.
Ann Smith
E. Denise Smith
Gabriele Steiner
Michael Strangio
Lillian Vallee, PhD.
Barbara Wells
Barbara (BJ) Wells
Thomas West
Theron Westrope, PhD.

SUPPORT STAFF
Silvana Paddock Morris,
Admin. Secretary
Jennifer Tinney, Support Staff III

INSTRUCTIONAL SUPPORT STAFF
Mary Calderon, Lab Asst. I
Lisa Castillo, Lab. Asst. I
Alejandra Contreras, Inst. Asst. II
John Has-Ellison, Inst. Asst. II
Jaqueline Jordan, Inst. Asst. II
Suzanne McBride, Inst. Asst. II
Theresa Stovall, Lab. Asst. I
Sargon Yadegar, Lab. Asst. II

ASSOCIATE DEGREE PROGRAMS
English
German
French
Spanish
Foreign Language

Literature & Language Arts
South Hall 275A
(209) 575-6149

Brenda J. Robert, PhD.
Division Dean

BASIC SKILLS
J. Patrick Wall, Ph.D., Director

FACULTY
James Beggs, PhD.
Patrick Bettencourt
Ines Bucknam
Michelle Christopherson
Shelley Circle
Marcos Contreras, PhD.
Jillian Daly
Rose Engstrom
Mara Fagin
Marianne Franco, PhD.
Mari Carmen Garcia, PhD.
Janelle Gray
Annalesse Hauser-Akprovi
Timothy Hobert
Barbara Jensen
Ingrid Johnson
Dimitri Keriots
Ruth Luman
Kimberly Manner, PhD.
G. Daniel Martin
Evelyn Metcalf
Jeffrey Netto, PhD.
Jenny Netto
Daniel Ororato
Samuel Pierstorff
Rick Rivera
Lawrence Scheg
Dorothy Scully
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Ann Smith
E. Denise Smith
Gabriele Steiner
Michael Strangio
Lillian Vallee, PhD.
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Thomas West
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SUPPORT STAFF
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Admin. Secretary
Jennifer Tinney, Support Staff III

INSTRUCTIONAL SUPPORT STAFF
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John Has-Ellison, Inst. Asst. II
Jaqueline Jordan, Inst. Asst. II
Suzanne McBride, Inst. Asst. II
Theresa Stovall, Lab. Asst. I
Sargon Yadegar, Lab. Asst. II

ASSOCIATE DEGREE PROGRAMS
English
German
French
Spanish
Foreign Language

Physical, Recreation, & Health Education

PE Office 105
(209) 575-6269

William Kaiser, PhD.
Division Dean

SUPPORT STAFF
Patricia Wallace, Admin. Secretary
Shamiran Pourelyas, Secretary II

FACULTY
Paul Aiello
Gary Ard
Bobby Boswell
Paul Brogan
Lori Bryhni
James Clarke
Pamela Johnson
Milan Motroni
Cheryl Mulder
Mary Shea
David Shrock
Jim Stevens
Sam Young

ASSOCIATE DEGREE PROGRAMS
Physical Education
Athletic Training/Sports Medicine

OTHER INSTRUCTIONAL PROGRAMS
Athletics
Dance
Health Education

Public Safety

Morris Memorial 204
(209) 575-6887

COMMUNITY & ECONOMIC DEVELOPMENT.
George Boodrookas, Dean

CRIMINAL JUSTICE TRAINING CENTER
Kevin Finnerty, Director
Cornacopia Way, Ceres
(209) 525-4702

REGIONAL FIRE TRAINING CENTER
1220 Fire Science Lane
(209) 549-7028

John Sola, Director

SUPPORT STAFF
Gail Campbell
Virgil Atchison
Range Coordinator
Tom Davis
Program Asst/Facility Oper.

ASSOCIATE DEGREE PROGRAMS
Fire Science

CERTIFICATE PROGRAMS
Fire Academy
Fire Science
Law Enforcement Academy - Basic Academy

Continued ➤
Academic Departments and Divisions

Science, Math, & Engineering

(Cont’d from previous column)

ASSOCIATE DEGREE PROGRAMS
Architectural Drafting Tech.
Architectural Engineering
Architecture -
City and Regional Planning
Engineering
Construction Management
Engineering Drafting Technology
Engineering Technology
Landscape Architecture
Physical Science

CERTIFICATE PROGRAMS
Architectural Drafting Tech.

OTHER INSTRUCTIONAL PROGRAMS
Anatomy
Astronomy
Biology
Botany
Chemistry
Earth Science
Geology
Marine Biology
Mathematics
Meteorology
Microbiology
Physics
Physiology

Technical Education

(Cont’d from previous column)

Sierra Hall 154A
(209) 575-6332

Mark Anglin
Division Dean

Pedro Mendez
Technical Education Director

FACULTY
Ron Cooper
Sonny Gumm
John Kropp
Alan Layne
Brian Lomax
W. John Petersen
John S. Peterson
Jan Pinckney
Robert Radeuchel
Tim Vaughan
Jeff Weaver

SUPPORT STAFF
Judy Gonzales, Secretary III

ASSOCIATE DEGREE PROGRAMS
Autobody/Collision Repair
Autobody Refinishing
Automotive Tech.
Building and Safety Code Admin.
Communication Graphics Appl.
Computer Electronics
General Plant Maintenance
Graphic Design
Home Building Technologies
Industrial Electronics
Industrial Tech/Electrician
Industrial Tech/Maintenance
Industrial Tech/Systems
Machine Tool Technology
Maintenance Electrician
Welding

CERTIFICATE PROGRAMS
Automotive Tech.
Maintenance Mechanic
Autobody Collision Repair
Autobody/Refinishing
Building and Safety Code Admin.
Electronics Technology
Computer Electronics
Industrial Electronics
Flexographic Printing
Graphic Design
Presses & Bindery
Printing Maintenance
Communication Graphics
Applications
Home Building Technologies

Technical Education

(Cont’d from previous column)

Industrial Technology
Systems
Electrician
Maintenance Technician
Machine Tool Technology
General Plant Maintenance
Maintenance Electrician
Maintenance Machinist
CNC Operator
CNC Programmer
Fabrication Technician
Sheet Metal Fabricator
Shielded Metal Arc Welding
Pipe Welding
Gas Tungsten Arc Welding
Gas Metal Arc Welding
Welding

OTHER INSTRUCTIONAL PROGRAMS
Work Experience Education (General and Vocational)

Tutoring & Basic Education

Library Basement 10
(209) 575-6839

Martha Robles
Coordinator

SUPPORT STAFF
Kimberly Stanley, Tutoring Tech.
Donna Yarnal, Secretary

INSTRUCTIONAL PROGRAMS
Adult Basic Education
High School
Tutoring
<table>
<thead>
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<th>Codes</th>
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<td>411507 AA</td>
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<td>Accounting Clerk (see Schedule of Classes)</td>
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<td>Fashion Merchandising/General</td>
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<td>Administrative Justice</td>
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<td>Fashion Merchandising</td>
<td>711600 AS</td>
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<td>Administration of Justice</td>
<td>319011 AA</td>
<td>General</td>
<td>711604 C</td>
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<td>Agricultural Business</td>
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<td>Special</td>
<td>711605 C</td>
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<tr>
<td>Agriculture-Sales, Service Technician</td>
<td>112001 AS</td>
<td>Sales</td>
<td>214000 C</td>
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<tr>
<td>Agriculture Laboratory Technician</td>
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<td>Fire</td>
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<tr>
<td>Architectural Drafting Technology</td>
<td>511000 AS</td>
<td>Cooking/General</td>
<td>113000 AS</td>
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<tr>
<td>Architectural Drafting Technology</td>
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<td>General</td>
<td>113001 C</td>
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<td>Architecture/Landscape Design</td>
<td>114552 C</td>
<td>Forestry</td>
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<td>Art</td>
<td>211000 AA</td>
<td>Fruit Science</td>
<td>115001 AS</td>
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<td>Art Gallery/Museum Studies</td>
<td>211001 C</td>
<td>General</td>
<td>115002 C</td>
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<td>Artificial Infection Technician</td>
<td>113001 C</td>
<td>Plant Maintenance</td>
<td>735259 AA</td>
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<td>Athletic Training/Sports Medicine</td>
<td>952001 AS</td>
<td>Management</td>
<td>735259 C</td>
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<td>Autobody/Collision Repair</td>
<td>734000 AS</td>
<td>General</td>
<td>735260 C</td>
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<td>Autobody/Collision Repair</td>
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<td>Plant Maintenance</td>
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<td>Autobody/Refinishing</td>
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<td>General</td>
<td>417101 AA</td>
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<td>Design</td>
<td>417102 C</td>
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<td>Building Technologies</td>
<td>735252 AS</td>
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<td>General</td>
<td>735253 C</td>
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<td>Behavioral and Social Sciences</td>
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<td>Services</td>
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<td>Bookkeeping</td>
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<td>415111 C</td>
<td>Shopper</td>
<td>711901 C</td>
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<tr>
<td>Child Development Site Supervisor</td>
<td>710005 C</td>
<td>Interior Design</td>
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<td>Child Dev. Early Intervention -1</td>
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<td>Interior</td>
<td>712801 AA</td>
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<td>Child Dev. Early Intervention -2</td>
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<td>Design</td>
<td>712802 C</td>
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<tr>
<td>City and Regional Planning</td>
<td>511002 AS</td>
<td>Business</td>
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<td>Clerical</td>
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<td>Journalism</td>
<td>215000 C</td>
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<td>412106 AA</td>
<td>Print</td>
<td>215001 AA</td>
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<td>Clerical</td>
<td>412109 C</td>
<td>Technical</td>
<td>215005 C</td>
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<td>Commercial Floristry Technician</td>
<td>114554 C</td>
<td>Technology</td>
<td>735256 C</td>
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<td>Communication Graphics App.</td>
<td>736100 C</td>
<td>Electrician</td>
<td>735263 C</td>
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<tr>
<td>Communication Graphics App. (see Schedule of Classes)</td>
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<td>Electrician</td>
<td>735264 C</td>
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<tr>
<td>Computer Applications Specialist</td>
<td>412001 C</td>
<td>Maintenance Machinist 1</td>
<td>735803 C</td>
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<td>Computer Applications</td>
<td>412000 C</td>
<td>Machinist</td>
<td>735804 C</td>
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<td>Computer Applications</td>
<td>412001 C</td>
<td>Maintenance Machinist 2</td>
<td>735805 C</td>
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<tr>
<td>Computer Applications</td>
<td>417010 AS</td>
<td>Maintenance</td>
<td>735806 C</td>
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<td>Computer Applications</td>
<td>417013 C</td>
<td>Machinist</td>
<td>735807 C</td>
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<tr>
<td>Computer Information Systems</td>
<td>412002 AA</td>
<td>Maintenance</td>
<td>735808 C</td>
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<tr>
<td>Computer Programming Specialist</td>
<td>412003 C</td>
<td>Machinist</td>
<td>735809 C</td>
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<tr>
<td>Computer Science</td>
<td>412000 AS</td>
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<td>735810 C</td>
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<td>Construction Management</td>
<td>511003 AS</td>
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<td>Crop Science</td>
<td>115000 AS</td>
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<td>735812 C</td>
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<td>Culinary Arts</td>
<td>712200 C</td>
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<td>Dairy Industry</td>
<td>113003 C</td>
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<td>Dairy Industry Technician</td>
<td>113004 C</td>
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<td>113002 C</td>
<td>Network Technician</td>
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<td>Dental Assisting</td>
<td>611000 AS</td>
<td>Nursing Assistant (CNA)</td>
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<td>Nursing, Associate Degree (RN)</td>
<td>612501 C</td>
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<td>Computer Electronics</td>
<td>734500 AS</td>
<td>Nursing, LVN Certificate Up</td>
<td>612502 C</td>
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<td>Computer Electronics</td>
<td>734501 AS</td>
<td>LVN Program (LVN to RN)</td>
<td>612504 AS</td>
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<td>Electronics Technology-Computer Electronics</td>
<td>734502 C</td>
<td>Office Administration</td>
<td>412100 C</td>
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<tr>
<td>Emergency Medical Technician</td>
<td>615000 C</td>
<td>Office Administration</td>
<td>412104 AA</td>
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<td>Engineering</td>
<td>511000 AS</td>
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<td>412106 AA</td>
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<td>Engineering Drafting Technology</td>
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<tr>
<td>English</td>
<td>815100 AA</td>
<td>Commercial Graphics</td>
<td>734500 AS</td>
</tr>
</tbody>
</table>

**K-12 Students**

| K-8 | 876508 N |
| 2-15 | 876509 N |

**Transfer Students**

Please select your transfer goal from the list below if MAC doesn’t offer your Academic Program.

- Transfer to a CSU campus with a degree: 876506 TD
- Transfer to a CSU campus w/out a degree: 876501 TN
- Transfer to a UC campus with a degree: 876507 TD
- Transfer to a UC campus w/out a degree: 876502 TN
- Transfer to other college with a degree: 876505 TD
- Transfer to other college w/out a degree: 876500 TN

**Meaning of Awards**

AS: Associate of Science Degree
AA: Associate of Arts Degree
C: Certificate
N: None
TD: Transfer with Associate Degree
TN: Transfer without Associate Degree
Basic Degree Requirements

A. Complete a minimum of 60 units of courses numbered 50 or higher, the last 12 of which must be completed "in-residence" at MJC.

B. Overall GPA of 2.0 or higher (C average) based on all work attempted in college in courses numbered 50 or higher.

C. Demonstrate competence in reading, written expression, and mathematics.


1. Complete the MJC GE Pattern
   (p.53).

2. Complete coursework in a MAJOR:
   a. Associate in Arts Degree: Choose one option:
      - Complete 20 units in courses approved by the department offering the major
      - Complete the General College Major as outlined in the catalog.
   b. Associate in Science Degree:
      - Complete 30 units in courses approved by the department offering the major.

Courses in the student’s major or General Education requirement list may count in both areas except for the General College Major. Only one degree (AA or AS) can be awarded in the same major.

D. Meet MJC's GUIDANCE & ACTIVITIES requirements (as outlined in Sections I and II on page 53.)

E. Choose and complete one of the two study plans below, "Occupational & Technical Studies" or "Transfer Studies".

F. File an application for graduation.
   The Associate in Arts Degree (AA) and the Associate in Science Degree (AS) are not automatically awarded when the student completes the requirements. Students must file an application for graduation in the Evaluations Office, Morris Memorial Building, Room 205, after registering for the semester in which they are completing the requirements. Requirements may be completed during any semester or summer session. The graduation ceremony will be held only at the end of the spring semester.

Sixty units for an Associate degree can include:

- All units at MJC in courses numbered 50 or above
- Units at other US accredited institutions (students must submit transcripts for evaluation)
- Units earned through "Credit by Examination" (limited to 12 maximum, see p. 20.)

Transfer Studies

1. Complete GENERAL EDUCATION for the school you plan to attend by choosing an option below.

   a. California State University Transfers:
      Complete one of the following two options:
      - CSU-GE - (California State University General Education Pattern) p. 56
      - UC/CSU IGETC (Intersegmental General Education Transfer Curriculum) p 58

   b. University of California Transfers:
      Complete one of the following two options:
      - UC/CSU IGETC (Intersegmental General Education Transfer Curriculum), p 58
      - Individual breadth pattern for the UC campus of your choice, or see a UC Catalog.

   c. All other college/university transfers:
      See your counselor for planning advice on the pattern to be followed.
MJC Graduation Requirements

MJC Guidance and Activities

FOR "OCCUPATIONAL & TECHNICAL STUDIES" & "TRANSFER STUDIES" STUDENTS

I. GUIDANCE REQUIREMENT: Complete one course.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 115</td>
<td>Intro to Ag Education &amp; Careers</td>
<td>1(F02)</td>
</tr>
<tr>
<td>ARCH/ENGR/100</td>
<td>Intro to Engineering &amp; Arch.</td>
<td>1(F02)</td>
</tr>
<tr>
<td>CLDDV 100</td>
<td>Intro to Early Childhood Education</td>
<td>1</td>
</tr>
<tr>
<td>GUIDE 109</td>
<td>Orientation for Foreign Students</td>
<td>1</td>
</tr>
<tr>
<td>GUIDE 110</td>
<td>Educational Planning</td>
<td>1/2</td>
</tr>
<tr>
<td>GUIDE 111</td>
<td>Career Awareness</td>
<td>1</td>
</tr>
<tr>
<td>GUIDE 112</td>
<td>Job Development Skills</td>
<td>1/2</td>
</tr>
<tr>
<td>GUIDE 116</td>
<td>Orient for Re-Entry Adults</td>
<td>2</td>
</tr>
<tr>
<td>GUIDE/ST-SK 120</td>
<td>Success Strategies for Transfer</td>
<td>3</td>
</tr>
</tbody>
</table>

II. ACTIVITIES REQUIREMENT: Complete two (2) units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 100B</td>
<td>Leadership in Agriculture</td>
</tr>
<tr>
<td>ART/CMPGR 202</td>
<td>Intro to Computer Graphics</td>
</tr>
<tr>
<td>ART 108</td>
<td>Ceramics (3)</td>
</tr>
<tr>
<td>ART 109</td>
<td>Intermediate Ceramics (3)</td>
</tr>
<tr>
<td>ART 110</td>
<td>Advanced Ceramics (3)</td>
</tr>
<tr>
<td>ART 120</td>
<td>Basic Drawing (1)</td>
</tr>
<tr>
<td>ART 121</td>
<td>Basic Drawing 2 (3)</td>
</tr>
<tr>
<td>ART 123</td>
<td>Figure Drawing (3)</td>
</tr>
<tr>
<td>ART 124</td>
<td>Color &amp; Design 1 (3)</td>
</tr>
<tr>
<td>ART 125</td>
<td>Color &amp; Design 2 (3)</td>
</tr>
<tr>
<td>ART 140</td>
<td>Sculpture (3)</td>
</tr>
<tr>
<td>ART 141</td>
<td>Sculpture (3)</td>
</tr>
<tr>
<td>ART 142</td>
<td>Sculpture (3)</td>
</tr>
<tr>
<td>ART 144</td>
<td>Watercolor Painting (3)</td>
</tr>
<tr>
<td>ART 145</td>
<td>Watercolor Painting (3)</td>
</tr>
<tr>
<td>ART 149</td>
<td>Oil Painting 1 (3)</td>
</tr>
<tr>
<td>ART 149</td>
<td>Oil Painting 2 (3)</td>
</tr>
<tr>
<td>ART 150</td>
<td>Gallery Operation &amp; Management (3)</td>
</tr>
<tr>
<td>ART 155</td>
<td>Basic Photography (3)</td>
</tr>
<tr>
<td>ART 170</td>
<td>Basic Photography (3)</td>
</tr>
<tr>
<td>ART 173</td>
<td>Digital Imaging Photographers (3)(F02)</td>
</tr>
<tr>
<td>ART 175</td>
<td>Color Photography (3)</td>
</tr>
<tr>
<td>ART 181</td>
<td>Basic Photography I (1 1/2)</td>
</tr>
<tr>
<td>ART 182</td>
<td>Basic Photography II (1 1/2)</td>
</tr>
<tr>
<td>ART 189A, B</td>
<td>Photography Lab Tech (1-2)</td>
</tr>
<tr>
<td>CMPGR 282</td>
<td>Exploring Web (1)</td>
</tr>
<tr>
<td>CMPGR 284</td>
<td>Desktop Video Animation (3)</td>
</tr>
<tr>
<td>ENGL 105</td>
<td>Creative Writing: Poetry (3)</td>
</tr>
<tr>
<td>ENGL 106</td>
<td>Creative Writing: Short Fiction(3)</td>
</tr>
<tr>
<td>ENGL 108</td>
<td>Creative Writing - Autobiography (3)</td>
</tr>
<tr>
<td>ENGL 109</td>
<td>Scriptwriting (3)</td>
</tr>
<tr>
<td>ENGL 110</td>
<td>Novel Writing (3)</td>
</tr>
<tr>
<td>FILM 150</td>
<td>Film Production (3)</td>
</tr>
<tr>
<td>JRL 120 A,B,C Student Newspaper Prod. Staff (1,2,3)</td>
<td></td>
</tr>
<tr>
<td>JRL 146 A,B,C Newspaper Photo Staff (1,2,3)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 120</td>
<td>Elementary Piano (1)</td>
</tr>
<tr>
<td>MUSIC 121</td>
<td>Piano Enrichment (1)</td>
</tr>
<tr>
<td>MUSIC 124</td>
<td>Organ (Elementary) (1)</td>
</tr>
<tr>
<td>MUSIC 127</td>
<td>Elementary Strings (1)</td>
</tr>
<tr>
<td>MUSIC 131</td>
<td>Elementary Voice (1)</td>
</tr>
<tr>
<td>MUSIC 132</td>
<td>Voice Enrichment (1)</td>
</tr>
<tr>
<td>MUSIC 140</td>
<td>Brass/Percussion Instruments (Elem) (1)</td>
</tr>
<tr>
<td>MUSIC 146</td>
<td>Symphonic Band (2)</td>
</tr>
<tr>
<td>MUSIC 147</td>
<td>Evening Jazz Band (1)</td>
</tr>
<tr>
<td>MUSIC 148</td>
<td>Pep Band (1)</td>
</tr>
<tr>
<td>MUSIC 149</td>
<td>Jazz Band (2)</td>
</tr>
<tr>
<td>MUSIC 151</td>
<td>Chamber Music Ensemble (Strings) (1)</td>
</tr>
<tr>
<td>MUSIC 152</td>
<td>Choir (1)</td>
</tr>
<tr>
<td>MUSIC 153</td>
<td>Singers (1)</td>
</tr>
<tr>
<td>MUSIC 154</td>
<td>Masterworks Chorus (1)</td>
</tr>
<tr>
<td>MUSIC 157</td>
<td>Musical Theatre Workshop (2)</td>
</tr>
<tr>
<td>MUSIC 158</td>
<td>Advanced Musical Theatre Workshop (2)</td>
</tr>
<tr>
<td>MUSIC 161</td>
<td>Concert Band (1)</td>
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<tr>
<td>MUSIC 162</td>
<td>Community Orchestra (1)(F99)</td>
</tr>
<tr>
<td>MUSIC 163</td>
<td>Elementary Guitar (1)</td>
</tr>
<tr>
<td>MUSIC 166</td>
<td>Applied Classical Guitar (1)(F01)</td>
</tr>
<tr>
<td>MUSIC 170</td>
<td>Intro Synth &amp; Midi Music Comp (2)</td>
</tr>
<tr>
<td>MUSIC 172</td>
<td>Beg Recording Studio Tech (1)(F01)</td>
</tr>
<tr>
<td>MUSIC 173</td>
<td>Guitar Orchestra (2)</td>
</tr>
<tr>
<td>MUSIC 174</td>
<td>Guitar Advancement (2)</td>
</tr>
<tr>
<td>MUSIC 180</td>
<td>Woodwind Instruments (Elem) (1)</td>
</tr>
<tr>
<td>MUSIC 181</td>
<td>Elementary Harpsichord(1)(F99)</td>
</tr>
<tr>
<td>MUSIC 182</td>
<td>Theory Fundamentals &amp; Beyond (1)(F03)</td>
</tr>
</tbody>
</table>

MJC General Education

FOR "OCCUPATIONAL & TECHNICAL STUDIES" STUDENTS ONLY

A. NATURAL SCIENCES: Complete a minimum of three (3) units.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AG 376</td>
<td>Basic Sci &amp; Lab Techniques</td>
</tr>
<tr>
<td>AP 50</td>
<td>Elem Human Anat-Phys</td>
</tr>
<tr>
<td>AP 150</td>
<td>Integrative Anat &amp; Physiology</td>
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<tr>
<td>AN-SC 200</td>
<td>Intro to Animal Science</td>
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<tr>
<td>ANTHR 101</td>
<td>Physical Anthropology</td>
</tr>
<tr>
<td>ANTHR 105</td>
<td>Physical Anthro Lab</td>
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<tr>
<td>ASTRO 141</td>
<td>Intro to Astrophysics</td>
</tr>
<tr>
<td>ASTRO 160</td>
<td>Intro to Modern Astronomy</td>
</tr>
<tr>
<td>BIO 50</td>
<td>Basic Biology</td>
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<tr>
<td>BIO 101</td>
<td>Biological Principles</td>
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<tr>
<td>BIO 111</td>
<td>General Biology</td>
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<tr>
<td>BIO 114</td>
<td>Intro to Ecology</td>
</tr>
<tr>
<td>BIO 115</td>
<td>Genetics, Evolution &amp; Society</td>
</tr>
<tr>
<td>BIO 128</td>
<td>The Sierra Nevada</td>
</tr>
<tr>
<td>BIO 130</td>
<td>Intro to Marine Vertebrates</td>
</tr>
<tr>
<td>BIO 130/130L</td>
<td>Intro:Marine Vertebrates w Lab</td>
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<tr>
<td>BIO 140</td>
<td>Intro to Marine Biology</td>
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<tr>
<td>BIO 145</td>
<td>Intro to Freshwater Biology</td>
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<td>BOT 110</td>
<td>Plant Biology</td>
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<tr>
<td>CHEM 101</td>
<td>General Chemistry 1 (5)</td>
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<td>CHEM 142</td>
<td>Pre-General Chemistry</td>
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<tr>
<td>CHEM 143</td>
<td>Introductory College Chem</td>
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<td>CHEM 150</td>
<td>Explor Our Chem Environ</td>
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<tr>
<td>EASCI 161</td>
<td>Earth Science</td>
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<tr>
<td>ELETEC 208/INTEC 208 -Electricity and Elctrncs</td>
<td>(3)</td>
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<tr>
<td>ENSCI 108</td>
<td>Environmental Conservation</td>
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<td>FNDR 219</td>
<td>Nutrition</td>
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<td>FNDTR 351</td>
<td>Practical Nutrition</td>
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<tr>
<td>GEO 64</td>
<td>Geology of National Parks</td>
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<tr>
<td>GEO 160</td>
<td>Intro to Geology</td>
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<tr>
<td>GEO 161</td>
<td>Physical Geology</td>
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<tr>
<td>GEO 165</td>
<td>Geology of California</td>
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<tr>
<td>GEO 166</td>
<td>Historical Geology</td>
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<tr>
<td>METEO 160</td>
<td>Intro to Weather &amp; Climate</td>
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<tr>
<td>MICRO 101</td>
<td>Microbiology</td>
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<tr>
<td>NR 200</td>
<td>Soils</td>
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<td>NR 215</td>
<td>Wildlife Production</td>
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<td>NR 220</td>
<td>Introductory Forestry</td>
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<tr>
<td>PHSCI 52</td>
<td>The Way Things Work</td>
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<tr>
<td>PHSCI 161</td>
<td>Science Matters</td>
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<tr>
<td>PHSCI 161</td>
<td>Science Matters</td>
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<tr>
<td>PHSCI 164</td>
<td>Phys Sci Environ Lab</td>
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<tr>
<td>PHYS 101</td>
<td>General Physics</td>
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<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat &amp; Waves</td>
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<tr>
<td>PHYS 160</td>
<td>Descriptive Intro to Physics</td>
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<tr>
<td>PHYS 160/164</td>
<td>Intro to Physics &amp; Phys Lab</td>
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<tr>
<td>PHYS 165</td>
<td>Introductory Physics</td>
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<tr>
<td>PL-SC 200</td>
<td>Intro to Plant Science</td>
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<tr>
<td>PL-SC 230</td>
<td>Fruit Science</td>
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<tr>
<td>PSYCH 103</td>
<td>Psychology</td>
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<tr>
<td>ZOOL 110</td>
<td>Animal Biology</td>
</tr>
</tbody>
</table>

Continued ➤
B. SOCIAL & BEHAVIORAL SCIENCES: Complete a minimum of three (3) units.

ADJU 201 Intro to Admin of Justice (3)  HIST 101 Hist of the US thru Reconstruction (3)  POLSCI 102 Const & Rights of Americans (3)
AG-EC 210 Elem of Ag Economics (3)  HIST 102 Hist of the US-Post Civil War (3)  POLSCI 110 International Relations (3)
AG-GE 146/INDIS 146 Ag, Environment & Soc (3)  HIST 106 World Civ to the 16th Cent (3/F02)  POLSCI 120 Cult Politics & Problems (3)
ANTHR 102 Cultural Anthropology (3)  HIST 107 World Civ from the 16th Cent (3/F02)  POLSCI 160 The Pacific Rim (3)
ANTHR 140 Magic, Witchcraft & Relig (3)  HIST 112 20th Century America (3)  PSYCH 51 Psych in Everyday Life (3)
BUSAD 240 Principles of Mgmt (3)  HIST 113 Soc/Cult Hist US prior to 20th Cent (3)  PSYCH 101 General Psychology (3)
CLDDV 100 Child Growth and Dev (3)  HIST 119 Soc/Cult Hist 20th Cent America (3/F00)  SOCIO 101 Intro to Sociology (3)
CLDDV 150 Atypical Development (3)  HIST 128 Hist of Amer Far West Front (3)  SOCIO 102 Social Problems in U.S. (3)
ECON 101 Econ for Mgt Maj (3)  HIST 154 Hist of Afri-Amer thru 19th Cent (3)  SOCIO 131 Sociology of Medicine... (3/F00)
ECON 102 Econ Prin: Macro (3)  HIST 155 Afri-Amer in 20th/21st Cent (3/F99)  SOCIO 150 Ethnicity & Culture in America (3)
ECON/HIST 115 Econ Hist of the US (3)  HUMSR 101 Intro to Human Services (3)  SOCIO 154 Afri-Amer Cult/Communities (3)
ENSCI/INDIS 110 California Water (3)  INDIS* 55 Intro Women's Studies (3)  SOCIO 156 Mexican Culture in the US (3)
GEOG 102 Cultural Geography (3)  INDIS* 105 Intro Women's Studies (3)  SOCSOC 105 Women's Studies (3) (F01)
GEOG 105 Economic Geog (3)  POLSCI 101 American Politics (3)  SOCSOC 110 Introduction to Education (3)
GEOG 110 World Regional Geography(3)

C. HUMANITIES: Complete a minimum of three (3) units.

ARCH 117 History of Architecture 1 (3)  ENGL 172 Intro to Chicano Lit (3)  PHILO 101 Philosophy (3)
ARCH 118 History of Architecture 2 (3)  ENGL 173 Intro to Latin American Lit (3)  PHILO 111 Ethics: Theory & Application (3)
ART 100 Appreciation of Art (3)  ENGL 175 Women in Literature (3)  PHILO 115 Religion: Philo & Comp IQ (3)
ART 111 American Art (3)  ENGL 176 Introduction to Mexican Lit, (3/F03)  PHILO 120 History of Philo: Ancient (3)
ART 162 History of Renaissance Art (3)  ENGL 179 Intro to Native American Lit (3)  PHILO 121 History of Philo: Modern (3)
ART 163 Hist of Modern Art (3)  FILM 153 Contemporary Film (3/F01)  PHILO 123 20th Century Philosophy (3/F02)
ART 164 History of Art (3)  FILM 154 Movies w/Social Message... (3/F01)  PHILO 140 Philosophy and Film (3)
ART 165 History of Art (3)  FREN 101 French 1 (4)  PORTG 51 Intro to Prac. Portuguese(3/F99)
ART 168 Survey of Photography (3)  FREN 201 French 2 (4)  RA-TV 150 Intro to Mass Communication (3)
ART 169 Hist of Non-Western Art(3/F99)  FREN 103 French 3 (4)  SIGN 125 ASL: Begin Comm w/Deaf (3)
CMPGR 201 Animation: Global View (3/F03)  FREN 104 French 4 (4)  SIGN 126 ASL: Interm Comm w/Deaf (3)
ENGL 112 Intro to Novel & Short Story (3)  GERM 101 German 1 (4)  SIGN 127 ASL: Adv Comm w/Deaf (3)
ENGL 114 Introduction to Poetry (3)  GERM 102 German 2 (4)  SOCSOC 105 Women's Studies (3) (F01)
ENGL 116 Introduction to Drama (3)  GERM 103 German 3 (4)  SPAN 51 Intro to Practical Spanish 1 (3)
ENGL 131 Intro to World Lit to 1500 (3)  GERM 104 German 4 (4)  SPAN 52 Intro to Practical Spanish 2 (3)
ENGL 132 Intro to World Lit 1500 to Present (3)  HIST 104 Western Civilization (3)  SPAN 101 Spanish 1 (4)
ENGL 135 American Lit to 1850 (3)  HIST 105 Western Civilization (3)  SPAN 102 Spanish 2 (4)
ENGL 136 American Lit 1850 to Prsent (3)  HUMAN 101 Intro to the Humanities (3)  SPAN 103 Spanish 3 (4)
ENGL 137 Survey of English Lit(3)  HUMAN 105 Early Humanistic Trad (3)  SPAN 104 Spanish 4 (4)
ENGL 138 Survey of English Lit (3)  HUMAN 106 Humanities in the Modern World (3)  SPAN 111 Spanish for Spanish Speakers (4)
ENGL 151 Folklore (3)  HUMAN 110 East Meets West (3)  SPAN 112 Intro to Spanish/Chicano Lit (4)
ENGL 156 The Bible as Lit-The Hebrew Canon (3)  HUMAN 130 Introduction to Western Religion  SPAN 138 Adv Conversational Span (3)
ENGL 157 The Bible as Lit-The New Testmnt... (3)  INDIS 55* Intro to Women's Studies (3)  SPCOM/THTR 120 Oral Reading/Interpretation (3)
ENGL 161 Film Appreciation (3)  INDIS* 105 Intro to Women's Studies (3)  SPCOM/THTR 124 Adv Readers’ Theatre (3/F00)
ENGL/INDIS162 History of Film (3/F03)  MUSIC 110 Music Appreciation (3)  THTR 100 Intro to Theatre Arts (3)
ENGL 163 Intro to Shakespeare (3)  MUSIC 112 History of Music 1 (3)  THTR 102 World Theatre (3) (F03)
ENGL 168 Adolescent Literature (3)  MUSIC 113 History of Music 2 (3)  THTR 110 Drama in Performance (3)
ENGL 169 Children's Literature (3)  MUSIC 118 Intro to Amer Pop Music (3)  THTR 150 Elements of Playwriting (3)
ENGL 171 Intro to African-American Lit (3)  MUSIC 169 Intro to World Music(3/F01)  THTR 165 Hist of Amer, Music Thrt (3)

D. LANGUAGE & RATIONALITY: Complete D1 and D2 as indicated.

D.1 English Composition:

Complete a minimum of three (3) units:

CMPS 213 Programming with Visual BASIC (3)  MATH 130 Finite Mathematics (3)
CMPS 241 Assembly Lang Program (3)  MATH 134 Elementary Statistics (4)
CMPS 261 Problem Solv & Program 2(3)  MATH 138 Calc for Bus & Soc Sci (3)
ENGL 101 Composition & Reading (3)  MATH 144 Applied Fortran (3)
ENGL 102 Composition & Reading (3)  MATH 171 Calculus: First Course (4)

D.2 Comm. & Analytical Thinking:

Complete a minimum of three (3) units:

BUSAD 210 Business Communication (3)  MATH 105 Introduction to Algebra (3)
CMPGR 264 Publishing on WWW (3)  MATH 106 Structure of Mathematics 1 (3)  PHIL 107 Philosophy of Science (3)
CMPGR 265 Multimedia on WWW (3)  MATH 107 Structure of Mathematics 2 (3)  SPCOM 100 Fund of Public Speaking (3)
CMPS/PHILO 103 Symbolic Logic (3)  MATH 108 Structure of Mathematics 3 (3)  SPCOM 102 Intro to Human Communications (3)
CMPS/PHILO 103 Symbolic Logic (3)  MATH 109 Calculus: Second Course (3)  SPCOM 104 Argumentation (3)
CMPS 201 General Computer Lit (3)  MATH 110 Calculus: Third Course (3)  SPCOM 106 Group & Organizational Comm (3)
CMPS 222 Functions & Analytic Geom 4)  MATH 111 Applied College Algebra (3)  SPCOM 107 Intro to Debate (3)
CMPS 222 Functions & Analytic Geom 4)  MATH 112 Structure of Mathematics 4 (3)  SPCOM 110 Persuasion (3)
CMPS 222 Functions & Analytic Geom 4)  MATH 113 Statistics (3)  SPCOM 130 Intercultural Comm (3)

E. HEALTH EDUCATION: Complete a minimum of three (3) units.

FAMLF 131 Family Relationships (3)  PSYCH 110 Human Sexual Behavior (3)  THETR/PFE 194 Intro to World Dance (3/F01)
HE 110 Healthful Living (3)  PSYCH 130 Personal Adjustment (3)
HE 111 Women's Health Issues (3)  PSYCH 141 Human Lifespan (3)

* Can be used in area B or C, not both.
Modesto Junior College will certify completion of this pattern in part, or in its entirety, for students transferring to one of the twenty-three campuses of the California State University (CSU). Modesto Junior College will give full certification upon the completion of thirty-nine (39) designated units. Courses must be completed with a C or better to be certified. Some courses have only recently been approved for CSU transfer. Those courses are valid for transfer as of the date indicated in parentheses, i.e. (F99) or “Fall 1999”.

### CSU-GE Transfer Pattern

#### AREA A
**Communication in the English Language and Critical Thinking**

Complete one course in each category for a total of nine (9) units.

**A.1 ORAL COMMUNICATION**

- SPCOM 100 Fund of Public Speak (3)
- SPCOM 102 Intro Human Comm (3)
- SPCOM 110 Persuasion (3)

**A.2 WRITTEN COMMUNICATION**

- ENGL 101 Comp and Reading (3)

**A.3 CRITICAL THINKING**

- CMPSC/PHILO 103 Symbolic Logic (3)
- ENGL 103 Clear Thinking in Writing (3)
- PHILO 105 Reasoning (3)
- PHILO 107 Philo of Science (3) (F93)

**SPCOM 104 Argumentation (3)**

**SPCOM 107 Intro to Debate (3)**

#### AREA B
**Physical Universe, its Life Forms and Mathematical Concepts**

Nine (9) units with one course from B.1, B.2, and B.4 required. One course from B.1 or B.2 must be a laboratory course (marked with an asterisk*) for B.3.

**B.1 PHYSICAL SCIENCE**

- ASTRO 141 Intro Astrophysics (3)
- ASTRO 141-151 Intro Astro/Lab (3-1)
- ASTRO 160 Intro to Modern Astro (3)
- ASTRO 160-151* Intro to Mod Astro/Lab (3-1)
- CHEM 101* Gen. Chemistry 1 (5)
- CHEM 102* Gen. Chemistry 2 (5)
- CHEM 103 Gen. Chem 2 Lecture (3)
- CHEM 112 Organic Chem (5) (F03)
- CHEM 142* Pre-General Chemistry (4)
- CHEM 143* Intro College Chem (5)
- CHEM 144* Fund of Organic & Biochem (4)
- CHEM 150 Exploring ourChem Environment (3)
- EASCI 161* EARTH Science (4)
- GEOG 101 Physical Geography (3)
- GEOL 100 Intro to Geology (3) (F95)
- GEOL 161* Physical Geology (4)
- GEOL 165 Geol of California (3)
- GEOL 166* Historical Geol (4)
- METEO 160 Intro to Wthr & Climate (3)

**B.2 LIFE SCIENCE**

- ANAT 125* Human Anatomy (4)
- AP 150* Integ Anat/Physio (4) (F96)
- ANTHR 101 Phys Anthropology (3)
- ANTHR 105* Phys Anthro Lab (1) (F98)
- BIO 101* General Principles (5)
- BIO 111* General Biology (4)
- BIO 144 Intro to Ecology (3) (F98)
- BIO 115 Genetics, Evol & Soc (3) (F97)
- BIO 128 The Sierra Nevada (3)
- BIO 140* Intro to Marine Biology (4)
- BIO 145* Intro to Freshwater Biology (4)
- BOT 101* General Botany (4)
- BOT 110* Plant Biology (3)
- ENSCI 108 Env. Conservation (3)
- MICRO 101* Microbiology (4) (F94)
- PSYHO 101* Intro Human Physio (4)
- PL-SC 200 Intro to Plant Science (3)
- PSYCH 103 Psychobiology (3)
- ZOOLOG 101* General Zoology (4)
- ZOOLOG 110* Animal Biology (3)

**B.3 LABORATORY**

Take one course from B.1 or B.2 with a laboratory, as indicated by the asterisk(*)

#### AREA C
**Arts, Literature, Philosophy, and Foreign Language**

Nine (9) units required. Three (3) units from C.1 and three (3) units from C.2. Three (3) additional units from C.1 or C.2.

**C.1 ARTS**

- ARCH 117 History of Architecture 1 (3)
- ARCH 118 History of Architecture 2 (3)
- ART 102/CMPGR202 Microcomp Graphics (3)(F81)
- ART 120 Basic Drawing 1 (3)
- ART 124 Color and Design (3)
- ART 140 Sculpture (3)
- ART 160 Appreciation of Art (3)
- ART 161 American Art (3) (F90)
- ART 162 Hist of Renais Art (3) (F92)
- ART 163 Hist of Modern Art (3) (F94)
- ART 164 History of Art (3)
- ART 165 History of Art (3)
- ART 168 Survey of Photography (3)
- ART 169 History of Non-Western Art (3) (F99)
- ART 170 Basic Photography (3)
- MUSIC 106 Music Theory 3 (3) (F93)
- MUSIC 110 Music Appreciation (3)
- MUSIC 112 History of Music 1 (F93)
- MUSIC 113 History of Music 2 (3) (F93)
- MUSIC 118 Intro to Amer Pop Music (3)
- MUSIC 169 Intro to World Music (3)(F99)
- SPCOM/THER 120 Oral Read & Interpre (3)
- SPCOM/THER 122 Intro to Readers’ Theor (3)
- SPCOM/THER 123 Storytelling: Intop Child’s Lit(3)(F’00)
- SPCOM/THER’124 Advanced Readers’ Theatre (3)
- THER 100 Intro to Theatre Arts (3)
- THER 110 Drama in Performance (3) (F01)
- THER 160 Fundamentals of Acting (3)
- THER 161 Intermediate Acting (3)
- THER 165 History of American Music Theater(3)(F92)
- THER 194 Intro to World Dance (3) (F01)

**C.2 LITERATURE, PHILOSOPHY, AND FOREIGN LANGUAGE**

- ENGL 102 Adv Comp & Intro to Lit (3)
- ENGL 105 History of Architecture (3)
- ENGL 106 Creative Writing, Short Fiction (3)
- ENGL 112 Intro to Novel & Shrt Story (3)
- ENGL 114 Intro to Poetry (3)
- ENGL 116 Intro to Drama (3)
- ENGL 131 Intro to World Lit to 1500 (3)
- ENGL 132 Intro to World Lit 1500 to Present (3)
- ENGL 135 American Lit to 1850 (3)

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**Continued ➤**
C.2 LITERATURE, PHILOSOPHY, AND FOREIGN LANGUAGE (cont’d)

ENGL 136 Am Lit 1850 to Present (3)
ENGL 137 Survey of Eng Lit (3)
ENGL 138 Survey of Eng Lit (3)
ENGL 151 Folklore (3)
ENGL 156 Bible as Lit: Hebrew Canon (3)
ENGL 157 Bible as Lit: New Testament...
ENGL 161 Film Appreciation (3)
ENGLNDS 162 History of Cinema (3)
ENGL 163 Intro to Shakespeare (3)
ENGL 168 Adolescent Lit (F90)
ENGL 169 Children’s Lit (3)
ENGL 171 Intro African-American Lit (F92)
ENGL 172 Intro to Chicano Lit (F93)
ENGL 173 Intro Latin American Lit (F93)
ENGL 175 Women in Literature (3)
ENGL 176 Intro to Mexican Lit (F93)
ENGL 179 Intro to Nv Amer Lit, Myth & Oral Trad (F95)

FOREIGN LANGUAGE numbered 101, 102, 103, 104

HUMAN 101 Intro to the Humanities (3)
HUMAN 105 Early Human History (3)
HUMAN 106 Humanities in the Modern World (3)
HUMAN 110 East Meets West (3)
HUMAN 130 Introduction to Western Religions (3)

PHILO 101 Philosophy (3)
PHILO 111 Ethics: Theory & Appl (3)
PHILO 115 Religion: A Phil. & Comparative Inquiry (3)
PHILO 120 Hist of Philo: Ancient (3)
PHILO 121 Hist of Philo: Modern (3)
PHILO 123 20Th Century Philosophy (F02)
PHILO 140 Philosophy & Film (3) (F93)
SIGN 125 ASL - Beginning (3) (F95)
SIGN 126 ASL - Intermediate (3)(F95)
SIGN 127 ASL - Advanced (3) (F95)
SPAN 111 Fnd Spkn & Wrtn Spn for Spkn Spkrs (4)
SPAN 112 Introv. to Span and Chino Lit (3) (F90)
SPAN 138 Adv Convers Span (3) (F93)

THETR 150 Elem of Playwriting (3) (F94)

D.3 ETHNIC STUDIES

HIST 125 History of Mexico (3)
HIST 154 History of Afr. Amer thru 19th Century (3)(F95)
HIST 145 Survey of Latin Amer. Civilization (3)
HIST 155 History of Afr. Amer in 20th/21st Cent. (3)(F99)
SOCIO 150 Ethnicity in America (3)
SOCIO 154 Afr-Amer Culture & Communities (3)(F95)
SOCIO 156 Mex Culture in the US (3)
SPCOM 130 Intercultural Communication (3)(F02)

D.4 GENDER STUDIES

INDIS 105 Intro to Women’s Studies(3)(F96)
POLSC 151 Women and Politics (F03)
SOCSC 105 Women’s Studies (3) (F01)

D.5 GEOGRAPHY

GEOG 102 Cultural Geography (3)
GEOG 105 Economic Geography (3)
GEOG 110 World Regional Geography (3)(F97)

D.6 HISTORY

HIST 101 History of US thru Reconstruction (3)
HIST 102 History of the US - Post Civil War (3)
HIST 104 Western Civilization (3)
HIST 105 Western Civilization (3)
HIST 106 World Civ. to the 16th Century (3) (F02)
HIST 107 World Civ. from the 16th Century (3) (F02)
HIST 112 Twentieth Century Amer (3)
HIST 113 Soc & Cult Hist of US Prior to 20th Cent (3)
HIST 115 Econ History of the US (3)
HIST 116 Women in Amer History (3)
HIST 119 Soc & Cult Hist 20th Cent Amer (3) (F00)
HIST 125 History of Mexico (3)
HIST 128 History of Amer Far Western Frontier (3)(F94)
HIST 129 History of California (3)
HIST 145 Survey of Latin Amer Civil (3)
HIST 154 History of Afr. Amer thru 19th Cent (3)(F95)
HIST 155 History of Afr. Amer in 20th/21st Cent (3)(F99)

D.7 INTERDISCIPLINARY SOCIAL OR BEHAVIOR SCIENCE

AGGE/INDIS 146 Ag, Envr & Soc. (3)
ENS1 110 Calif Water (3) (F98)
SPCOM 130 Intercultural Communication (3)(F02)

D.8 POLITICAL SCIENCE, GOVERNMENT AND LEGAL INSTITUTIONS

POLSC 101 American Politics (3)
POLSC 102 The Const. & the Rights of Americans (3)
POLSC 110 International Relations (3)
POLSC 111 War & Peace in 20th Cent (3)
POLSC 120 Calif Politics & Problems(3)
POLSC/PHILO 130 Political Theory (3)
POLSC 140 Comparative Politics (3)
POLSC 151 Women in Politics (3) (F03)
POLSC 160 The Pacific Rim(3)(F98)

D.9 PSYCHOLOGY

Psych 101 General Psychology (3)
Completion of the IGETC (Intersegmental General Education Transfer Curriculum) will permit a student to transfer from a community college to most campuses and majors in either the California State University or University of California system without the need, after transfer, to take additional lower division general education courses to satisfy campus specific general education requirements.

### AREA 1: English Composition
If you plan to attend CSU, choose 3 courses, 1 from each group. If you plan to attend UC, choose 2 courses, 1 from Group A, and 1 from Group B.

<table>
<thead>
<tr>
<th>GROUP A - English Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course, or (3) semester units.</td>
</tr>
<tr>
<td>ENGL 101 Composition &amp; Reading (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP B - Critical Thinking/English Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course, or (3) semester units</td>
</tr>
<tr>
<td>ENGL 103 Clear Thinking in Writing (3)</td>
</tr>
<tr>
<td>PHIL 105 Reasoning (3) (F92)</td>
</tr>
<tr>
<td>PHIL 107 Philo of Science (3) (F93)</td>
</tr>
<tr>
<td>SPCM 104 Argumentation (3) (F93)</td>
</tr>
</tbody>
</table>

### AREA 2: Mathematical Concepts and Quantitative Reasoning
For UC and CSU, choose at least three (3) courses/nine (9) semester units. One course must be from 3A and one from 3B, and one additional course from either 3A or 3B.

<table>
<thead>
<tr>
<th>3A. Arts (cont’d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 165 History of Art (3)</td>
</tr>
<tr>
<td>ART 169 Hist of Non-Western Art (3)(F99)</td>
</tr>
<tr>
<td>MUSIC 102 Music Theory 1 (3)</td>
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<tr>
<td>MUSIC 103 Music Theory 2 (3)</td>
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<tr>
<td>MUSIC 106 Music Theory 3 (3)</td>
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<tr>
<td>MUSIC 107 Music Theory 4 (3)</td>
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<tr>
<td>MUSIC 110 Music Appreciation (3)</td>
</tr>
<tr>
<td>MUSIC 169 Intro to World Music (3)(F99)</td>
</tr>
<tr>
<td>THER 194 Intro to World Dance (PE 194)(3)(F01)</td>
</tr>
<tr>
<td>THER 100 Intro to Theatre Arts (3)</td>
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<tr>
<td>THER 110 Drama in Performance (3)(F01)</td>
</tr>
</tbody>
</table>

### AREA 3: Arts and Humanities (cont’d)

<table>
<thead>
<tr>
<th>3B. Humanities</th>
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</thead>
<tbody>
<tr>
<td>ENGL 112 Intro Novel &amp; Short Story (3)</td>
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<tr>
<td>ENGL 114 Intro to Poetry (3)</td>
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<tr>
<td>ENGL 116 Intro to Drama (3)</td>
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<tr>
<td>ENGL 131 Intro to World Lit to 1500 (3)</td>
</tr>
<tr>
<td>ENGL 132 Intro to World Lit to 1500 Present (3)</td>
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<tr>
<td>ENGL 135 American Lit to 1580 (3)</td>
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<tr>
<td>ENGL 136 American Lit 1580 to Present (3)</td>
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<tr>
<td>ENGL 137 Survey of English Lit (3)</td>
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<tr>
<td>ENGL 138 Survey of English Lit (3)</td>
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<tr>
<td>ENGL 151 Folktale (3)(F01)</td>
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<tr>
<td>ENGL 156 Bible as Lit- Hebrew Canon (3)</td>
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<tr>
<td>ENGL 157 Bible as Lit: New Testament and... (3)</td>
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<tr>
<td>ENGL/INDIS 162 History of Cinema (3)</td>
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<tr>
<td>ENGL 163 Intro to Shakespeare (3)</td>
</tr>
<tr>
<td>ENGL 171 Intro African-Amer. Lit (3)(F95)</td>
</tr>
<tr>
<td>ENGL 172 Intro to Chicano Lit (3)(F95)</td>
</tr>
<tr>
<td>ENGL 173 Intro to Latin American Lit (3)</td>
</tr>
<tr>
<td>ENGL 175 Women in Literature (3)</td>
</tr>
<tr>
<td>ENGL 179 Intro to Nat.Amer Lit &amp; Oral Trad.(3)(F99)</td>
</tr>
<tr>
<td>FREN 103 French 3 (4)</td>
</tr>
<tr>
<td>FREN 104 French 4 (4)</td>
</tr>
<tr>
<td>GER 103 German 3 (4)</td>
</tr>
<tr>
<td>GER 104 German 4 (4)</td>
</tr>
<tr>
<td>HUMAN 101 Intro to the Humanities (3)</td>
</tr>
<tr>
<td>HUMAN 105 Early Humanistic Traditions (3)</td>
</tr>
<tr>
<td>HUMAN 106 Human in Modern World (3)</td>
</tr>
<tr>
<td>HUMAN 110 East Meets West (3)</td>
</tr>
<tr>
<td>HUMAN 130 Intro. to Western Religions (3)</td>
</tr>
<tr>
<td>PHILO 101 Philosophy (3)</td>
</tr>
<tr>
<td>PHILO 111 Ethics: Theory &amp; Appl (3)</td>
</tr>
<tr>
<td>PHILO 115 Religion: Philo &amp; Comp Inq (3)</td>
</tr>
<tr>
<td>PHILO 120 Hist of Philosophy: Ancient (3)</td>
</tr>
<tr>
<td>PHILO 121 Hist of Philosophy: Modern (3)</td>
</tr>
<tr>
<td>PHILO 123 Twentieth Century Philosophy (3)(F02)</td>
</tr>
<tr>
<td>SIGN 126 ASL - Int Comm. w/ the Deaf (3)(F97)</td>
</tr>
<tr>
<td>SIGN 127 ASL - Adv Comm. w/ the Deaf (3)(F97)</td>
</tr>
<tr>
<td>SPAN 103 Spanish 3 (4)(F92)</td>
</tr>
<tr>
<td>SPAN 104 Spanish 4 (4)(F92)</td>
</tr>
<tr>
<td>SPAN 112 Into to Spanish and Chicano Lit. (4)</td>
</tr>
</tbody>
</table>

### AREA 4: Social and Behavioral Sciences
At least three courses/nine (9) semester units in a minimum of two disciplines.

| PHIL 102 Cultural Anthropology (3) |
| PHIL 130 Archaeology & Cult Prehist (3) |
| PHIL 150 Native People of North America (3) |

| ECON 101 Econ Principles: Macro (3) |
| ECON 102 Econ Principles: Micro (3) |
| ECON 115 Econ History of the US (HIST 115)(3)(^) |
| ENSCI 110 California Water (3)(F98) |
| GEOG 102 Cultural Geography (3) |
| GEOG 105 Economic Geography (3)(F00) |

| HIST 101 History of the US thru Reconstruction (3)(^) |
| HIST 102 Hist of the US-Post Civil War (3)(^) |
| HIST 104 Western Civilization (3) |
| HIST 105 Western Civilization (3) |
| HIST 106 World Civ. to the 18th Century (3)(F02) |
| HIST 107 World Civ. from the 16th Century (3)(F02) |
| HIST 112 20th Century America (3)(^) |
| HIST 113 Soc., Ctrtl. Hist of US prior to 19th Cent.(3) |
| HIST 116 Women in American Hist (3)(^) |
| HIST 119 Soc/Ctrtl. History 20th Cent. Amer.(3)(F00) |
| HIST 125 History of Mexico (3) |
| HIST 128 Hist. of American Far Western Front. (3) |
| HIST 129 History of California (3) |
| HIST 145 Survey of Latin Amer Civ. (3) |
| HIST 154 Afr-Amer thru 19th Cent.(3)(F99) |
| HIST 155 Afr-Amer in 20th & 21st Cent. (3)(F02) |
| PHIL 130 Political Theory (POLSC 130) (3) |
| POLS 101 American Politics (3)(^) |
| POLS 120 Const & Rights of Amer (3)(^) |
| POLS 110 International Relations (3)(^) |
| POLS 111 War & Peace in 20th Cent (3) |
| POLS 120 Calif Politics & Problems (3)(^) |
| POLS 130 Poli Theory (aka Philo 130)(3) |
| POLS 140 Comparative Government (3) |
| POLS 151 Women and Politics(3)(F03) |
| POLS 160 The Pacific Rim(3)(F99) |
| PSYCH 101 General Psychology (3) |
| PSYCH 104 Social Psychology (3) |
| PSYCH 110 Human Sexual Behavior (3) |
| PSYCH 141 Human Lifespan (3) |
| SOCIO 101 Introduction to Sociology (3) |
| SOCIO 102 Social Prob. in the US (3)(F99) |
| SOCIO 125 Sociology of the Family (3) |
| SOCIO 150 Ethnic & Culture in America (3) |
| SOCIO 154 Afr-Amer Cultures and Communities (3) |
| SOCIO 156 Mexican Culture in the US (3) |
| SOCIO 157 Women’s Studies (3)(F01) |
| SPCM 130 Intercultural Comm. (3)(F97) 130 |

** Indicates that transfer credit may be limited on specific course sequences at the University of California. Please consult the UC Transfer Course Agreement available in the Counseling Office, MM 103 or Transfer Center.

^ See limitation on credit under United States History, Constitution and American Ideals Requirement.
### AREA 5

**Physical and Biological Sciences**

Select at least two courses (7-9 semester units). Choose one course from 5A and one course from 5B required. One course from 5A or 5B must be a laboratory marked with a single asterisk (*).

#### 5A. Physical Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTRO 141</td>
<td>Intro to Astrophysics (3)</td>
</tr>
<tr>
<td>ASTRO 141*151</td>
<td>Intro to Astrophysics w/ lab (3)(1)</td>
</tr>
<tr>
<td>ASTRO 160</td>
<td>Intro to Modern Astronomy (3)**</td>
</tr>
<tr>
<td>ASTRO 160*151</td>
<td>Intro to Mod Astro w/ Lab (3)**(1)</td>
</tr>
<tr>
<td>CHEM 101*</td>
<td>General Chemistry 1 (5)</td>
</tr>
<tr>
<td>CHEM 102*</td>
<td>General Chemistry 2 (5)**</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>General Chemistry 2 Lecture(3)**</td>
</tr>
<tr>
<td>CHEM 112*</td>
<td>Organic Chemistry 1 (5)**</td>
</tr>
<tr>
<td>CHEM 113*</td>
<td>Organic Chemistry 2 (5)**</td>
</tr>
<tr>
<td>CHEM 142*</td>
<td>Pre-General Chemistry (4)**</td>
</tr>
<tr>
<td>CHEM 143*</td>
<td>Intro College Chem (5)**</td>
</tr>
<tr>
<td>CHEM 144*</td>
<td>Fund of Organic &amp; Biochemistry (4)**</td>
</tr>
<tr>
<td>EASCI 161*</td>
<td>Earth Science (4)**</td>
</tr>
<tr>
<td>GEOG 101</td>
<td>Physical Geography (3)</td>
</tr>
<tr>
<td>GEOL 160</td>
<td>Intro to Geology (3)(F99)**</td>
</tr>
<tr>
<td>GEOL 161*</td>
<td>Physical Geology (4)</td>
</tr>
<tr>
<td>GEOL 165</td>
<td>Geology of California (3)</td>
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<tr>
<td>GEOL 166*</td>
<td>Historical Geology (4)</td>
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<tr>
<td>METEO 160</td>
<td>Intro Weather &amp; Climate (3)</td>
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<tr>
<td>METEO 160/151</td>
<td>Intro to Wthr &amp; Climate w/ Lab (3-1)</td>
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<tr>
<td>PHSCI 161*</td>
<td>Science Matters (3)**</td>
</tr>
<tr>
<td>PHYS 101*</td>
<td>General Physics (4)**</td>
</tr>
<tr>
<td>PHYS 102*</td>
<td>General Physics (4)**</td>
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<tr>
<td>PHYS 103*</td>
<td>General Physics (4)**</td>
</tr>
<tr>
<td>PHYS 142*</td>
<td>Mech, Heat &amp; Waves (4)**</td>
</tr>
<tr>
<td>PHYS 143*</td>
<td>Elect, Magnetism, Optics... (4)**</td>
</tr>
<tr>
<td>PHYS 160</td>
<td>Descrip Intro to Physics (3)**</td>
</tr>
<tr>
<td>PHYS 165*</td>
<td>Introductory Physics (4)**</td>
</tr>
</tbody>
</table>

#### 5B. Biological Sciences

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ANTHR 101</td>
<td>Physical Anthropology (3)</td>
</tr>
<tr>
<td>ANTHR 101/105</td>
<td>Physical Anthro w/ Lab (3-1)(F98)</td>
</tr>
<tr>
<td>BIO 101*</td>
<td>Biological Principles (5)**</td>
</tr>
<tr>
<td>BIO 111*</td>
<td>General Biology (4)**</td>
</tr>
<tr>
<td>BIO 114</td>
<td>Intro to Ecology (3)(F99)</td>
</tr>
<tr>
<td>BIO 140*</td>
<td>Intro to Marine Biology (4)</td>
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<tr>
<td>BIO 145*</td>
<td>Intro to Freshwater Biology (4)</td>
</tr>
<tr>
<td>BOT 101*</td>
<td>General Botany (4)**</td>
</tr>
<tr>
<td>BOT 110</td>
<td>Plant Biology (4) (F03)</td>
</tr>
<tr>
<td>ENSCI 108</td>
<td>Environmental Conservation (3)</td>
</tr>
<tr>
<td>MICRO 101*</td>
<td>Microbiology (4)</td>
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<tr>
<td>PHYSIO 101*</td>
<td>Intro to Human Physiol (4)**</td>
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<tr>
<td>PSYCH 103</td>
<td>Psychobiology (3)</td>
</tr>
<tr>
<td>ZOOL 101*</td>
<td>General Zoology (4)**</td>
</tr>
</tbody>
</table>

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### US History, Constitution, and American Ideals Requirement

UC

While in high school, the student must complete one of the following course combinations with a C or better.

- One year of American History or,
- ½ year of American History plus ½ year of civics, or
- American government.

**Note:** If the student has not met this requirement while in high school, courses taken at MJC to meet the requirement will not fulfill the Area 4 Social and Behavioral Sciences requirement.

CSU

The student is required to complete six (6) units outside of the IGETC pattern. If courses are taken at MJC to meet this requirement, they will not fulfill the Area 4 requirement in Social and Behavioral Sciences. Complete two courses, one from a. and one from b. or both from c.

**a.**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON/HIST 115</td>
<td>Econ History of the US (3)</td>
</tr>
<tr>
<td>HIST 112</td>
<td>20th Cent. America (3)</td>
</tr>
<tr>
<td>HIST 113</td>
<td>Soc./Cult. Hist US Prior 20th Cent. (3)</td>
</tr>
<tr>
<td>HIST 115</td>
<td>Women in American History (3)</td>
</tr>
<tr>
<td>HIST 119</td>
<td>Soc./Cult. Hist 20th Cent Amer(3)(F00)</td>
</tr>
<tr>
<td>HIST 128</td>
<td>Hist of Amer Far West. Fron. (3)</td>
</tr>
<tr>
<td>HIST 154</td>
<td>Afr Amer thru 19th Cent.(3)(F99)</td>
</tr>
<tr>
<td>HIST 155</td>
<td>Afr-Amer in 20th &amp; 21st Cents. (3)(F99)</td>
</tr>
</tbody>
</table>

**b.**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLSC 101</td>
<td>American Politics(3)</td>
</tr>
<tr>
<td>POLSC 102</td>
<td>The Const. &amp; Rights of Americans (3)</td>
</tr>
<tr>
<td>POLSC 110</td>
<td>International Relations (3)</td>
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<tr>
<td>POLSC 120</td>
<td>Calif Politics &amp; Pros (3)</td>
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</tbody>
</table>

**c.**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
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<tbody>
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<td>HIST 101</td>
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<tr>
<td>HIST 102</td>
<td>History of the US - Post Civil War (3)</td>
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</table>

**OR**

### FOR UC ONLY

**Language other than English**

The student shall demonstrate proficiency in a language other than English equal to two years of high school study. A student who has satisfied the CSU or UC freshman entrance requirements in a language other than English will have fulfilled this requirement. This requirement may also be satisfied by the completion of one of the following courses with a C grade or better:

- FREN 101 French 1 (4)
- GER 101 German 1 (4)
- SIGN 125 ASL: Beg Comm w/ Deaf (3)(F97)
- SPAN 101 Spanish 1 (4)

The student may also meet the requirement by earning a minimum score of 550 on an appropriate College Board Achievement Test in Foreign Language.

---

**The IGETC Pattern is not recommended for the following UC colleges and majors.**

**UC Berkeley**

- Haas School of Business Administration
  - College of Environmental Design
  - College of Chemistry
  - College of Engineering
  - College of Natural Resources
  - College of Letters and Sciences:
    - Biological Sciences; ComputerScience;
    - Mass Communication; Political Economy of Industrial Societies; Psychology

**UC Davis**

- College of Ag. and Env. Sciences
  - College of Engineering
  - College of Letters and Sciences:
    - Biological Sciences; Chemistry; Environmental Toxicology;
    - Exercise Science; Fermentation Science;
    - Food Science; Nutrition Science; Physics, Viticulture and Enology

**UC Irvine**

- School of Engineering, Biological Sciences and Physical Sciences

**UC Los Angeles**

- School of Engineering
  - School of Nursing

**UC Riverside**

- School of Engineering
  - Biological or Physical Sciences

**UC San Diego**

- School of Engineering
  - Revelle College
  - Eleanor Roosevelt College

**UC Santa Barbara**

- College of Engineering
  - College of Letters and Science:
    - Biological Science; Chemistry; Environmental Science; Geology; Physics; Geophysics

**UC Santa Cruz**

- School of Engineering
  - Environmental Studies
  - Biological or Physical Sciences
Transfer to the California State Universities

MJC and CSU

The California State Universities depend on community college transfers for a large portion of their upper division enrollment. More than 50% of their bachelor’s degrees are awarded to community college transfers. By proper program planning, students may complete lower division preparation at MJC and transfer to the campus of their choice without loss of credits. Information on the major transfer fields for which students may prepare at MJC is available in the Counseling/Transfer Center.

Liberal arts and sciences compose the core curriculum at all the State University campuses while individual campuses offer a variety of specialized programs. Linked in a statewide system, each campus retains its own personality and academic emphasis.

California State University System

The campuses vary in size and are located in communities ranging from small towns to large metropolitan areas. They include the following campuses:

- California Maritime Academy
- California State Polytechnic University, Pomona
- California State Polytechnic University, San Luis Obispo
- California State University, Bakersfield
- California State University, Channel Islands
- California State University, Chico
- California State University, Dominguez Hills
- California State University, Fresno
- California State University, Fullerton
- California State University, Hayward
- California State University, Long Beach
- California State University, Los Angeles
- California State University, Northridge
- California State University, Sacramento
- California State University, San Bernardino
- California State University, San Marcos
- California State University, Monterey Bay
- California State University, Stanislaus
- Humboldt State University
- San Diego State University
- San Francisco State University
- San Jose State University
- Sonoma State University

Admission Requirements for California Residents

If space is available, students who were eligible to enter a California State University upon graduation from high school are eligible to transfer on a space available basis from a community college at the close of any semester with a cumulative grade point average of 2.0 (C) or better.

Students who were not eligible to enter a California State University upon graduation from high school must satisfy specific course requirements and complete 60 units in courses certified for baccalaureate credit with a grade point average of 2.0 (C) or better.

Planning to Transfer

Students planning to transfer to one of the State Universities must keep the following requirements in mind when selecting courses:

1. General Education: Required for graduation from CSU. Select either Option A or B to complete lower division requirements at MJC.
   - A: Complete the Modesto Junior College pattern of General Education for transfer to the California State University (CSU-GE) on p. 56.
   - B: Complete the Intersegmental General Education Transfer Curriculum (IGETC) on p. 58.

2. Prerequisite courses for major: Some lower division courses in the student’s area of specialization must be taken prior to transfer. The student should consult his/her adviser/counselor to determine divisional course requirements.

3. Requirements for the minor: In some programs a minor is also required; the student is advised to check carefully to include lower division courses which may be the prerequisite to upper division work in the minor.

4. Impacted majors: High demand majors have very specific criteria such as course work and GPA requirements. Check with a counselor to determine if major or university has impaction status.

5. Transferability of courses: Only courses certified as appropriate for baccalaureate credit are transferable. 100 to 299 are accepted by all campuses of the California State University.

In planning a lower division program at MJC, the student should bear in mind that a minimum of 120 semester units of college work for a B.A. or B.S. degree is required. By state law the State University may accept for transfer from a community college a maximum of 70 semester units of credit.

Continued ➤
Transfer to the University of California System

The University of California System

The University of California (UC) has established campuses throughout the state of California. All campuses have uniform entrance requirements and certain other features in common. However, each campus is distinctive and not all majors are offered on all campuses. Students should study the list of undergraduate colleges, schools, and majors available on each campus to determine which campuses will best satisfy their educational needs. Students are encouraged to discuss with their counselors the particular advantages each campus has to offer.

University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Merced (new campus)
University of California, Riverside
University of California, San Diego
University of California, San Francisco (Medicine)
University of California, Santa Barbara
University of California, Santa Cruz

Program Planning

Students who plan to transfer to the University of California must keep the following requirements in mind when selecting courses:

1. General Breadth:

   Option 1: Complete the campus specific breadth requirements. Lists of approved courses which may be used to satisfy breadth requirements are available in the Counseling Center.

   Option 2: Complete Intersegmental General Education Transfer Curriculum.

2. Transfer credit: The University grants transfer credit only for courses on its approved list which is available in the Counseling Center.

3. Major: Certain "impacted" majors and pre-professional majors require completion of specific courses for admission. Advisers or counselors will assist students in selecting appropriate courses for their given majors.

In planning a lower division program at MJC, the student should bear in mind that a minimum of 124 semester units of college work for a Bachelor of Arts or Bachelor of Science degree is required. By state law, the University may accept a maximum of 70 semester units of credit for transfer from a community college.

Transfer to Private Schools and Schools Outside of California

Students planning to transfer to private colleges or universities outside of the UC and CSU systems are advised to consult the catalog of the college to which they plan to transfer for specific lower division requirements which may be completed at MJC. For assistance in planning a transfer program to private institutions, students should contact a counselor or visit the MJC Transfer Center.
California Articulation Numbering System (CAN)

The California Articulation Numbering System (CAN) assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN course on another participating campus; for example, CAN ANTH 2 on one campus will be acceptable for CAN ANTH 2 on another participating campus. Each campus retains its own numbering system. The following is a listing of Modesto Junior College's CAN courses. This listing will be updated periodically. Check with your counselor for additions to the list.

<table>
<thead>
<tr>
<th>CAN</th>
<th>MJC COURSE</th>
<th>CAN</th>
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</table>
I am...
an amateur tennis player
an environmentalist
an anthropology convert

...I am MJC.

What astonished me about MJC was how effortless it was to create lasting relationships with some of the faculty members who have offered guidance, assistance, and above all, friendship. These new friends have had a profound impact on my perspectives about the world and about MJC.

- Javier Valdez
MJC alumnus
How to Read the Course Listings and Program Information

- **Title of the Academic Department**
- **Department Description**
- **Name of Academic Award**
- **Type of Award (degree v. certificate)**
- **Courses required for the award**
  - Number in brackets indicates a preferred sequence of courses within a 4 semester program.
  - NP means "no preference".
- **Elective courses (students can be given options between or among courses in the Electives)**
How to Read Course Listings and Program Information

Course Prefix and Number
Course Title
Subheadings will contain one or more of the following:
  - Prerequisite (Prior course work or skill required)
  - Corequisite (Course to be taken concurrently)
  - Formerly listed as (Previous course prefix and/or number)
  - Also offered as (Course offered in another division)
  - Recommended for success (Course, ability, or skill level suggested)
  - Non degree course (Units do not apply toward degree)
Unit Value
Course Description
Lecture and/or Laboratory.
Hours arranged (Laboratory time arranged on individual basis)
Parentheses will contain one or more of the following:
  - CC (Columbia College corresponding class)
  - CAN (California Articulation Number)
  - CSU (Transferable to the California State University Campuses)
  - UC (Transferable to the University of California campuses)
  - GR (Letter grade only)
  - CR/NC (Credit/No Credit only, no letter grade given)
  - Unless otherwise stated by "GR" or "CR/NC," all courses are offered with a choice of letter grade or CR/NC option.
  - Eve (Evening only) (after 4 p.m.)
  - Fall (Fall semester only)
  - Spr. (Spring semester only)
  - Summer (Summer only)
  - Number of weeks (if other than full semester)
Administration of Justice Program

AA Degree: Administration of Justice

To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements, in addition to completing the coursework below.

**REQUIRED COURSES** - Complete 18 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADJU 201</td>
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<td>Introduction to Administration of Justice</td>
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<tr>
<td>ADJU 202</td>
<td>3</td>
<td>Prin. and Proc. of the Justice System</td>
</tr>
<tr>
<td>ADJU 203</td>
<td>3</td>
<td>Concepts of Criminal Law</td>
</tr>
<tr>
<td>ADJU 204</td>
<td>3</td>
<td>Legal Aspects of Evidence</td>
</tr>
<tr>
<td>ADJU 205</td>
<td>3</td>
<td>Community Relations</td>
</tr>
<tr>
<td>ADJU 212</td>
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<td>Criminal Investigation</td>
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**ELECTIVE COURSES** - Complete 3 units

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<td>ADJU 145A-D</td>
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<td>ADJU 206</td>
<td>3</td>
<td>Multicultural Issues within Public Safety</td>
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<td>ADJU 210</td>
<td>3</td>
<td>Communication in Criminal Justice</td>
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<td>ADJU 211</td>
<td>3</td>
<td>Introduction to Firearms</td>
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<tr>
<td>ADJU 215</td>
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<td>ADJU 216</td>
<td>NP</td>
<td>Firearms &amp; Range Application</td>
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<tr>
<td>ADJU 217</td>
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<td>Substance Abuse</td>
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**TOTAL UNITS FOR A.A. MAJOR** .................................................. 21

AS Degree: Administration of Justice

To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements, in addition to completing the coursework below. Associate in Science degree candidates may select an option in either Law Enforcement (police, sheriff, etc.) or Corrections (prison, parole, probation, etc.).

**REQUIRED COURSES** - Complete 18 units

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<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJU 201</td>
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<tr>
<td>ADJU 211</td>
<td>3</td>
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**ELECTIVE COURSES** - Complete 12 units within a single option

**Law Enforcement Option**

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<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJU 145</td>
<td>NP</td>
<td>Comm. Agency Serv.</td>
</tr>
<tr>
<td>ADJU 145A-D</td>
<td>NP</td>
<td>Comm. Agency Serv. Fieldwork 1,2,3,4</td>
</tr>
<tr>
<td>ADJU 206</td>
<td>3</td>
<td>Multicultural Issues within Public Safety</td>
</tr>
<tr>
<td>ADJU 210</td>
<td>3</td>
<td>Communication in Criminal Justice</td>
</tr>
<tr>
<td>ADJU 211</td>
<td>3</td>
<td>Introduction to Firearms</td>
</tr>
<tr>
<td>ADJU 215</td>
<td>1½</td>
<td>Introduction to Firearms</td>
</tr>
<tr>
<td>ADJU 216</td>
<td>NP</td>
<td>Firearms &amp; Range Application</td>
</tr>
<tr>
<td>ADJU 217</td>
<td>3</td>
<td>Substance Abuse</td>
</tr>
</tbody>
</table>

**Corrections Option**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJU 145</td>
<td>NP</td>
<td>Community Agency Service</td>
</tr>
<tr>
<td>ADJU 145A-D</td>
<td>NP</td>
<td>Community Agency Service Fieldwork 1,2,3,4</td>
</tr>
<tr>
<td>ADJU 206</td>
<td>3</td>
<td>Multicultural Issues within Public Safety</td>
</tr>
<tr>
<td>ADJU 210</td>
<td>3</td>
<td>Communication in Criminal Justice</td>
</tr>
<tr>
<td>ADJU 215</td>
<td>1½</td>
<td>Introduction to Firearms</td>
</tr>
<tr>
<td>ADJU 217</td>
<td>3</td>
<td>Substance Abuse</td>
</tr>
<tr>
<td>ADJU 219</td>
<td>NP</td>
<td>Corrections Firearms Training</td>
</tr>
<tr>
<td>ADJU 220</td>
<td>3</td>
<td>Juvenile Justice Procedures</td>
</tr>
<tr>
<td>ADJU 224</td>
<td>3</td>
<td>Crime Cauasion</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.S. MAJOR** .................................................. 30

Certificate: Supervisory Management in Public Safety

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.
Required Courses – Complete 12 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJU 351</td>
<td>3</td>
<td>Elements of Supervision in Public Safety</td>
</tr>
<tr>
<td>SUPR 106</td>
<td>3</td>
<td>Group and Organization Management</td>
</tr>
<tr>
<td>SUPR 364</td>
<td>3</td>
<td>Total Quality Management</td>
</tr>
<tr>
<td>BUSAD 274</td>
<td>3</td>
<td>Human Resources Management</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE: 12

Administration of Justice Courses

ADJU 145—COMMUNITY AGENCY SERVICE 1 Unit
Prerequisite: ADJU 201
Concurrent enrollment: ADJU 145A, ADJU 145B, ADJU 145C, or ADJU 145D.
Analysis of field experiences of students concurrently enrolled in ADJU 145A, 145B, 145C, or 145D. Class time is devoted to sharing and evaluating problems that develop, and ways of resolving them will be sought by class members. Lecture. Three maximum completions.

ADJU 145A, B, C, D—COMMUNITY AGENCY SERVICE FIELDWORK 1, 2, 3, 4 UNITS
Prerequisite: ADJU 201
Concurrent enrollment: ADJU 145 Supervised field experience in a variety of community social agencies. Weekly lab: 75 hours of work experience or 60 hours of volunteerism in a community service/social agency are required for every unit earned each semester. May be repeated for up to 16 units in any combination.

ADJU 201—INTRODUCTION TO ADMINISTRATION OF JUSTICE 3 Units
History and philosophy of the administration of justice in America. Overview of its sub-systems, including their role expectations and interrelationships. Overview of theories to account for crime, punishment and rehabilitation. Introduction to professional education, training and ethics in the administration of justice field. Field trips may be required. Lecture. (CAN.AJ 2, CSU, UC, GR)

ADJU 202—PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM 3 Units
Recommended for Success: ADJU 201
Role and responsibilities of each Administration of Justice system segment; law enforcement, judicial, corrections. Past, present and future exposure to each sub-system procedure from initial entry to final disposition; relationship each segment maintains with its system members. Field trips may be required. Lecture. (CSU, GR)

ADJU 203—CONCEPTS OF CRIMINAL LAW 3 Units
Recommended for Success: ADJU 201 and 202.
Historical development, philosophy of law and constitutional provisions; definitions, classification of crime and their application to Administration of Justice system; legal research, case law, methodology and concepts of law as a social force. Field trips may be required. Lecture. (CAN.AJ 4, CSU, UC, GR)

ADJU 204—LEGAL ASPECTS OF EVIDENCE 3 Units
Recommended for Success: ADJU 202 and 203.
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; judicial decisions interpreting individual rights and case studies. Field trips may be required. Lecture. (CAN.AJ 6, CSU, GR)

ADJU 205—COMMUNITY RELATIONS 3 Units
Roles of Administration of Justice practitioners and agencies. Interrelationships and role expectations among the various agencies and the public. Principal emphasis on the professional image of Administration of Justice system and development of positive relationships between system members and the public. Lecture. (CSU, UC, GR)

ADJU 206—MULTICULTURAL ISSUES WITHIN PUBLIC SAFETY 3 Units
Overview of multicultural concepts and issues; application of those concepts and issues to the four public safety disciplines: corrections, fire safety, hazardous materials, law enforcement. Identification of problems related to an increasingly diverse population. Examination of strategies to overcome those problems, particularly in relation to the maintenance of social order. Field trips required. Lecture. (CSU, GR)

ADJU 210—COMMUNICATIONS IN CRIMINAL JUSTICE 3 Units
Survey of the existing policies and principles affecting report writing in American criminal justice. Emphasizing preparation, oral presentation, and thoroughness necessary for judicial acceptance. Lecture. (CSU, GR)

ADJU 212—CRIMINAL INVESTIGATION 3 Units
Fundamentals of investigation; crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; interviews and interrogation; follow-up and case preparation. Field trips may be required. Lecture. (CAN A J 8, CSU, GR)

ADJU 213—PATROL PROCEDURES 3 Units
Responsibilities, techniques and methods of police patrol. Field trips required. Lecture. (CSU, GR)

ADJU 215—INTRODUCTION TO FIREARMS RANGE APPLICATION 1½ Units
The student may not have any convictions of state and federal law that prohibit firearms possession. Historical evaluation, ownership evaluation, moral aspects, legal provisions, safety precautions, and restrictions covering the use of firearms; field demonstration and basic instruction in use of sidearms. Students must provide own ammunition. Lecture/Laboratory. Students may repeat any combination of ADJU 215/216 or 219 for a maximum of 4 completions. Field trips may be required. (CSU, GR)

ADJU 216—ADVANCED FIREARMS AND RANGE APPLICATION 1½ Units
Basic understanding of controlled substances, including identification, physiological effects, testing, and use detection, methods of control and investigation, applicable laws controlling use, treatment processes, and patient rights to confidentiality. Lecture. (CSU, GR)

ADJU 217—SUBSTANCE ABUSE 3 Units
Recommended for Success: ADJU 215.
This course is restricted under California Penal Code Section 12021. Course requires handling and possessing firearms. Convicted felons, persons addicted to any narcotic or convicted of any offense involving the violent use of a firearm are not allowed to enroll in the course based on Penal Code Section 12021. Prior to use of a firearm in the course, each student must sign a declaration to the effect that he or she is not prohibited from such use by Penal Code Section 12021.

ADJU 219—CORRECTIONS FIREARMS TRAINING 1½ Units
Recommended for Success: ADJU 215.
This course is restricted under state and federal laws. The student may not have any convictions of state and federal law that prohibit firearms possession. Laws, policies, and ethical considerations with specialized training in weaponry used by correctional agencies. Range firing of rifles, shotguns, and handguns. Students must provide own safety glasses and hearing protectors. Lecture/Laboratory. Students may repeat any combination of ADJU 215/216 or 219 for a maximum of 4 completions. Field trips may be required. (CSU, GR)

Continued ➤
ADJU 222—PROFILING TERRORISM 3 Units
Recommended for success: ADJU 201.
“Profiling Terrorism” strives to discuss the most significant theories by the best terrorist analysts in the world, while still focusing on the domestic and international threat of terrorism and the basic security issues surrounding terrorism today. Social-historical origins of terrorism, criminal, legal, and social response to terrorism, at-risk populations, prevention, and intervention strategies. Lecture. Two maximum completions. (GR)

ADJU 232—JUVENILE JUSTICE PROCEDURES 3 Units

ADJU 234—CRIME CAUSATION 3 Units
Principal theories commonly utilized in accounting for many known facts of criminality. Emphasis on implications and logic of certain theoretical positions common to much thinking and writing in the field. Lecture. (CSU, GR)

ADJU 235—INTRODUCTION TO CORRECTIONS 3 Units
Introduction to correctional field. Covers historical development of correctional processes, current trends, and future directions of correctional field. Examines local, state and federal systems. Field trips required. Lecture. (CSU, GR)

ADJU 236—CORRECTIONAL LAW 3 Units
Overview of the Constitutional provisions and definitions of laws relating to the corrections component of the Criminal Justice System. Emphasis on the legal aspects concerning adult offenders and correctional personnel with the Dept. of Corrections, juvenile offenders and correctional personnel with the Youth Authority and diversion agencies. The laws will entail Federal, State, and Local jurisdictions. Field trips required. Lecture. (CSU, GR)

ADJU 240—DRUG AWARENESS 1/2 Unit
Basic understanding of current drugs of abuse including psychological and physical symptomology, appearance, and social implications. Lecture. (CSU, GR)

ADJU 242—DOMESTIC VIOLENCE PREVENTION 1/2 Unit

ADJU 243—DOMESTIC VIOLENCE CRISIS INTERVENTION 3 Units
Recommended for Success: ADJU 201 or 242. Domestic violence as a pervasive and significant social issue requiring both prevention and intervention. Social-historical roots of family violence, criminal, legal, and social response to violence, at-risk populations, prevention, and intervention strategies. Lecture. (CSU, GR)

ADJU 349-A,B,C,D WORK EXPERIENCE 1,2,3,4 Units
Designed for students who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Maximum 4 units may be earned per semester. May be repeated to a maximum of 16 units Work Experience credit. (Cooperative General Work Experience is included in the maximum.)

ADJU 351—ELEMENTS OF SUPERVISION IN PUBLIC SAFETY 3 Units
The nature and function of the supervisor’s role in business, industry, and government. The skills and techniques of effective management will be examined and applied in terms of attaining maximum results through the cooperative efforts of others. Lecture.

Agriculture Business Program

This program will develop and expand the student’s knowledge of Agriculture Business. The student will develop knowledge and skills sufficient to gain and hold entry-level jobs in Ag Business. Contact the division office in the Agriculture Building for advising assistance.

AS Degree - Agriculture Business

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers..................1
AG 349A-D [NP] Work Experience (for a total of 4 units)...............4 OR
AG 249 [NP] Agriculture Internship..................................................4

II. Agriculture Science Breadth Courses - Complete 9 units
PLSC 200 [1,2] Introduction to Plant Science..............................3
ANSC 200 [1,2] Introduction to Animal Science..............................3
NR 200 [1,2] Soils.........................................................4
AGM 200 [NP] Introduction to Mechanical Technology..................3

III. Major Required Courses - Complete 12 units
AGEC 200 [2] Agriculture Accounting and Analysis.........................3
AGEC 210 [NP] Elements of Agricultural Economics.......................3
AGEC 220 [3,4] Agribusiness Management........................................3
AGEC 225 [NP] Agriculture Computer Applications.........................3

IV. Elective Courses - Complete 4 units
Any 200 series Agriculture course not taken in Major Required Units.
Any 200 series Agriculture Economics course not taken in the breadth Required Units.

TOTAL UNITS FOR A.S. MAJOR........................................... 30

Agriculture - Sales, Service Program

The student will learn step-by-step sales techniques, stage presence, self-evaluation of voice, habits, abilities in sales, and understanding of sales career. This program will help students make decisions as to whether or not they are qualified in sales, and prepare them for a sales career if they choose that vocation. Contact the division office in the Agriculture Building for advising assistance.

Certificate: Agriculture - Sales, Service Technician

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers........1
AG 349A-D [NP] Work Experience (for a total of 4 units)............4 OR
AG 249 [NP] Agriculture Internship..............................................4

Continued ➤
### Agricultural Economics

**II. Agriculture Science Breadth Courses** - Complete 9 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>3</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>3</td>
<td>Introduction to Animal Science</td>
</tr>
<tr>
<td>NR 200</td>
<td>4</td>
<td>Soils</td>
</tr>
<tr>
<td>AGM 200</td>
<td>3</td>
<td>Introduction to Mechanical Technology</td>
</tr>
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</table>

**III. Major Required Courses** - Complete 18 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 200</td>
<td>3</td>
<td>Agriculture Accounting &amp; Analysis</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>1,2</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>AGEC 215</td>
<td>3,4</td>
<td>Agricultural Marketing</td>
</tr>
<tr>
<td>AGEC 280</td>
<td>3</td>
<td>Agricultural Sales and Service</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>3</td>
<td>Fund. of Public Speaking</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>AG 285</td>
<td>3</td>
<td>Communications in Agriculture</td>
</tr>
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</table>

**IV. Elective Courses** - Complete 3 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 225</td>
<td>1</td>
<td>Agriculture Computer Applications</td>
</tr>
<tr>
<td>AGEC 220</td>
<td>3</td>
<td>Agribusiness Management</td>
</tr>
<tr>
<td>AG 280</td>
<td>3</td>
<td>Agricultural Computations</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 35

**AS Degree: Agriculture - Sales, Service**

*To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.*

**I. Agriculture Career Courses** - Complete 5 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 115</td>
<td>1</td>
<td>Introduction to Agricultural Education and Careers</td>
</tr>
<tr>
<td>AG 349A-D</td>
<td>4 OR</td>
<td>Work Experience (for a total of 4 units)</td>
</tr>
<tr>
<td>AG 249*</td>
<td>4</td>
<td>Agriculture Internship</td>
</tr>
</tbody>
</table>

* Work experience/internship must be in marketing sales or closely allied.

**II. Agriculture Science Breadth Courses** - Complete 9 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
<td>3</td>
<td>Introduction to Mechanical Technology</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>3</td>
<td>Introduction to Animal Science</td>
</tr>
<tr>
<td>NR 200</td>
<td>4</td>
<td>Soils</td>
</tr>
<tr>
<td>PLSC 200</td>
<td>3</td>
<td>Introduction to Plant Science</td>
</tr>
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</table>

**III. Major Required Courses** - Complete 12 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 200</td>
<td>2-4</td>
<td>Agriculture Accounting Analysis</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>3</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>AGEC 215</td>
<td>3</td>
<td>Agricultural Marketing</td>
</tr>
<tr>
<td>AGEC 280</td>
<td>1,2</td>
<td>Agricultural Sales and Service</td>
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</table>

**IV. Elective Courses** - Complete 4 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 280</td>
<td>3</td>
<td>Agricultural Computations</td>
</tr>
<tr>
<td>AG 285</td>
<td>3</td>
<td>Communications in Agriculture</td>
</tr>
<tr>
<td>AGEC 220</td>
<td>3</td>
<td>Agribusiness Management</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>3 OR</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.S. MAJOR** ........................................... 30

**Agricultural Economics Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 50</td>
<td>3</td>
<td>Survey of Agricultural Economics</td>
</tr>
</tbody>
</table>

A preparatory course designed to further agricultural business knowledge and prepare for entry level employment and further agricultural business course pursuits. Field trips required. Lecture/Laboratory/Other.

**AGEC 200—AGRICULTURAL ACCOUNTING AND ANALYSIS**  
3 Units

Study of agricultural accounting and types of records, their use and how to compute and use measures of earnings and cost of production to improve efficiency in agricultural operations. Agricultural income tax problems. Lecture/Laboratory/Other. (CSU, GR)

**AGEC 210—ELEMENTS OF AGRICULTURAL ECONOMICS**  
3 Units

AGRICULTURE MANAGEMENT

The place of agriculture and farming in the economic system; basic economic concepts and problems of agriculture; pricing and marketing problems, factors of production; state and federal farm programs affecting the farmer's economic position. Field trips required. Lecture/Laboratory/Other. (CSU, UC, GR)

**AGEC 215—AGRICULTURAL MARKETING**  
3 Units

AGRICULTURE MANAGEMENT

Structure and framework of agricultural marketing, history and present trends; marketing principles, policies, channels, institutions, regulatory agencies, cooperatives, marketing orders, cyclical and seasonal price variations, integration, and foreign and domestic trade; consideration of specific marketing problems affecting area commodities. Field trips required. Lecture/Laboratory. (CSU, GR, Spr.)

**AGEC 220—AGRICULTURAL BUSINESS MANAGEMENT**  
3 Units

AGRICULTURE MANAGEMENT

Recommended for Success: AGEC 200, AG 285 or equivalent, MATH 70 or equivalent, and one AG production class. Principles of agricultural management and measures of earnings in determining production efficiency; property reports, study and reorganization of a given farm with application of above principles; term report and field laboratories required. Lecture/Laboratory. (CSU, GR, Spr.)

**AGEC 225—AGRICULTURE COMPUTER APPLICATIONS**  
3 Units

AGRICULTURE MANAGEMENT

Computer use in the work place 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, and other software appropriate to agribusiness. Lecture. (GR) (CAN AG 2)

**AGEC 280—AGRICULTURAL SALES AND SERVICE**  
3 Units

AGRICULTURE MANAGEMENT

Recommended for Success: Completion of three agriculture courses (preferably two or more agriculture production courses and one or more agribusiness courses). Introduction to sales and service professions with emphasis on, but not limited to, the agribusiness sector. Provides both theoretical background and experiential exercises on a variety of sales and service facets including: the sales industry, identifying and understanding personalities, motivating people, sales presentations, prospecting, sales management, and advertising and promotion. Designed to prepare for employment or augment a current sales job. Field trips required. Lecture/Laboratory. (CSU, GR)
I. Agriculture Career Core -  Complete 5 units
AG 115  [1] Introduction to Agricultural Education and Careers ..........1
AG 249  [NP] Agriculture Internship ........................................4
AG 349 A-D  [NP] Work Experience (for a total of 4 units) .................4 OR

II. Required Courses for Certificate - Complete 13 units
AGM 200  [1] Introduction to Mechanical Technology ....................3
AGM 210  [1,2] Agricultural Welding ........................................3 OR
AGM 215  [1] Farm Tractors ...................................................2
AGM 241  [NP] Compact Diesel Engines .................................2
AGM 262  [NP] Hydraulics/Pneumatics .....................................3

III. Elective Courses for Certificate - Complete 12 units
AG 280  [NP] Agricultural Computations .................................3
AG 285  [NP] Communications in Agriculture ............................3
AGEC 280  [NP] Agricultural Sales & Service ............................3
AGM 211  [NP] Advanced Agriculture Welding ............................3
AGM 215  [NP] Equipment Service and Safety ............................2
AGM 225  [NP] Residential & Farmstead Electrical ........................3

TOTAL UNITS FOR CERTIFICATE ........................................... 30

AS Degree: Mechanized Agriculture

-To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Core - Complete 5 units
AG 115  [1] Introduction to Agricultural Education and Careers ..........1
AG 249  [NP] Agriculture Internship ........................................4
AG 349 A-D  [NP] Work Experience (for a total of 4 units) .................4 OR

II. Agriculture Science Breadth Core - Complete 9 units
PLSC 200  [NP] Introduction to Plant Science ..............................3
ANSC 200  [NP] Introduction to Animal Science ..............................3
NR 200  [NP] Soils ............................................................4
AGEC 225  [NP] Agriculture Computer Applications OR
AGEC 210  [NP] Elements of Agricultural Economics .....................3 OR
AGEC 200  [NP] Agricultural Accounting and Analysis .....................3

III. Agriculture Major Courses - Complete 12 units in one option

FABRICATION OPTION
AGM 200  [1] Introduction to Mechanical Technology ....................3
AGM 210  [1,2] Agricultural Welding ........................................3 OR
AGM 215  [1] Farm Tractors ...................................................2
AGM 240  [NP] Farm Power ...................................................3
AGM 262  [NP] Hydraulics/Pneumatics .....................................3 OR
AGM 280  [NP] Fluid Power Systems ..........................................3
AGM 251  [2] Farm Construction & Materials .............................4

POWER OPTION
AGM 200  [1] Introduction to Mechanical Technology ....................3
AGM 210  [1,2] Agricultural Welding ........................................3
AGM 215  [1] Farm Tractors ...................................................2
AGM 240  [NP] Farm Power ...................................................3
AGM 262  [NP] Hydraulics/Pneumatics .....................................3 OR
AGM 280  [NP] Fluid Power Systems ..........................................3

IV. Agriculture Elective Courses - Complete 4-5 units,
AGM 211  [NP] Advanced Agricultural Welding ............................3
AGM 214  [NP] Equipment Service and Safety ............................2
AGM 225  [NP] Residential & Farmstead Electrical Wiring & Principles 3
AGM 230  [NP] Field Surveying ..............................................2
AGM 241  [NP] Compact Diesel Engines .....................................2
AGM 252  [4] Farm Construction Advanced Lab ............................2
AGM 389  [NP] Small Engine Repair ...........................................1

ANY 200 LEVEL AGRICULTURE COURSE INCLUDING THOSE THAT ARE LISTED, BUT NOT USED, IN AREA II ABOVE.

TOTAL UNITS FOR A.S. MAJOR ........................................... 30

"MAGM" in the Schedule of Classes

Mechanized Agriculture Program

In this program, students will develop skills and knowledge to enter the mechanized agriculture field. Contact the division office in the Agriculture Building for advising assistance.

Certificate: Mechanized Agriculture Technician

-To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

I. Agriculture Career Core - Complete 5 units
AG 115  [1] Introduction to Agricultural Education and Careers ..........1
AG 249  [NP] Agriculture Internship ........................................4
AG 349 A-D  [NP] Work Experience (for a total of 4 units) .................4 OR

*State law requires safety glasses for all students.
Agricultural Mechanics Courses

AGM 50—PREPARATION FOR MECHANICAL TECHNOLOGY* 3 Units
Preparation in woodworking, cold metal, forging, plumbing and welding as related to farm maintenance and repair. Designed for agricultural students who need development in basic mechanical skills. Field trips may be required. Lecture/Laboratory. Materials fee required.

AGM 200—INTRODUCTION TO MECHANICAL TECHNOLOGY* 3 Units
Also offered as INTEC 200. Basics in woodworking, cold metal, forging, plumbing and welding as related to farm maintenance and repair. Designed for agricultural students who need development in basic mechanical skills. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN AG 4, CSU, GR)

AGM 210—AGRICULTURAL WELDING* 3 Units
Introduction and basic instruction in oxy-acetylene welding and cutting techniques and shielded metal arc welding. Fusion welding, brazing and heating will also be covered as well as safety and machine operation. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, GR)

AGM 211—ADVANCED AGRICULTURAL WELDING* 3 Units
Prerequisite: AGM 210 or equivalent experience. Recommended for Success: Two years of high school welding. Advanced welding and other metallurgical techniques such as pipe fitting, hard facing, MIG (GMAW) and TIG (GTAW) welding on aluminum and stainless steel. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, GR)

AGM 214—EQUIPMENT SERVICE AND SAFETY 1 Unit
Safe tractor, forklift, and machinery operation, service and key safety practices found in shops. Safe handling of chemicals used in farming and fire safety. A job skills course for students involved in farming practices on college property. Supervised field operation and field trips required. Lecture/Laboratory. (CSU, GR)

AGM 215—FARM TRACTORS 2 Units
Selection, application, operation, maintenance and minor repair of wheel and track type farm tractors. Field laboratories required. Saturday laboratories may be required. Lecture/Laboratory. (CSU, GR)

AGM 220—FARM MACHINERY* 3 Units
Recommended for Success: AG 280 or other math equivalent. Operation, selection and care of farm machinery common to this area. The calibration, repair, adjustment and hitching of machinery. Principles of power and its transmission as related to machinery. Field trips and semester notebook required. Lecture/Laboratory. (CSU, GR)

AGM 221—FARM EQUIPMENT 2 Units
Basic mechanical principles and designs used in the construction and repair of farm equipment. Machinery management, operation, selection, and repair of machinery used in construction work and farming. Calibration, adjustment, hitching, principles of power transmission and safety as related to machinery. Field trips may be required. Lecture/Laboratory. (CSU, GR)

AGM 222—ORNAMENTAL HORTICULTURE MACHINERY 1 Unit
Operation, care, maintenance and service of machines and equipment commonly used in ornamental horticulture businesses such as nurseries, turf farms, golf courses, parks, and home landscaping and maintenance professions. Field trips required. Lecture/Laboratory. (CSU, GR)

AGM 225—RESIDENTIAL AND FARMSTEAD ELECTRICAL WIRING AND PRINCIPLES 3 Units
Also offered as INTEC 225. Fundamental principles, systems and applications of electrical energy and the equipment necessary to manually or automatically control that energy. Field laboratories required. Lecture/Laboratory. Materials fee required. (CSU, GR)

AGM 230—FIELD SURVEYING 2 Units
Recommended for success: Math 70 or AG 280. Also offered as ENGR 230. Selection, care and checking of tapes, levels, GPS and laser systems. Introduction to total station care and use. Field observations, note taking and office computations; use of surveying instruments and equipment for land measurement and mapping; practice in differential, profile, and contour leveling; horizontal angles, traverses, and construction problems used in public lands surveying, legal descriptions, and county records. Lecture/Laboratory. Field trips required. (CSU, GR)

AGM 235—IRRIGATION AND DRAINAGE 3 Units
Irrigation and drainage problems relating to pumps, motors, sprinkler systems, structures, pipelines, ditches and wells; computation of costs and measurement of water; water law, basic principles of plant-soil-moisture relations and water movement in soil. Field laboratories required. Lecture/Laboratory. (CSU, GR)

AGM 240—FARM POWER* 3 Units
Recommended for Success: Previous experience or knowledge of power units. Principle of operation of internal combustion engines including gasoline, diesel, and liquefied petroleum. Major overhaul, and repair, trouble-shooting, servicing, and maintenance of engine units and their accessory systems; power transmission units including clutches, transmissions, and final drives. Farm power unit selection, operation, and management. Field trips required. Lecture/Laboratory. (CSU, GR)

AGM 241—COMPACT DIESEL ENGINES 2 Units
Recommended for Success: AG/AUTE 289 or AUTE 390 or equivalent. Also offered as AUTEC 271. This course explores the design, operation, and proper maintenance of the latest compact diesel engines approved by the California Air Resources Board (CARB) for operation and sales in California after 1997. Topics include fuel characteristics, current emissions testing and standards, related engine systems, operation and trouble-shooting. Problem-solving component failures and disassembly/assembly of representative engine will be covered. (Engine Equipment Training Council certification approved course.) Field trips required. Lecture/Laboratory. Materials fee required. (CSU, GR)

AGM 245—ENGINE FUELS, FUEL SYSTEMS AND TURBOS 3 Units
Recommended for Success: Knowledge of engine parts, function, and engine systems. Introduction to fuel systems, fuel alternatives and fuel use for engines and equipment; engine modifications and fuel system adjustment to utilize future liquid fuels. Also fuel system governors, turbo chargers, and superchargers, diesel, fuel injection system principles, adjustment maintenance and troubleshooting of diesel fuel injection systems. Field trips required. Lecture/Laboratory. (CSU, GR)

AGM 251—FARM CONSTRUCTION AND MATERIALS* 4 Units
Prerequisites: AGM 200 and 210. Types, costs and characteristics of construction materials; their use in farm equipment and buildings. Structural requirements, cost factors, safe loads, animal and equipment requirements, operation and labor efficiency, adaptability to the community. Designing and building projects in the shop and group field work. Field trips required. Lecture/Laboratory. Materials fee required. (CSU,GR, Spr.)

AGM 252—FARM CONSTRUCTION ADVANCED LAB* 2 Units
Prerequisite: AGM 251 Types, costs and characteristics of construction materials; their use in farm equipment and buildings. Structural requirements, cost factors, safe loads, operation and labor efficiency, adaptability to the community. Designing and building projects in the shop and group field work. Field trips required. Laboratory. Materials fee required. (CSU, GR)

AGM 262—HYDRAULICS/PNEUMATICS 3 Units
Also offered as INTEC 262. Formerly listed as AGM 362. Principles and practices of hydraulics/pneumatics as used in the industry. Study of the different applications and management of hydraulics for the most efficient use. Basic pneumatic/principles and application systems. Field trips may be required. Two maximum completions. Lecture. (CSU)
AGM 280—FLUID POWER SYSTEMS 3 Units
   Recommended for Success: AG 280 and AGM 215 or 220
   Fundamental principles and practices of hydraulic circuitry as applied in hydraulic
   applications and system design. Study of standard hydraulic oil and pneumatic
   components found on mechanical units in transmissions, braking devices, auxiliary
   and accessory power units. System design term problem required. Field trips required.
   (National Outdoor Power Equipment (OPE) Association certification approved course.)
   Lecture/Laboratory. (CSU, GR)

AGM 310—AGRICULTURAL WELDING 2 Units
   Basic welding techniques and theory instruction in oxy-acietylene welding and cutting,
   shield metal arc welding, and flat and vertical fusion welding. Introduction to MIG welding,
   brazing, and heating will also be covered as well as welding safety. Lecture/Laboratory.
   Field trips required. (CR/NC)

AGM 376—FARM WELDING 1 Unit
   Short term basic course in the techniques of operating electric welding machines, oxy-
   acetylene torches, metal inert gas welding equipment. Welding, heating, brazing, cutting,
   hard surfacing and soldering of most common types of metals in all positions will be
   covered. Lecture/Laboratory. Not offered every semester. (GR)

AGM 389—SMALL ENGINE REPAIR 1 Unit
   Also offered as AUTEC 389.
   A short course in servicing, operation, and maintenance of small gas engines, garden
   and landscape equipment. The student will need shop clothes and a small gas engine
   to overhaul. Field trips required. Lecture/Laboratory. (GR)

Agricultural Science
See Agriculture, General

Agricultural Science
See Agriculture, General

Agricultural Business
See Agriculture, General

Agriculture, General (AGGE)
"MAGGE" in the Schedule of Classes

Agricultural studies play an essential part in filling the world-wide demand
for food and fiber. The program of courses offered in agriculture is designed
to prepare students for a variety of professions or occupations in agriculture
or transfer to higher institutions. Students preparing for immediate entry into
agricultural occupations will find practical sequences of courses designed to
assist them in achieving their occupational goals. University transfers may take
agricultural courses appropriate to the majors and programs of the institutions
to which they are transferring.

Supervised practice (work experience) is an essential part of the instruction
offered and is a requirement for completion of all agricultural programs.
Majors completing the appropriate requirements may earn the Associate
in Science degree. Transfer and community college students completing the
requirements of technical programs may earn certificates of completion.
Students should consult division advisors for enrollment and program details
before registration. In order to complete a program, students must complete
courses approved by the division. Divisional advisors will assist students in the
selection of proper courses and sequences.

Agricultural Science

AS Degree - Agricultural Science
To earn an Associate in Science Degree, the student must complete the MJC
Graduation Requirements, in addition to completing the 30 units required
below.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers........1
AG 349A-D [NP] Work Experience (for a total of 4 units)..............4 OR
AG 249 [NP] Agriculture Internship ..................................4

II. Agriculture Science Breadth Courses - Complete 9 units
PLSC 200 [NP] Introduction to Plant Science ..................3
ANSC 200 [NP] Introduction to Animal Science..................3
NR 200 [NP] Soils ...............................................4
AGM 200 [NP] Introduction to Mechanical Technology.............3
AGEC 225 [NP] Agriculture Computer Applications .................3 OR
AGEC 210 [NP] Elements of Agriculture Economics .................3 OR
AGEC 200 [2] Agriculture Accounting and Analysis .................3

III. Agriculture Major Courses - Complete 9 units
ANSC 201 [NP] Beef Cattle Science.................................3 OR
ANSC 202 [NP] Swine Science........................................3 OR
ANSC 203 [NP] Sheep Science......................................3
ANSC 230 [2,3,4] Poultry Science.................................3
EHS 210 [NP] Introduction to Environmental Horticulture .......3
PLSC 220 [NP] Fruit Science..........................................3

IV. Agriculture Major Elective Courses - Complete 7 units
ANY CLASS NOT USED IN AREA II & III
ANY 200 LEVEL AGRICULTURE CLASS APPROVED BY ADVISOR
2 UNITS OF 300 LEVEL CLASS
TOTAL UNITS FOR A.S. MAJOR...........................................30

Agriculture Laboratory
The student will acquire skills for entry-level employment in an agricultural
laboratory analyzing soil, feed, food, water, etc. Contact the division office in
the Agriculture Building for assisting assistance.

Certificate: Agriculture Laboratory Technician

• To earn a Certificate of Achievement, the student must complete the coursework as indicated below in addition to completing 400 hours of in-
laboratory work experience. Each course must be completed with a grade
of C or better.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers........1
AG 349A-D [NP] Work Experience** ................................1-4 OR
AG 249 [NP] Agriculture Internship** ..............................4

II. Agriculture Science Breadth Courses - Complete 9 units
PLSC 200 [NP] Introduction to Plant Science ..................3 OR
ANSC 200 [NP] Introduction to Animal Science..................3
NR 200 [NP] Soils ...............................................4
AGM 200 [NP] Introduction to Mechanical Technology** ........3
AGEC 225 [1] Agriculture Computer Applications .................3 OR
Agriculture, General - Agriculture, Vocational and Technical

AS Degree - Agriculture Laboratory Technician

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers .......1
AG 349A-D [NP] Work Experience .................................. 4 OR
AG 249 [NP] Agriculture Internship ......................................4

II. Agriculture Science Breadth Courses - Complete 9 units
PLSC 200 [NP] Introduction to Plant Science .....................3 OR
ANSC 200 [NP] Introduction to Animal Science ....................3
NR 200 [NP] Soils ....................................................... 4
AGM 200 [NP] Introduction to Mechanical Technology ..........3
AGEC 225 [NP] Agriculture Computer Applications .............3 OR
AGEC 210 [NP] Elements of Agricultural Economics ......... 3 OR

III. Required Courses - Complete 8 units
AG 376 [3,4] Basic Science and Laboratory Techniques ..........3
AG 280 [NP] Agricultural Computations ..........................3 OR
FDP 376 [1] Basic Food Plant Laboratory Procedures ..........1
FDP 378 [2] Food Laboratory Instruments ........................1

IV. Elective Courses - Complete 8 units
CHEM 101 [NP] General Chemistry 1 ......................... 5 OR
CHEM 143 [NP] Introduction to Chemistry .....................5 OR
CHEM 144 [NP] Fundamentals of Organic and Biochemistry ....4-5
MICRO 101 [NP] Microbiology ....................................4
AG 285 [1,2] Communications in Agriculture ..................3
FDP 200 [1] Basic Food Processing ...............................3
FDP 379-387 [1] Select course in consultation with advisor ....1-2

ANY COURSE NOT TAKEN IN II. AND/OR III. ABOVE MAY BE USED TO COMPLETE IV.

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

Agriculture, General Courses

AGGE 145—PARLIAMENTARY PROCEDURE 1 Unit
Introduction to Parliamentary Procedure. Preparing for and participating in meetings as a member, officer, and chairperson. Rank and use of motions. Two maximum completions. Lecture/Other. (CSU)

AGGE 146—AGRICULTURE, ENVIRONMENT AND SOCIETY 3 Units
Also offered as INDIS 146.
The sociology of agriculture presented through an examination of relationships between societies and their environments, economics, and agriculture. Emphasis on the analysis of agriculture's use of technology and the corresponding impact on the environment, economy and society. Field trips may be required. Lecture. Materials fee may be required. (CSU, UC)

AGGE 306—SUBURBAN AGRICULTURE AND LIVING 2 Units
Designed for small farm owners, potential small farm owners, or those interested in agriculture on a smaller scale but open to all students. Emphasis on ecologically and economically sound methods as applied to larger than garden-sized units. Topics include: economics, land appraisal and purchase, food preservation, and development of a farm plan. Field trips required. Two maximum completions. Lecture.

AGGE 307—AQUACULTURE: HUSBANDRY 1 Unit
OF AQUATIC PLANTS AND ANIMALS
Raising aquatic plants and animals as sources of food. Includes an overview of the United States and world aquaculture industries, biology of organisms (emphasis on fish); various production systems; management of fish, invertebrates, the plant aquatic; and the legal aspects of developing a fish farm. Integrating aquaculture into existing farm programs. Field trips required. Two maximum completions. Lecture.

AGGE 320A-B—EVALUATION OF AGRICULTURAL PRODUCTS
Evaluation skills in selecting animal, plant, mechanical, and business products. Four maximum completions. Field trips required. Lecture. Materials fee required. (GR)

Agriculture Laboratory
See Agriculture, General

Agriculture - Sales, Service
See Agricultural Economics

Agriculture, Vocational & Technical (AG)
"MAG" in the Schedule of Classes

Vocational courses are designed to prepare for occupational entry into skilled or semi-professional fields of agriculture. Technical courses are designed to prepare for occupational entry into the technical fields of agriculture.

Agriculture, Vocational and Technical Courses

AG 100A, B—LEADERSHIP IN AGRICULTURE 1, 2 Units
Lecture and supervised activities relating to student participation in agricultural competitions, judging contests, livestock exhibitions, recruitment programs, award and scholarship applications, and youth activity planning. Field trips required. Lecture/Independent study. Students may not exceed a total of 2 units in AG 100A only. (CSU).

TOTAL UNITS FOR CERTIFICATE ..................................... 34
AG 115—INTRODUCTION TO AGRICULTURAL EDUCATION AND CAREERS
Introduction to educational and agricultural employment opportunities. Includes portfolio and educational plan development and curriculum requirements that pertain to educational goals as they relate to agriculture majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in agriculture careers. Current events that impact agriculture and society will be discussed. Lecture. (CSU, GR)

AG 120—INTRODUCTION TO AGRICULTURE EDUCATION  2 Units
Overview of agricultural education and agricultural education programs including goals and purposes, kinds of classes, types of programs, and qualifications essential to successful agriculture teaching. Field trips may be required. Lecture plus participation in agricultural events, leadership activities and FFA involvement. (CSU, GR)

AG 130—AGRICULTURE EDUCATION  2 Units
EARLY FIELD EXPERIENCE
Prerequisite: Minimum completion of 12 units in agriculture course work.
To increase the awareness of opportunities for prospective agriculture teachers through observation, participation in the field and through analysis of field experiences. Students will be expected to complete 20 hours of observation/field activities. The off-campus activities shall be supervised by the course instructor and shall take place in an approved agriculture department. Field trips required. Lecture/Laboratory. (CSU, GR)

AG 249—AGRICULTURE INTERNSHIP  4 Units
Placement as an employee with selected agribusiness firms dealing with the production, manufacturing, retailing, wholesale production, growers, mechanics, sales and services of agriculture products in public and private agencies. The experience must be related to the student’s major. The student will be under the joint supervision of the employer and a faculty member; 300 paid hours or 240 unpaid hours of related internship per semester. (CSU, CR/NC)

AG 280—AGRICULTURAL COMPUTATIONS  3 Units
Prerequisite: Satisfactory completion of MATH 20 or equivalent or qualification by MJC assessment process. Practical problems in production agriculture, agriculture mechanics, agriculture business, and natural resources. Includes problems in algebra, geometry, money and interest, equipment calibration, metrics and graphics. Lecture/Laboratory. (CSU, GR)

AG 285—AGRICULTURAL COMMUNICATIONS  3 Units
Formerly listed as AG 285—Communications in Agriculture. Methods of gathering and organizing data and writing reports. Communicating data. Lecture. (CSU, GR)

AG 300—AGRICULTURAL FIELD PRACTICES  1 Unit
Practice in basic in-season farm operations including the use of common farm machinery and equipment, soil tillage, cultivation, harvest and irrigation; farmstead maintenance including the use of minor equipment such as sprayers, burners and chemical applicators; livestock and dairy operations including care, feeding and handling. Recommended for students with inadequate agricultural experience for satisfactory progress toward occupational objectives, but open to all students. Field trips required. Laboratory. (GR)

AG 305—SUPERVISION IN AGRICULTURE  2 Units
Formerly listed as AGEC 305. Training agriculture managers, superintendents and crew leaders in the principles of supervision, maintaining effective relationships, handling personnel problems, instructing new personnel on job performance, and analyzing job efficiency. Designed for West Campus student residents. Field trips required. Four maximum completions. Lecture plus applied skills. (GR)

AG 349 A,B,C,D—WORK EXPERIENCE  1, 2, 3 and 4 Units
AGRICULTURE—SUPERVISED PRACTICE
Corequisite: Enrollment in a minimum of 7 units, which may include Cooperative Vocational Work Experience. Designed for agriculture majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Maximum of 4 units may be earned per semester. May be repeated to a maximum of 16 units Work Experience credit (Cooperative General Work Experience is included in this maximum.) Also offered during May, June and July. Lecture/Other

AG 376—BASIC SCIENCE AND LABORATORY TECHNIQUES  3 Units
Essential laboratory techniques and basic science principles and information designed to qualify students for service in agriculture at technical levels. Field trips are required. Lecture/Laboratory. (GR)

AG 390 A,B,C,D—AGRICULTURAL SKILLS TRAINING  ½, 1, 2, 3, 4 Units
Emphasis on developing or upgrading skills of agricultural employees. Field trips are required. Four maximum completions. Total number of AG 390 A,B,C,D units not to exceed eight total units. Lecture/Laboratory. (GR)

ALLIED HEALTH (ALHE)

"MALHE" in the Schedule of Classes

ALHE 380—BASIC CARDIAC ARRHYTHMIAS  3 Units
Recommended for Success: Understand basic medical terminology. Designed for students who have had little or no formal training in arrhythmia diagnosis. Emphasis will be on diagnosing the major and life-threatening arrhythmias incorporating patient assessment and treatment. Field trips may be required. Four maximum completions. Lecture. (CC EMS 20)

ALHE 385—INTRODUCTION TO CRITICAL CARE CONCEPTS  3 Units
Prerequisite: Must have completed NURSE 252 or equivalent, or have 6 months medically related clinical training or experience. Presentation of concepts and techniques employed in the care of the critically ill. Course focus is on cardiac arrhythmia recognition, advanced cardiac life support, and hemodynamic monitoring. Lecture.

ANATOMY (ANAT)

"MANAT" in the Schedule of Classes

ANAT 125—HUMAN ANATOMY  4 Units
Study of human body structures through use of models, charts, skeletons, microscopic slides, and dissection. Cadaver demonstrations may be used. Lecture/Laboratory. (CAN BIOL 10, CAN BIOL SEQ B, CSU, UC) (CC BIOL 10)

ANATOMY AND PHYSIOLOGY (AP)

"MAP" in the Schedule of Classes

AP 50—ELEMENTARY HUMAN ANATOMY-PHYSIOLOGY  3 Units
Introduction to human structure and function. Designed as a foundation course for the allied health student, but open to all students. Lecture.

AP 150—INTEGRATIVE ANATOMY AND PHYSIOLOGY  4 Units
Prerequisites: High school biology or any of the following: BIO 101, 111 or AP 50 General structure and function of the human body with an emphasis on integrative functions of the systems. Lecture/Laboratory. Materials fee may be required. (CSU, UC, GR)

ANIMAL SCIENCE (ANSC)

"MANS" in the Schedule of Classes

This program prepares students for livestock ranching, ranch management, agribusiness and agri-education, as well as artificial insemination. It also prepares students for transfer to a senior college for continuation of agriculture education and training. Contact the division office in the Agriculture Building for advising assistance.
Animal Science Program

AS Degree: Animal Science

*To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Courses - Complete 5 units

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<tr>
<th>Code</th>
<th>Units</th>
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<tbody>
<tr>
<td>AG</td>
<td>115</td>
<td>Introduction to Agricultural Education and Careers</td>
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<tr>
<td>AG</td>
<td>349A-D[NP]</td>
<td>Work Experience</td>
</tr>
<tr>
<td>AG</td>
<td>249</td>
<td>Agriculture Internship</td>
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II. Agriculture Science Breadth Courses - Complete 9 units

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<tr>
<th>Code</th>
<th>Units</th>
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<tbody>
<tr>
<td>PLSC</td>
<td>200</td>
<td>Introduction to Plant Science</td>
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<tr>
<td>NR</td>
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</tr>
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<tr>
<td>AGEC</td>
<td>225</td>
<td>Agriculture Computer Applications OR</td>
</tr>
<tr>
<td>AGEC</td>
<td>210</td>
<td>Elements of Agriculture Economics OR</td>
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<tr>
<td>AGEC</td>
<td>200</td>
<td>[2-4] Agriculture Accounting and Analysis</td>
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III. Agriculture Major Courses - Complete 12 units

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<tr>
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<tbody>
<tr>
<td>ANSC</td>
<td>200</td>
<td>Introduction to Animal Science</td>
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<tr>
<td>ANSC</td>
<td>201</td>
<td>Beef Cattle Science</td>
</tr>
<tr>
<td>ANSC</td>
<td>202</td>
<td>Swine Science</td>
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<tr>
<td>ANSC</td>
<td>203</td>
<td>Sheep Science</td>
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<tr>
<td>ANSC</td>
<td>207</td>
<td>Equine Science</td>
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<tr>
<td>ANSC</td>
<td>210</td>
<td>Livestock Selection &amp; Evaluation</td>
</tr>
<tr>
<td>ANSC</td>
<td>211</td>
<td>[3-4] Meat Science</td>
</tr>
<tr>
<td>ANSC</td>
<td>214</td>
<td>Livestock, Feeding &amp; Nutrition</td>
</tr>
</tbody>
</table>

IV. Elective Courses - Complete 4 units

Any 200 level Animal Science class not listed above [NP] |
Any Agriculture class not used in Area II. for breadth core [NP] |
Any Animal Science class not used in Area III. for major core [NP] |
No more than two units of 300 level Agriculture classes [NP] |

TOTAL UNITS FOR A.S. MAJOR 30

Artificial Insemination Program

The student will develop skills and knowledge sufficient enough to collect bull semen, artificially inseminate cows, and to evaluate pedigrees. The student will also develop skills in basic salesmanship. Contact the division office in the Agriculture Building for advising assistance.

Certificate: Artificial Insemination Technician

*To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

I. Agriculture Career Courses - Complete 5 units

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II. Agriculture Science Breadth Courses - Complete 9 units

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<tbody>
<tr>
<td>AGEC</td>
<td>376</td>
<td>Basic Science &amp; Lab Techniques</td>
</tr>
<tr>
<td>AGEC</td>
<td>200</td>
<td>[2-3.4] Agricultural Accounting &amp; Analysis</td>
</tr>
<tr>
<td>AGEC</td>
<td>280</td>
<td>[NP] Agricultural Sales &amp; Services</td>
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III. Required Courses - Complete 10 units

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<td>201</td>
<td>Beef Cattle Science</td>
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<tr>
<td>ANSC</td>
<td>220</td>
<td>Dairy Industry/Dairy Science</td>
</tr>
<tr>
<td>ANSC</td>
<td>217</td>
<td>Advanced Breeding &amp; Artificial Insemination</td>
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IV. Elective Courses - Complete 6 units

<table>
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<tbody>
<tr>
<td>ANSC</td>
<td>224</td>
<td>Dairy Feeds &amp; Feeding</td>
</tr>
<tr>
<td>ANSC</td>
<td>214</td>
<td>Livestock Feeding &amp; Nutrition</td>
</tr>
<tr>
<td>ANSC</td>
<td>226</td>
<td>Dairy Breeding &amp; Selection OR</td>
</tr>
<tr>
<td>ANSC</td>
<td>216</td>
<td>Livestock Breeding &amp; Selection</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE 30

Dairy Science Program

AS Degree: Dairy Science

*To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Courses - Complete 5 units

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II. Agriculture Science Breadth Courses - Complete 9 units

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<td>200</td>
<td>Introduction to Mechanical Technology</td>
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<tr>
<td>AGEC</td>
<td>225</td>
<td>Agriculture Computer Applications OR</td>
</tr>
<tr>
<td>AGEC</td>
<td>210</td>
<td>Elements of Agriculture Economics OR</td>
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<tr>
<td>AGEC</td>
<td>200</td>
<td>[2-3.4] Agriculture Accounting &amp; Analysis</td>
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III. Agriculture Major Courses - Complete 9 units

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<tr>
<td>ANSC</td>
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<tr>
<td>ANSC</td>
<td>201</td>
<td>Beef Cattle Science</td>
</tr>
<tr>
<td>ANSC</td>
<td>202</td>
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<td>Sheep Science</td>
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<td>ANSC</td>
<td>207</td>
<td>Equine Science</td>
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<tr>
<td>ANSC</td>
<td>210</td>
<td>Livestock Selection &amp; Evaluation</td>
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<tr>
<td>ANSC</td>
<td>211</td>
<td>[3-4] Meat Science</td>
</tr>
<tr>
<td>ANSC</td>
<td>214</td>
<td>Livestock, Feeding &amp; Nutrition</td>
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</tbody>
</table>

IV. Elective Courses - Complete 7 units

Any 200 level Animal Science class not listed above [NP] |
Any Agriculture class not used in Area II. for breadth core [NP] |
Any Animal Science class not used in Area III. for major core [NP] |
No more than two units of 300 level Agriculture classes [NP] |

TOTAL UNITS FOR A.S. MAJOR 30

Poultry Science Program

In this program the student will develop skills and knowledge sufficient to enter the poultry industry or to transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

AS Degree: Poultry Science

*To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

Continued
I. Agriculture Career Courses - Complete 5 units

- ANSC 115 [I] Introduction to Agricultural Education and Careers..............1
- ANSC 349A-D [NP] Work Experience.................................................4 OR
- ANSC 249 [NP] Agriculture Internship..............................................4

II. Agriculture Science Breadth Courses - Complete 9 units

- PLSC 200 [NP] Introduction to Plant Science.....................................3
- ANSC 200 [NP] Introduction to Animal Science.................................3
- NR 200 [NP] Soils ........................................................................4
- AGM 200 [NP] Introduction to Mechanical Technology....................3
- AGEC 225 [NP] Agriculture Computer Applications............................3 OR
- AGEC 210 [NP] Elements of Agriculture Economics............................3 OR
- AGEC 200 [2,3,4] Agriculture Accounting and Analysis.........................3

III. Agriculture Major Courses - Complete 12 units

- ANSC 230 [I] Poultry Science.............................................................3
- ANSC 214 [NP] Livestock Feeding and Nutrition.......................3 OR
- ANSC 234 [NP] Poultry Feeding........................................................3
- ANSC 235 [2] Poultry Diseases & Housing........................................3 OR
- ANSC 237 [3,4] Poultry Management................................................3 OR
- ANSC 236 [2] Poultry Breeding and Selection......................................3

IV. Agriculture Major Electives - Complete 4 units

- ANY 200 LEVEL ANIMAL SCIENCE CLASS THAT IS NOT LISTED ABOVE
- ANY 200 LEVEL AGRICULTURE ECONOMICS CLASS NOT LISTED ABOVE
- ANY AGRICULTURE CLASS NOT USED IN AREA II. FOR BREEDTH CORE
- NO MORE THAN TWO UNITS OF 300 LEVEL AGRICULTURE CLASSES

TOTAL UNITS FOR A.S. MAJOR ..................................................................30

Certificate: Veterinary Technician

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

Required Courses – Complete 17 units

- ANSC 250 [2] Intro to Veterinary Medical Terminology,
  Anatomy & Physiology.................................................................3
- ANSC 251 [3] Veterinary Laboratory and Pharmacy Procedures........3
  Instrumentation and Safety........................................................3
- ANSC 254 [4] Veterinary Medical Office Procedures.........................3
- ANSC 255 [3] Preparation for Veterinary Surgical
  and Dental Assistance.................................................................3
- ANSC 256 [3] Veterinary medicine and Nursing:
  Emergency Procedures...............................................................1
- ANSC 257 [4] Veterinary Assistance and Nursing: Animal Handling..1

Elective Courses – Complete 0 units

- BIO 111 [NP] General Biology..........................................................4
- ANSC 200 [NP] Intro to Animal Science (Large animal oriented)......3
- ANSC 215 [NP] Animal Health and Sanitation (Large animal oriented)..3

TOTAL UNITS FOR CERTIFICATE ...........................................................17

• NOTE: To become a registered veterinary technician, students must meet specific requirements established by the AVMA (American Veterinary Medical Association). Please contact the MJC Agriculture Division office for advising.

Animal Science Courses

- ANSC 50—PREPARATORY ANIMAL SCIENCES 3 Units
  A preparatory survey of the livestock industry, supply of animal products and their uses.

- ANSC 200—INTRODUCTION TO ANIMAL SCIENCE 3 Units
  A survey of the livestock industry, supply of animal products and their uses. A special emphasis on the origin, characteristics, adaptations and contributions of farming animals to the ag industry. Analyze the economic trends and career opportunities in animal agriculture. Field trips required. Lecture.

- ANSC 201—BEETLE CATTLE SCIENCE 3 Units
  A study of the principles and practices of purebred and commercial beef cattle production throughout California, the U.S. and the world. Emphasis to 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 as applied to beef cattle. Field trips required. Lecture/ Laboratory. (CAN AG 6, CSU, UC, GR)

- ANSC 202—SWINE SCIENCE 3 Units
  A study of the principles and practices of purebred and commercial pork production throughout California, the U.S., and the world. Emphasis to be placed on importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and record-keeping to ensure scientifically-based management decisions and consumer product acceptance. Field trips required. Lecture/ Laboratory. (CAN AG 20, CSU, UC, GR)

- ANSC 203—SHEEP SCIENCE 3 Units
  A survey of the sheep industry including management of commercial, purebred and small farm flocks; selecting, feeding, breeding and basic care of ewes and lambs plus marketing of lambs and wool. Field trips required. Lecture/Laboratory. (CAN AG 22, CSU, UC, GR)

- ANSC 205—BEETLE CATTLE BREEDS 1 Unit
  Breeds of cattle available to beef cattle breeders. History, development and characteristics emphasizing the merits and limitations of various breeds. Field laboratories including one or two on Saturdays required. Lecture/Laboratory. (CSU, GR)

- ANSC 207—EQUINE SCIENCE 3 Units
  A survey of the equine industry; selection, feeding, breeding, facilities, handling and health management will be emphasized to ensure scientifically-based management decisions. Field trips required. Lecture/Laboratory. (CAN AG 26, CSU, UC, GR, Spr.)

- ANSC 208—CARE AND HANDLING OF HORSES AND TACK 3 Units
  Basic care of the horse and equipment. Types of equipment. Horse handling skills including training and riding. Student is expected to provide own horse. Field trips required. Lecture/Laboratory. (CSU, GR)

- ANSC 209—EQUINE BREEDING AND REPRODUCTION 2 Units
  Recommended for Success: ANSC 207
  A short-term, advanced level course designed for those interested in learning more about equine breeding and reproduction. Field trips required. Lecture/ Other. (CSU, GR)

- ANSC 210—LIVESTOCK SELECTION AND EVALUATION 3 Units
  Detailed analysis of various visual and physical methods of appraising beef, sheep, swine and horses concerning functional and economic value. Written and oral summaries of evaluation will be required. Specific reference will be made to performance data and factors determining carcass value. Lecture/Laboratory/required attendance at judging contests arranged. Two maximum completions. (CSU, UC, GR)

- ANSC 211—INTRODUCTION TO MEAT SCIENCE 3 Units
  An introductory course to the meat industry with a special emphasis on meat products and value-added meat processing techniques. Concepts on food safety and sanitation, grading and inspection along with preservation and marketing strategies to meet current consumer demands. Field trips required. Lecture/Laboratory. (CSU, UC, GR)
ANSC 212—ADVANCED LIVESTOCK SELECTION AND CARCASS EVALUATION 3 Units
Recommended for Success: ANSC 210
Advanced study of animal conformation as related to its various functions. Evaluation of beef, sheep and swine species using performance and carcass data as well as live animal observation. Oral interpretation of these evaluative criteria. Formal reasoning presentations required. Two maximum completions. Lecture/Laboratory/Other. (CSU, GR)

ANSC 214—LIVESTOCK FEEDING AND NUTRITION 3 Units
The fundamentals of digestion and absorption in both ruminants and nonruminants are discussed. The nutritive value of feeds as they relate to the formulation of livestock rations will be emphasized, including by-product feeding. Field trips required. Lecture. (CSU, UC, GR)

ANSC 215—ANIMAL HEALTH AND SANITATION 3 Units
Common livestock diseases and fundamentals of immunity. Includes coverage of the livestock worker's role in promoting animal health and the foundation of disease control programs. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 216—LIVESTOCK BREEDING AND SELECTION 3 Units
Anatomy and physiology of male and female reproductive systems, endocrine system, and problems affecting reproductive efficiency; fertilization, gestation, and parturition. Principles of heredity as applied to livestock breeding and improvement; systems of breeding; environmental factors affecting reproduction and performance. Livestock selection programs based on performance and progeny. Field laboratories including some on Saturdays required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 217—ADVANCED BREEDING AND ARTIFICIAL INSEMINATION 4 Units
Prerequisites: ANSC 201 and 220, ANSC 216 or 226.
Advanced study and practical application of breeding principles and artificial insemination of farm animals; the collection, evaluation, and handling of semen; nutritional level, and sanitation practices affecting reproductive efficiency; public relations, and the responsibilities of the technician and the management. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, UC, GR)

ANSC 218—LIVESTOCK MANAGEMENT 3 Units
Recommended for Success: Suggested sophomore standing, at least one animal production course, AGEC 200 and AGEC 215.
Functional steps of management, agricultural resources, decision making procedures and instruments, planning and evaluating the livestock program, cost of production, management analysis, marketing, finance and credit, livestock industry trends. Field laboratories including some on Saturdays required. Lecture/Laboratory. (CSU, UC, GR, Spkr.)

ANSC 220—DAIRY INDUSTRY/DAIRY SCIENCE 3 Units
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; employment opportunities and requirements. Field trips required. Lecture/Laboratory. (CAN AG 28, CSU, UC, GR)

ANSC 221—DAIRY CATTLE SELECTION AND EVALUATION 3 Units
Selection of dairy cattle on type conformation and the correlation between type and production. Pedigree evaluation, animal analysis, linear classification and body condition scoring. Written and oral evaluation on selection. Field trips required. Two maximum completions. Lecture/Laboratory/Other. (CSU, UC, GR)

ANSC 222—MILK PRODUCTION AND TECHNOLOGY 3 Units
Milk and milk product consumption and the economics of milk production. Discusses the mammary system anatomy, the physiology of milk secretion, the composition and the properties of milk, including factors of production. Evaluation of milking parlors and equipment, systems, analysis and operation is also included. Milk testing, sanitation, quality control, udder health and treatment as well as dairy mathematics. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 224—DAIRY FEEDS AND FEEDING 3 Units
Fundamentals of digestion and absorption in ruminants. The nutritive value of feeds as they relate to the formulation of dairy rations will be emphasized, including by-product feeding. Term project and field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 226—DAIRY BREEDING AND SELECTION 3 Units
The study of basic genetic principles with the study of the anatomical and physiological aspects of reproduction as they relate primarily to the bovine. Genetic principles to be emphasized include basic inheritance, selection techniques, mating systems, heterosis, and performance evaluation. Reproductive aspect 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. Field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 227—ADVANCED DAIRY CATTLE SELECTION AND EVALUATION 3 Units
Prerequisite: ANSC 221
Advanced study of dairy conformation as related to the function of milk production. Evaluation of dairy cattle using production data, pedigrees and live animal evaluation. Particular emphasis will be placed on linear classification and selective mating. Oral interpretation of these evaluative criteria and formal reasoning presentations will be required. Evaluation of milk and milk products will be required as well. Field trips are required. Two maximum completions. Lecture/Laboratory (CSU, GR)

ANSC 228—DAIRY MANAGEMENT 3 Units
Recommended for Success: ANSC 220 and 224 and AGEC 200.
Economics of dairying; milk production and marketing and their relationship to income; computing production costs; analyzing dairy enterprises; business planning; farm selection; management problems relating to feeding, labor, replacements, breeding, work simplification and recordkeeping. Term problem and field laboratories required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 230—POULTRY SCIENCE 3 Units
A study of the principles and practices of commercial poultry production. Emphasis to be placed on poultry nutrition, reproduction, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 232—AVIAN PRACTICES 3 Units
Practices in avian management including breeders, fryers, and layers; incubating, brooding and rearing of chicks. Processing and marketing of various avian products. Specific work with game birds, and non-commercial species of fowl. Field laboratories required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 233—TURKEY PRODUCTION AND MANAGEMENT 3 Units
Turkey industry in the area, state, and nation; brooding, growing and management of turkeys; breeds and their adaptation, feeding, housing, and equipment; management of breeding flock; disease prevention; recordkeeping and evaluation. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

ANSC 234—POULTRY FEEDING 3 Units
Economics of poultry feeding. Composition of feeds, nutritional requirements, feed formulation for chickens and turkeys; computer-assisted feed formulation, and proper feeding techniques. Field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 235—POULTRY DISEASES AND HOUSING 3 Units
Anatomy and physiology of poultry; diagnosis, treatment, prevention and control of disease; sanitation; types of housing and equipment; planning housing, and equipment needs; vaccination schedules. Field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 236—POULTRY BREEDING AND SELECTION 3 Units
Principles of poultry breeding, pedigrees, marketing, record analysis; culling and selection of poultry, judging, incubation, hatching and grading of chicks and selecting sources of chicks. Field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 237—POULTRY MANAGEMENT 3 Units
Recommended for Success: ANSC 230, 232, 233, 234, 235, or 236.
Economic aspects of poultry production; records and record analysis; efficiency factors affecting profit; marketing; poultry layout and budget; housing management; feeding. Field laboratories required. Lecture/Laboratory. (CSU, GR)

ANSC 240—BEEF FITTING AND SHOWING 2 Units
Principles of selection, feeding, fitting, and presentation of beef animals for show. Field trips required. Three maximum completions. Lecture/Laboratory/Other. (CSU, GR)
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<td>DAIRY FITTING &amp; SHOWING</td>
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<td>ANSC 251</td>
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<td>ANSC 255</td>
<td>PREPARATION FOR SURGICAL AND DENTAL ASSISTANCE</td>
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<td>VETERINARY ASSISTANCE AND NURSING: EMERGENCY</td>
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<td>VETERINARY ASSISTANCE AND NURSING: ANIMAL</td>
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<td>ANSC 308</td>
<td>RABBIT PRODUCTION</td>
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<td>ANSC 316</td>
<td>FARM PROCESSING OF MEAT ANIMALS</td>
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<td>ANSC 335</td>
<td>ROPE HORSE TRAINING</td>
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<td>PACKING ANIMALS - WALKING/RIDING</td>
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<td>ANIMAL HEALTH (LIVESTOCK)</td>
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<td>SMALL ANIMAL MEDICINE AND BEHAVIOR</td>
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<td>ANSC 340</td>
<td>CATTLE RANCH SKILLS</td>
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**Recommended for Success: ENGL 50**

**Animal Science - Anthropology**

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<td>ANTH 102</td>
<td>CULTURAL ANTHROPOLOGY</td>
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**Anthropology (ANTHR)**

"MANDH" in the Schedule of Classes
Anthropology - Architecture/Architectural Engineering

ANTHR 105—PHYSICAL ANTHROPOLOGY LABORATORY 1 Unit
Prerequisite: ANTHR 101 or concurrent enrollment.
Laboratory investigation of methods and techniques of human evolution and variation, including use of the scientific method, anthropometrics, and an analysis of the functional morphology of primates. Lines of evidence examined will include the study of population genetics, comparative anatomy and behavior of primates, forensic anthropology, human fossils and their reconstruction. Field trips may be required. Lecture/Laboratory. (GR, CSU, UC)

ANTHR 130—ARCHAEOLOGY AND CULTURAL PREHISTORY 3 Units
An introduction to anthropological archaeology including concepts, theories, and methods employed by archaeologists in reconstructing past life ways of humans. Topics include history and interdisciplinary nature of archaeological research; data acquisition, analysis and interpretation with a discussion of applicable data and models; cultural resource management; selected cultural sequences. Field trips may be required. Lecture. (CAN ANTH 6, CSU, UC)

ANTHR 140—MAGIC, WITCHCRAFT & RELIGION 3 Units
Recommended for Success: ENGL 101
A cross-cultural study of the forms and functions of supernatural beliefs and associated rituals in various societies of Africa, Asia, aboriginal Australia, Oceania, South America, native North America and elsewhere. Emphasis on analyzing beliefs and rituals within their cultural contexts, and on broad comparison, to derive insight into the place of belief and ritual in human life. Field trips may be required. Lecture. (CSU, UC)

ANTHR 150—NATIVE PEOPLE OF NORTH AMERICA 3 Units
Introductory survey of the origins and varied adaptations made by the aboriginal cultures north of Mexico. Protohistoric and historic periods are emphasized. Special consideration of the aboriginal cultures of California. Emphasis on the techniques of data collection, analysis and interpretation. Field trips may be required. Lecture. Not offered every semester. (CSU, UC) (CC ANTHR 15)

ANTHR 160—FAMILIES IN SOUTHEAST ASIAN CULTURES 1 Unit
Also offered as FAMLF 160.
A survey of basic value concepts of Southeast Asian cultures; their origin, and resulting impact on family structure, child rearing, marriage practices, religion, folk medicine and education. Overview of the interplay between Southeast Asian social and cultural values and their counterparts in American society. Continuity and change in the Southeast Asian family. Lecture. (CSU, Spr.)

ANTHR 161—FAMILIES IN LATIN AMERICAN CULTURES 1 Unit
Also offered as FAMLF 161.
A survey of basic value concepts of Latin American cultures; their origin, and resulting impact on family structure, child rearing, marriage practices, religion, folk medicine and education. Overview of the interplay between Latin American social and cultural values and their counterparts in American society. Continuity and change in the Latin American family. Lecture. (CSU, Fall)

Architecture/Architectural Engineering (ARCH)
"MARCH" in the Schedule of Classes

The Architecture program prepares students to transfer to four-year college and university programs. The programs at most universities vary somewhat. The student should consult closely with the architecture staff to ensure that required transfer courses are completed for the specific college that the student selects.

The work of an architect is very complex. Architecture includes the total responsibility for the planning, design, and observation of construction of all types of buildings. Also included is the knowledge of engineering principles, construction methods, materials, new techniques, and procedures as related to the client's needs. The architecture program is directed to provide the student with the architectural, engineering, mathematics, and general education courses. See advisor for required mathematics and science courses.

Architecture/Architectural Engineering Program

AS Degree:
Architecture/Architectural Engineering

- A minimum of 30 units must be completed from required mathematics, science, and Elective Courses for an Associate in Science Degree. MJC Graduation Requirements must also be completed. See advisor for selection of courses.

REQUIRED COURSES - Complete 23 Units

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ELECTIVE COURSES - Complete 7 units

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TOTAL UNITS FOR A.S. MAJOR................................. 30

Continued ➤
Architectural Drafting Technology Program

The Architectural Drafting Technology program prepares students to enter the field of architectural drafting at the entry level as a drafter.

The program is for students interested in the more pragmatic and applied aspects of architectural work, and is directed to the application of established scientific and architectural knowledge and methods.

Certificate: Architectural Drafting Technology

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 19 units**

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**TOTAL UNITS FOR CERTIFICATE** .................................................. 19

AS Degree: Architectural Drafting Technology

- In addition to meeting the requirements below, student must complete the MJC Graduation Requirements. Consult with an advisor for selection of courses.

**REQUIRED COURSES - Complete 19 units**

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**ELECTIVE COURSES - Complete 11 units**

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**TOTAL UNITS FOR A.S. MAJOR** .................................................. 30

Construction Management Program

The Construction Management Program prepares and directs students to the field of construction in areas other than as the craftsman/technician. The program is for students interested in learning the more pragmatic and applications aspects of construction, engineering, and management, and is directed to the application of established scientific and engineering knowledge and methods.

AS Degree: Construction Management

- In addition to meeting the requirements below, student must complete the MJC Graduation Requirements. Consult with an advisor for selection of courses.

**REQUIRED COURSES - Complete 15 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ARCH 106</td>
<td>2</td>
</tr>
<tr>
<td>ARCH 107</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 121</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 131</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 100</td>
<td>3</td>
</tr>
</tbody>
</table>

City and Regional Planning Program

The City and Regional Planning program prepares students to transfer to four-year college and university programs. The programs at most universities vary somewhat. The student should consult closely with the architecture staff to ensure that required transfer courses are completed for the specific college that the student selects.

The work of a city and regional planner is part of the newer awareness of society to protect our environment. Planning includes opportunities with both private industry and/or federal, state, or local governmental agencies. The city and regional planning program is directed to provide the student with undergraduate architectural, engineering, mathematics, and general education courses. See advisor for required mathematics and science courses.

AS Degree: City & Regional Planning

- In addition to meeting the requirements that follow, student must complete the MJC Graduation Requirements. Consult with an advisor for selection of courses.

**REQUIRED COURSES - Complete 18 units**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ARCH 100</td>
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<tr>
<td>ARCH 121</td>
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<tr>
<td>ARCH 122</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 131</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 152</td>
<td>5</td>
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**ELECTIVE COURSES - Complete 12 units**

<table>
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<th>Course</th>
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<tbody>
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<tr>
<td>ARCH 107</td>
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<tr>
<td>ARCH 117</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 118</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 132</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 153</td>
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<tr>
<td>ENGR 101</td>
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</tr>
<tr>
<td>ENGT 210</td>
<td>1</td>
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<tr>
<td>ENGT 211</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.S. MAJOR** .................................................. 30
ARCHITECTURE/ARCHITECTURAL ENGINEERING - ART

ARCH 100—INTRODUCTION TO ENGINEERING AND ARCHITECTURE 1 Unit
Also offered as ENGR 100.
Introduction to the vocational and academic opportunities at MJC with special emphasis on engineering, architecture, and related technologies. Topics include models of student success, characteristics of the professions, development of educational plans, graduation requirements, importance of teamwork, and self-assessment. Activities include field trips, practice labs, and presentations by MJC counselors and practicing engineers and architects. Lecture. Materials fee may be required. (CSU, UC, Fall)

ARCH 106—MATERIALS OF CONSTRUCTION 2 Units
Recommended for Success: ARCH 107
Use and application of construction processes and materials pertaining to architecture. Field trips may be required. Lecture. Materials fee may be required. (CSU, Fall)

ARCH 107—MATERIALS OF CONSTRUCTION LABORATORY 1 Unit
Recommended for Success: Concurrent enrollment in or completion of ARCH 106 or ENGT 250.
Observation and testing of mechanical properties of steel, concrete, and wood; laboratory and field exercises with basic construction methods using wood and concrete; field trips to construction sites, materials manufacturing and processing plants. Laboratory. Materials fee may be required. (CSU, Spr.)

ARCH 117—HISTORY OF ARCHITECTURE 1 3 Units
The development of architecture, its philosophies and conditions from Prehistoric through Egyptian, Greek, Roman, Early Christian, Medieval, Romanesque Gothic and Pre-Columbian. Lecture. Materials fee may be required. (CSU, UC, Spr.)

ARCH 118—HISTORY OF ARCHITECTURE 2 3 Units
The development of architecture, its philosophies and conditions from the Renaissance through the Industrial Revolution, the Modern Movement and including the Twentieth Century. ARCH 117 is not a prerequisite. Lecture. Materials fee may be required. (CSU, UC, Spr.)

ARCH 121—BEGINNING GRAPHICS AND DESIGN 1 4 Units
Introduction to the graphic and computer production of architectural drawings pertaining to freestand, orthographic, axonometric and perspective drawings. Basic principles and concepts of two- and three-dimensional design. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, Fall)

ARCH 122—BEGINNING GRAPHICS AND DESIGN 2 4 Units
Prerequisite: ARCH 121
Continuation of ARCH 121. Extended development of the content in ARCH 121 plus the introduction of the graphic methods and skills to communicate and represent conceptual ideas, analysis, and design concepts. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, Spr.)

ARCH 131—ARCHITECTURAL DRAFTING 1 4 Units
Recommended for Success: Previous drafting experience.
Techniques and skills of drafting; introduction to building codes and construction methods, and the construction documents used to communicate the light-wood frame building process. Introduction to computer-assisted drafting in architectural applications. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU)

ARCH 132—ARCHITECTURAL DRAFTING 2 3 Units
Prerequisite: ARCH 131
Continuation of ARCH 131. Further development of office and drafting practices, contract document preparation, and construction practices with emphasis on heavy timber construction. Introduction to computer-assisted drafting in more complex architectural applications. Field trips may be required. Lecture/Laboratory. (CSU, Spr.)

ARCH 135—ARCHITECTURAL MECHANIC—STATICS 2 Units
Prerequisites: PHYS 101 and MATH 172.
Statics of particles and rigid bodies; vector notation; analytical solutions of two-and three-dimensional structures in equilibrium; centroids, center of gravity, and moments of inertia. Lecture. Materials fee may be required. (CSU, UC, Spr.)

ARCH 152—ARCHITECTURAL DESIGN 1 5 Units
Prerequisites: ARCH 122
Fundamentals of design concepts focusing on architectural form, function, space, and structure. Application of problem solving methods as applied to the relationship of man, building, and environmental concerns. Field trips required. Lecture/Laboratory. Materials fee may be required. (CSU, UC, Fall)

ARCH 153—ARCHITECTURAL DESIGN 2 5 Units
Prerequisite: ARCH 152
Continuation of ARCH 152. Explorations in architectural design within an environmental context. Consideration of projects dealing with buildings, site, climate, and structural issues and their interaction with aesthetic and functional concerns. Field trips required. Lecture/Laboratory. Materials fee may be required. (CSU, Spr.)

ARCH 331—BASIC ARCHITECTURAL DRAFTING 1 2 Units
Introduction to architectural drafting and construction techniques for the nonprofessional with major emphasis on residential drawing and design. Topics include: a basic understanding of drafting skills, architectural nomenclature, design presentations, building materials, and a simple understanding of structure. Lecture/Laboratory.

The comprehensive MJC Art Program offers several areas of concentration: art history, ceramics, computer graphics, drawing, design, sculpture, watercolor painting, oil painting, and photography. The program is designed to include pre-professional and professional courses, personal enrichment in specific art areas, and classes for students who plan a career in Art. Art courses help students develop a capacity for creative thinking and the ability to solve problems in new and creative ways.

Art (ART)
"MART" in the Schedule of Classes

Continued ➤


### Art Program

#### AA Degree: Art

- To earn an Associate in Arts Degree, the student must complete the **MJC Graduation Requirements** in addition to the coursework below. Courses should be selected with the assistance of an Art faculty advisor.

- **Students who plan to transfer** to a four-year college or university should consult with an Art faculty advisor and a counselor to ensure that all required transfer courses are completed.

#### REQUIRED COURSES - Complete 9 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ART 120</td>
<td>[1]</td>
<td>Basic Drawing 1</td>
</tr>
<tr>
<td>ART 124</td>
<td>[2]</td>
<td>Color and Design 1</td>
</tr>
<tr>
<td>ART 160</td>
<td>[1]</td>
<td>Appreciation of Art</td>
</tr>
<tr>
<td>ART 164</td>
<td>[NP]</td>
<td>History of Art</td>
</tr>
<tr>
<td>ART 165</td>
<td>[NP]</td>
<td>History of Art</td>
</tr>
</tbody>
</table>

#### ELECTIVE COURSES - Complete 11 units, no more than 1 course in each area

**DESIGN AND DRAWING AREA**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>[2]</td>
<td>Basic Drawing 2</td>
</tr>
<tr>
<td>ART 123</td>
<td>[2]</td>
<td>Figure Drawing</td>
</tr>
<tr>
<td>ART 125</td>
<td>[3]</td>
<td>Color and Design 2</td>
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**THREE-DIMENSIONAL ART AREA**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tr>
<td>ART 108</td>
<td>[1]</td>
<td>Ceramics</td>
</tr>
<tr>
<td>ART 140</td>
<td>[1]</td>
<td>Sculpture</td>
</tr>
<tr>
<td>ART 141</td>
<td>[2]</td>
<td>Sculpture</td>
</tr>
<tr>
<td>ART 142</td>
<td>[3]</td>
<td>Sculpture</td>
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</table>

**PAINTING AND PRINTMAKING AREA**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ART 149</td>
<td>[3]</td>
<td>Oil Painting 2</td>
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</table>

**ART HISTORY AND APPRECIATION AREA**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>[1]</td>
<td>Gallery Operation and Management</td>
</tr>
<tr>
<td>ART 160</td>
<td>[1]</td>
<td>Appreciation of Art</td>
</tr>
<tr>
<td>ART 161</td>
<td>[NP]</td>
<td>American Art</td>
</tr>
<tr>
<td>ART 162</td>
<td>[NP]</td>
<td>History of Renaissance Art</td>
</tr>
<tr>
<td>ART 163</td>
<td>[NP]</td>
<td>History of Modern Art</td>
</tr>
<tr>
<td>ART 164</td>
<td>[NP]</td>
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<tr>
<td>ART 165</td>
<td>[NP]</td>
<td>History of Art</td>
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<tr>
<td>ART 166</td>
<td>[NP]</td>
<td>History of Art</td>
</tr>
<tr>
<td>ART 168</td>
<td>[1]</td>
<td>Survey of Photography</td>
</tr>
<tr>
<td>ART 169</td>
<td>[NP]</td>
<td>History of Non-Western Art</td>
</tr>
</tbody>
</table>

**PHOTOGRAPHY AND COMPUTER GRAPHICS AREA**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 102</td>
<td>[1]</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>ART 170</td>
<td>[1]</td>
<td>Basic Photography</td>
</tr>
<tr>
<td>ART 181</td>
<td>[1]</td>
<td>Basic Photography (1)</td>
</tr>
<tr>
<td>ART 182</td>
<td>[2]</td>
<td>Basic Photography (2)</td>
</tr>
<tr>
<td>ART 185</td>
<td>[3]</td>
<td>Intermediate Photography (1)</td>
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<tr>
<td>ART 186</td>
<td>[4]</td>
<td>Intermediate Photography (2)</td>
</tr>
<tr>
<td>ART 175</td>
<td>[3]</td>
<td>Color Photography</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.A. MAJOR** ................................................. 20

### Certificate: Art Gallery/Museum Studies Program

#### Art Gallery/Museum Studies

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

#### REQUIRED COURSES - Complete 8 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>[NP]</td>
<td>Gallery Operations and Management (twice at 3 units)</td>
</tr>
<tr>
<td>ART 199B</td>
<td>[NP]</td>
<td>Independent Study in Gallery/Museum Studies</td>
</tr>
</tbody>
</table>

#### ELECTIVE COURSES - Complete 9 units as indicated

**I. Art Appreciation/Humanities - Complete 3 units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 160</td>
<td>[NP]</td>
<td>Appreciation of Art</td>
</tr>
<tr>
<td>ART 164</td>
<td>[NP]</td>
<td>History of Art</td>
</tr>
<tr>
<td>HUMAN 101</td>
<td>[NP]</td>
<td>Introduction to the Humanities</td>
</tr>
</tbody>
</table>

**II. Studio Art - Complete 3 units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 120</td>
<td>[NP]</td>
<td>Basic Drawing 1</td>
</tr>
<tr>
<td>ART 102</td>
<td>[NP]</td>
<td>Introduction to Microcomputer Graphics</td>
</tr>
</tbody>
</table>

**III. Art History/Humanities - Complete 3 units.**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 161</td>
<td>[NP]</td>
<td>American Art</td>
</tr>
<tr>
<td>ART 162</td>
<td>[NP]</td>
<td>History of Renaissance Art</td>
</tr>
<tr>
<td>ART 163</td>
<td>[NP]</td>
<td>History of Modern Art</td>
</tr>
<tr>
<td>ART 165</td>
<td>[NP]</td>
<td>History of Art</td>
</tr>
<tr>
<td>ART 169</td>
<td>[NP]</td>
<td>History of Non-Western Art</td>
</tr>
<tr>
<td>HUMAN 105</td>
<td>[NP]</td>
<td>Early Humanistic Traditions</td>
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<td>HUMAN 106</td>
<td>[NP]</td>
<td>Humanities in the Modern World</td>
</tr>
<tr>
<td>HUMAN 110</td>
<td>[NP]</td>
<td>East Meets West</td>
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<tr>
<td>CMPGR201</td>
<td>[NP]</td>
<td>Animation-A Global View of Art in Motion</td>
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</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ................................................. 17

### Photography Program

Photography is both an artistic and a technical vocation. This program is designed to develop the student's aesthetic and technical abilities by working with design, composition, lighting situations, various types of imagery, photographic processes, presentation methods, and image critique sessions.

#### AA Degree: Photography

- To earn an Associate in Arts Degree, students must complete 15 Required Units and 5 Elective Units, plus meet the **MJC Graduation Requirements**. Courses should be selected with the assistance of a Photography faculty advisor. Students who plan to transfer to a four-year college or university should consult with a Photography faculty advisor to ensure that all required transfer courses are completed.

#### REQUIRED COURSES - Complete 18 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 124</td>
<td>[2]</td>
<td>Color and Design 1</td>
</tr>
<tr>
<td>ART 168</td>
<td>[1]</td>
<td>Survey of Photography</td>
</tr>
</tbody>
</table>
Art Courses

ART 102—INTRODUCTION TO COMPUTER GRAPHICS 3 Units
Also offered as CMPGR 202.
Introduction to computer graphics using various applications and tools. Topics explored include but are not limited to: original image creation, photographic editing, scanning, printing, two-dimensional animation, sound, digitizing pens, mouse, and digital camera. Field trips required. Materials fee required. Lecture/Laboratory. (CSU)

ART 103—APPLIED COMPUTER GRAPHICS 3 Units
Recommended for Success: ART 102
Also offered as CMPGR 213.
Formerly listed as Microcomputer Graphics.
Concepts and techniques in computer graphics as related to fine and applied art applications. Field trips required. Materials fee required. Lecture/Laboratory. (CSU)

ART 108—CERAMICS 3 Units
Techniques of elementary clay construction and ornamentation; introduction to throwing techniques. Trustee receipt required to purchase course materials as needed. Field trips required. Lecture/Laboratory. (CAN ART 6, CSU, UC) (CC ART 31)

ART 109—INTERMEDIATE CERAMICS 3 Units
Recommended for Success: ART 108
Pottery construction, emphasis on throwing and design. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 110—ADVANCED CERAMICS 3 Units
Recommended for Success: ART 109
Throwing techniques and surface decoration; experiments in clay bodies, glazes, and stacking of kiln. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 119—COMPUTER GRAPHICS PORTFOLIO REVIEW 1 Unit
Prerequisite: This course follows the completed courses of the Computer Graphics majors/certificate core requirements.
Also offered as CMPGR 219.
Prepares the student majoring or receiving a certificate in Computer Graphics with the necessary visual and business skills to develop a portfolio; emphasizes the creative and applied business needs for individuals entering the professional field of Computer Graphics. Field trips required. Lecture/Laboratory. (CSU, GR)

ART 120—BASIC DRAWING 1 3 Units
Introductory techniques used in representing form, light and shade, texture and perspective with various media. Field trips may be required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CAN ART 8, CSU, UC) (CC ART 1)

ART 121—BASIC DRAWING 2 3 Units
Prerequisite: ART 120
Further exploration of various drawing materials and techniques. Emphasis on composition; development of personal approach to drawing. Field trips required. Lecture/Laboratory. (CSU, UC)

ART 123—FIGURE DRAWING 3 Units
Prerequisite: ART 120
Fundamentals of art anatomy and representation of the human figure. Drawing of both the nude and draped figure in various media. Two maximum completions. Lecture/Laboratory. Field trips required. (CAN ART 24, CSU, UC) (CC ART 9A)

ART 124—COLOR AND DESIGN 1 3 Units
Design principles and color theory. Problems in two and three-dimensional form using various media. Field trips required. Lecture/Laboratory/Other. (CAN ART 14, CSU, UC) (CC ART 2)

ART 125—COLOR AND DESIGN 2 3 Units
Prerequisite: ART 124
Expressions in design. Utilization of the elements and principles of design in two and three-dimensional form using various materials and techniques. Field trips required. Lecture/Laboratory/Other. (CAN ART 16, CSU, UC, Spr.)

ART 140—SCULPTURE 3 Units
Study of form, structure and three-dimensional design as related to sculpture using various materials such as stone, plaster, clay, plastics and metals. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CAN ART 12, CSU, UC)

ART 141—SCULPTURE 3 Units
Prerequisite: ART 140
Continuation of ART 140; in-depth realization of sculpture in both concept and craftsmanship. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 142—SCULPTURE 3 Units
Prerequisite: ART 141
Continuation of ART 141 with an emphasis on experimentation and development of personal expression applied to sculptural problems. Field trips required. Two maximum completions. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 144—WATERCOLOR PAINTING 3 Units
Prerequisite: ART 120
Theory and practice of transparent watercolor painting using still life and landscape subject matter. Traditional and experimental techniques will be used. Field trips required. Lecture/Laboratory. (CSU, UC, CC ART 23A)

ART 145—WATERCOLOR PAINTING 3 Units
Prerequisite: ART 144
A continuation of the concepts and skills developed in ART 144. Emphasis is placed upon experimentation and on the development of a personal painting style. Field trips required. Lecture/Laboratory. (CSU, UC, CC ART 23B)

ART 148—OIL PAINTING 1 3 Units
Prerequisite: ART 120
Introduction to oil and acrylic painting; basic techniques and stylistic approaches. Emphasis on developing form through color. Field trips required. Lecture/Laboratory. (CAN ART 10, CSU, UC) (CC ART 21A)

ART 149—OIL PAINTING 2 3 Units
Prerequisite: ART 148
Introduction to oil and acrylic painting; basic techniques and stylistic approaches. Emphasis on developing form through color. Field trips required. Lecture/Laboratory. (CSU, UC) (CC ART 21B)
ART 150—GALLERY OPERATION AND MANAGEMENT 3 Units
Recommended for Success: Concurrent enrollment in ART 160, 164, or 165
Introduction to the various aspects of operation and management of an art gallery: exhibition organization, hanging, publicity and jurying. Field trips required. Two maximum completions. Lecture/Laboratory. (CSU)

ART 160—APPRECIATION OF ART 3 Units
Introductory art appreciation for the general student. Illustrated lectures in painting, sculpture, architecture and design. Field trips required. Lecture. (CSU, UC)

ART 161—AMERICAN ART 3 Units
Analysis of the arts through the study of painting, sculpture, architecture, and history of North America from pre-historic times to the present. Emphasis will be on the arts of the United States. Field trips required. Lecture. (CSU, UC)

ART 162—HISTORY OF RENAISSANCE ART 3 Units
Analysis of the European 14th-16th century drawing, painting, sculpture, and architecture, with an emphasis on the Italian High Renaissance masters. Field trips required. Lecture. (CSU, UC)

ART 163—HISTORY OF MODERN ART 3 Units
Analysis of the arts through the study of painting, sculpture, architecture, and the history of Europe and the Americas from c. 1870 to the present. Field trips required. Lecture. (CSU, UC)

ART 164—HISTORY OF ART 3 Units
Analysis of great art epochs through study of paintings, sculpture, architecture, and history from prehistoric times to the end of the Middle Ages. Field trips required. Lecture. (CAN ART 2, CAN ART SEQ A, CSU, UC) (CC ART 11)

ART 165—HISTORY OF ART 3 Units
Continuation of study of painting, sculpture, and architecture from Renaissance to the present. Field trips required. Lecture. (CAN ART 4, CAN ART SEQ A, CSU, UC) (CC ART 12)

ART 168—SURVEY OF PHOTOGRAPHY 3 Units
Recommended for Success: ART 170 or 181.
A survey course dealing with past and present photographic technique and imagery. Field trips required. Lecture. (CSU, UC, Spr.)

ART 169—HISTORY OF NON-WESTERN ART 3 Units
Analysis of the art forms of Africa, Oceania, Asia and the Americas in their relation to their cultural history from prehistoric times to the present. Field trips required. Lecture. Not offered every semester. (CSU, UC) (CC ART 13)

ART 170—BASIC PHOTOGRAPHY 3 Units
Introduction to the art and craft of photography: cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. Field trips required. Project card use available. Lecture/Laboratory. Not offered every semester. (CAN ART 18, CSU, UC) (CC ART 40)

ART 172—INTERMEDIATE PHOTOGRAPHY 3 Units
Prerequisite: ART 170 or 182.
Refinement of basic craft, vision, and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. Field trips required. Project card use available. Lecture/Laboratory. (CSU, UC)

ART 173—DIGITAL IMAGING FOR PHOTOGRAPHERS 3 Units
Recommended for Success: ART 170
Introductory course in digital imaging and electronic desktop photography. Applications related to the use of fine art photography and publication will be emphasized. The class includes lectures, discussions, critiques, computer laboratory work. Field trips required. Three maximum completions. Material fee required. Lecture/Laboratory. (CSU, UC)

ART 175—COLOR PHOTOGRAPHY 3 Units
Prerequisite: ART 172 or 186.
Introduction to color photography. Transparency and negative materials; printing processes; print presentation and aesthetics. Field trips required. Lecture/Laboratory. (CSU, GR, Fall)

ART 178B.C,D—ADVANCED PHOTOGRAPHY 2,3,4 Units
Prerequisite: ART 172 or 186 or 175.
Recommended for Success: ART 168
Advanced exploration in the visual and technical areas of either black and white, color, or non-silver photography. Students will design a project and produce a portfolio of finished work. Field trips required. Completions to 6 units maximum. Other - combination seminar, and hours arranged. (CSU)

ART 181—BASIC PHOTOGRAPHY 1 1½ Units
Introduction to the art and craft of photography - cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. Field trips required. ART 181 and ART 182 are the two semester equivalent of ART 170 but do not fulfill the CSU-GE requirement. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 182—BASIC PHOTOGRAPHY 2 1½ Units
Prerequisite: ART 181
Introduction to the art and craft of photography: cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. ART 181 and ART 182 are the two-semester equivalent of ART 170: but do not fulfill the CSU-GE requirement. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC) (CC ART 40)

ART 185—INTERMEDIATE PHOTOGRAPHY 1 1½ Units
Prerequisite: ART 170 or 182.
Refinement of basic craft, vision and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. ART 185 and ART 186 are the two-semester equivalent of ART 172. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)

ART 186—INTERMEDIATE PHOTOGRAPHY 2 1½ Units
Prerequisite: ART 185
Refinement of basic craft, vision and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. ART 185 and ART 186 are the two-semester equivalent of ART 172. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. (CSU, UC)
ART 189A—PHOTO LABORATORY TECHNOLOGY 1 1,2 Units
Recommended for Success: ART 170
Maintenance and operation of a photographic lab facility; equipment, chemistry, scheduling and other related activities. Field trips required. Four maximum completions. Laboratory. (CSU)

ART 191—PHOTO LABORATORY TECHNOLOGY 2 1 Unit
Recommended for Success: ART 170
Maintenance and operation of a photographic lab facility; equipment, chemistry, scheduling and other related activities. Field trips required. Four maximum completions. Laboratory. (CSU)

ART 197—FIELD STUDIES IN PHOTOGRAPHY 1 Unit
Preparation of and participation in field studies of various thematic and technical approaches to photography as a fine art. Course will include travel to specific geographic regions to influence and augment the study of particular styles of photography. Geographic areas to be studied and visited will vary from one semester to the next. Field trips required. Four maximum completions. Lecture/Laboratory. Materials fee may be required. Cost of each trip varies. (CSU).

Art Gallery/Museum Studies
See Art

Artificial Insemination
See Animal Science

Astronomy (ASTRO)
"MASTRO" in the Schedule of Classes

ASTRO 55—EXPLORING THE NIGHT SKY 1 Unit
Audio-tutorial program in constellation identification and naked-eye astronomy. Self-paced study of nighttime sky with cassette tapes and visual aids. Field trips required. Lecture. Materials fee may be required. (Eve.)

ASTRO 141—INTRODUCTION TO ASTROPHYSICS 3 Units
Prerequisite: Successful completion of PHYS 142 or PHYS 101 or one year of high school physics with a grade of A or B. Recommended for Success: MATH 122 or qualification by MJC assessment process.

ASTRO 151—INTRODUCTION TO ASTRONOMY 1 Unit
Lab
Concurrent enrollment or previous completion of ASTRO 141 or 160. Recommended for Success: Satisfactory completion of MATH 70.

ASTRO 160—INTRODUCTION TO MODERN ASTRONOMY 3 Units
Introductory survey course in astronomy. Emphasis on current studies of solar system, the birth and death of stars and cosmology. Field trips may be required. Lecture. Materials fee may be required. (CSU, UC)

Autobody (AUBDY)
"MAUBDY" in the Schedule of Classes

The Auto Body program is designed to help the beginning student progress through basic procedures in body repairs and painting to entry-level job skill development. Complete and current practices used in industry are emphasized. The orientation is toward theory and hands-on activities required to perform practical repair operations. Related trade and technical information, care and use of equipment and shop safety are also a focus in the Auto Body program.

Autobody Collision Repair & Refinishing Program

Certificate:
Autobody/Collision Repair

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COMPETENCIES

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>READ 184</td>
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<td>Critical Reading</td>
</tr>
<tr>
<td>MATH 20</td>
<td>3</td>
<td>Pre-Algebra</td>
</tr>
</tbody>
</table>

Eligibility for MATH 70 through Placement Exam

REQUARED COURSES - Complete 23 units

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>AUBDY 115</td>
<td>1</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUBDY 301</td>
<td>1</td>
<td>Automotive Collision Repair 1</td>
</tr>
<tr>
<td>AUBDY 302</td>
<td>1</td>
<td>Automotive Collision Repair 2</td>
</tr>
<tr>
<td>AUBDY 303</td>
<td>1</td>
<td>Automotive Collision Repair 3</td>
</tr>
<tr>
<td>AUBDY 304</td>
<td>1</td>
<td>Automotive Collision Repair 4</td>
</tr>
<tr>
<td>AUBDY 399</td>
<td>1</td>
<td>Independent Study/Special Problems</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE: 23

AA Degree:
Autobody/Collision Repair

To earn an Associate in Arts Degree, student must complete the 20 Required Units, and meet the MJC Graduation Requirements.

REQUARED COURSES - Complete 20 units

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>AUBDY 115</td>
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<td>Automotive Collision Repair 4</td>
</tr>
<tr>
<td>AUBDY 399</td>
<td>1</td>
<td>Independent Study/Special Problems</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.A. MAJOR: 20

Athletic Training
See Physical Education
Autobody Refinishing Program

Certificate: Autobody/Refinishing

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 8 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AUBDY 115</td>
<td>Introduction to Technical Industries</td>
<td>1</td>
</tr>
<tr>
<td>AUBDY 321</td>
<td>Automotive Spray Refinishing 1</td>
<td>2</td>
</tr>
<tr>
<td>AUBDY 322</td>
<td>Automotive Spray Refinishing 2</td>
<td>3</td>
</tr>
<tr>
<td>AUBDY 399</td>
<td>Special Problems</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ............................................. 8

AS Degree: Autobody Refinishing

• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

**REQUIRED COURSES** - Complete 31 units

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
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<td>Introduction to Technical Industries</td>
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</tr>
<tr>
<td>AUBDY 301</td>
<td>Automotive Collision Repair 1</td>
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</tr>
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<td>5</td>
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<td>AUBDY 303</td>
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</tr>
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<td>AUBDY 304</td>
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<td>AUBDY 399</td>
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<tr>
<td>AUTEC 321</td>
<td>Braking Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>Steering, Suspension, and Alignment</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.S. MAJOR** ........................................... 31

Autobody Courses

AUBDY 115 – INTRODUCTION TO TECHNICAL INDUSTRIES 1 Unit

Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Lecture/Other. (CSU,GR).

AUBDY 301—AUTOMOTIVE COLLISION REPAIR 1 5 Units

Study of body sheet metal and structural strength; body design and sheet metal working characteristics. Training in welding, brazing, metal bumping, metal finishing and plastic filling; heat shrinking; shop safety. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

AUBDY 302—AUTOMOTIVE COLLISION REPAIR 2 5 Units

Prerequisite: AUBDY 301 completion with a “C” grade or better.

Body repair techniques. Progressive training in the use of hydraulic portopower equipment, plastic repairs, and corrosion protection. Installation of fenders, hoods, doors, and alignment procedures. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

AUBDY 303—AUTOMOTIVE COLLISION REPAIR 3 4 Units

Prerequisite: AUBDY 302 completion with a “C” grade or better.

Training in automobile body measurement and alignment, replacement of welded body parts; methods of sectioning; types of glass and glass operating mechanisms; upholstery, trim and moldings. Techniques and procedures in MIG Welding and Mild HSS Steel. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

AUBDY 304—AUTOMOTIVE COLLISION REPAIR 4 4 Units

Prerequisite: AUBDY 303 completion with a “C” grade or better.

Specialized training in major body repairs, rebuilding, unitized body alignment and fundamentals of frame repair; damage estimating and shop management. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

AUBDY 321—AUTOMOTIVE SPRAY REFINISHING 1 2 Units

Introduction to automobile spray painting. Study of materials, supplies and equipment. Experience in feather-edging and application of base coats; spray techniques in spot blending and panel refinishing with a base coat and clear coat. Field trips may be required. Lecture/Laboratory/Other. Materials fee required. (GR)

AUBDY 322—AUTOMOTIVE SPRAY REFINISHING 2 3 Units

Prerequisite: AUBDY 321 completion with a “C” grade or better.

Continuation of AUBDY 321 with further instruction in complete refinishing with single stage enamels, base coat/clear coat enamels, and estimate writing. Field trips may be required. Lecture/Laboratory/Other. Materials fee required. (GR)

AUBDY 351—AUTO BODY COLLISION REPAIR 1 2 Units

For beginning students in auto body collision work. Theory and study of the body sheet metal and structure. Theory and manipulative skills in oxy-ace welding, sheet metal strengthening, plastic filling and shrinking. Lecture/Laboratory. Materials fee required. (GR)

AUBDY 352—AUTO BODY COLLISION REPAIR 2 2 Units

Prerequisite: AUBDY 351

Continued development of skills competence in metal strengthening through individual project work. Student must supply own project, and it must meet instructor’s approval. Study of theory, equipment and manipulative techniques in MIG welding and spray refinishing, up to and including surface preparation and priming. (No complete or spot color repairs are allowed in evening classes without instructor’s approval.) Lecture/Laboratory. Materials fee required. (GR)

Automotive Technology (AUTEC)

"MAUTEC" in the Schedule of Classes

The Automotive Technology program is designed to provide training in automobile repair, maintenance theory, study of factory manuals and publications, and applications of methods used in the auto servicing and repair industry.

The Automotive Technology Program offers two levels of training: Automotive Technician and Maintenance Mechanic. The Maintenance Mechanic requires less course work. It provides the student with basic automotive skills to perform basic maintenance and service tasks.

The Technician program of instruction requires additional training in the more sophisticated technologies. This program prepares students to enter technician jobs that perform diagnostic and repair on complex automotive systems.

Automotive Technician Program

Certificate: Automotive Technician

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.
REQUIRED COMPETENCIES

READ  184  [1,2,3]  Critical Reading ........................................... 3 or
        Reading Competency through Placement Exam
MATH  20  [1,2,3]  Pre-Algebra ............................................. 3 or
        Eligibility for MATH 70 by MJC assessment process

REQUIRED COURSES - Complete 38 units

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
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</tr>
<tr>
<td>AUTEC 311</td>
<td>Basic Automotive Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 368</td>
<td>Automotive Electricity I</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 369</td>
<td>Automotive Electricity II</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 323</td>
<td>Automatic Transmissions &amp; Transaxes</td>
<td>4</td>
</tr>
<tr>
<td>AUTEC 324</td>
<td>Manual Transmissions &amp; Drive Axles</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 315</td>
<td>Engine Rebuilding</td>
<td>4</td>
</tr>
<tr>
<td>AUTEC 321</td>
<td>Braking Systems</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>Steering, Suspension, &amp; Alignment</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 317</td>
<td>Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>AUTEC 319</td>
<td>Automotive Fuel Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUTEC 320</td>
<td>Automotive Engine Performance</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE .................................................. 30

AS Degree: Automotive Technician

* To earn an Associate in Science Degree, student must complete the 30 Required Units and meet the MJC Graduation Requirements.

REQUIRED COURSES - Complete 30 units

<table>
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<td>Air Conditioning</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.S. MAJOR .................................................. 30

Maintenance Mechanic Program

Certificate: Maintenance Mechanic

* To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COMPETENCIES

<table>
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</thead>
<tbody>
<tr>
<td>READ 184</td>
<td>Critical Reading</td>
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</tr>
<tr>
<td>READ 20</td>
<td>Pre-Algebra</td>
<td>3</td>
</tr>
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</table>

REQUIRED COURSES - Complete 23 units

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</tr>
</tbody>
</table>

AUTEC 322  [2,3,4]  Steering, Suspension, & Alignment .......... 3

ELECTIVE COURSES - Complete 7 units

7 Unit Technical Specialization drawn from the following departments
AUTEC, AUBDY, INTEC, MACH, and / or WELD ................................. 7

TOTAL UNITS FOR CERTIFICATE .................................................. 30

Automotive Technology Courses

AUTEC 115 — INTRODUCTION TO TECHNICAL INDUSTRIES  1 Unit
Also offered as AUBDY 115 and INTEC 115.
Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Lecture/Other. (CSU, GR).

AUTEC 241 — COMPACT DIESEL ENGINES  2 Units
Recommended for Success: AUTEC/AGM 389 or AUTEC 390 or equal. Also offered as AGM 241.
This course explores the design, operation, and proper maintenance of the latest compact diesel engines approved by the California Air Resources Board (CARB) for operation and sales in California after 1997. Topics include fuel characteristics, current emissions testing and standards, related engine systems, operation and trouble-shooting. Problem-solving component failures and disassembly/assembly of representative engine will be covered. (Engine Equipment Training Council Association certification approved course.) Field trips required. Lecture/Laboratory. Materials fee required. (CSU, GR).

AUTEC 311 — BASIC AUTOMOTIVE SYSTEMS  3 Units
Basic repair practices of automotive systems to include cooling, lubrication, fuel, exhaust, and electrical. Proper selection and use of automotive shop manuals, charts, service publications, tools, measuring devices, etc. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

AUTEC 315 — ENGINE REBUILDING  4 Units
Prerequisite: AUTEC 311 with a "C" grade or better. Automotive engine rebuilding. Use of automotive type of machine shop equipment. Engine disassembly, cleaning, inspection, measuring, and reassembly procedures. Lecture/Laboratory. Materials fee required. Not offered every semester. (GR)

AUTEC 317 — AUTOMOTIVE AIR CONDITIONING  3 Units
Concurrent enrollment in or previous completion of: AUTEC 311. The principles of automotive air conditioning and the components used in air conditioning. Factory installed air conditioning units and add-on type units. Charging, leak detection, component replacement and repair procedures. Lecture/Laboratory. Materials fee required. (GR)

AUTEC 319 — AUTOMOTIVE FUEL SYSTEMS  3 Units
Prerequisite: AUTEC 311, AUTEC 368 with a C grade or better. Provides the automotive technician with a comprehensive, up-to-date background in automotive fuel systems overhaul and testing of carburetors, fuel injection systems, pumps and relays. Test equipment and techniques used will assure that engine operation and emission levels are within state standards. Field trips may be required. Lecture/Laboratory. Materials fee required. Not offered every semester. (GR)

AUTEC 320 — ENGINE PERFORMANCE  4 Units
Prerequisites: AUTEC 311, AUTEC 319, AUTEC 368, and AUTEC 369. Automotive emission control: test equipment and techniques used will assure that engine operation, performance and emission levels are within C.A.R.B. standards. Lecture/Laboratory. Materials fee required. Field trips may be required. (GR)
AUTEC 321—BRAKING SYSTEMS 3 Units
Prerequisite: AUTEC 311.
Principles of design and operation, techniques for repair, diagnosis and replacement of 4-wheel braking systems. Lecture/Laboratory. Materials fee required. Field trips may be required. (GR)

AUTEC 322—STEERING, SUSPENSION, AND ALIGNMENT 3 Units
Prerequisite: AUTEC 311.
Principles of design and operation, techniques for diagnosis and repair of steering and suspension systems. Includes component replacement and alignment theory and procedures using two and four-wheel alignment equipment. Lecture/Laboratory. Materials fee required. Field trips may be required. (GR)

AUTEC 323—AUTOMATIC TRANSMISSION AND TRANSMISSIONS 4 Units
Prerequisite: AUTEC 311.
Construction, operation and diagnosis of automatic transmissions and transaxles to include service diagnosis and overhaul. Lecture/Laboratory. Materials fee required. Field trips may be required. (GR)

AUTEC 324—MANUAL TRANSMISSION AND DRIVE AXLES 3 Units
Prerequisite: AUTEC 311.
Construction, operation and diagnosis of manual transmissions and axles, to include service and overhaul. Theory as well as “hands-on” training with clutch systems and drive axle operation and service. Lecture/Laboratory. Materials fee required. Field trips may be required. (GR)

AUTEC 369—AUTOMOTIVE ELECTRICITY/ ELECTRONIC SYSTEMS 1 3 Units
Prerequisite: AUTEC 311. Preparation for ASE (Automotive Service Excellence) A6 and A8 exams: Ohm’s Law, starting and charging systems, batteries, alternators, and starters. Principles of operation, testing, adjusting and rebuilding procedures. AC and DC charging systems. Mechanical and electric voltage control. Lecture/Laboratory/Other. Materials fee required. (GR)

AUTEC 386—SMALL ENGINE REPAIR 1 Unit
Also offered as AGM 389.
A short course in servicing, operation, and maintenance of small gas engines, garden and landscape equipment. The student will need shop clothes and a small gas engine to overhaul. Field trips may be required. Lecture/Laboratory. (GR)

AUTEC 396—INTRODUCTION TO ELECTRONIC ENGINE CONTROL 2 Units
An introductory course in the application of electronic management to the operation of the modern automobile. Basic operation of fuel, ignition, and emission systems and their relationship to overall engine performance. Field trips may be required. Lecture/Laboratory. Materials fee required.

Behavioral and Social Sciences

Offerings in the Behavioral and Social Sciences Division are designed to meet the needs of transfer students, non-transfer students and community residents who desire general education courses. A student may complete an Associate of Arts degree in Behavioral and Social Sciences. All majors must complete a program of courses approved by the division. Divisional advisors will assist students in the selection of proper courses.

AA Degree: Behavioral and Social Sciences

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below.

REQUIRED COURSES - Complete 20 units

Complete 20 units of coursework from any of the following academic departments. Students must choose at least four discipline areas, and may complete no more than two courses from any department.

DEPARTMENTS

Administration of Justice* Human Services*
Anthropology Philosophy
Economics Political Science
Geography Psychology
Gerontology Sociology
History Social Science

TOTAL UNITS FOR A.A. MAJOR................................................................. 20

*Note: Students interested in Administration of Justice and Human Services may earn a degree or certificate in those areas. Specific information is listed under those headings in the catalog.

Biology (BIO)

"MBIO" in the Schedule of Classes

All courses are offered for letter grade only unless otherwise stated. Biology majors must take major courses on a letter grade basis. All majors must complete a program of courses approved by the division. Suggested curricula for specific biological sciences majors and related fields may be obtained from the advisors. Classes may sometimes convene at off-campus sites within the YCCD.

Biology Courses

BIO 50—BASIC BIOLOGY 3 Units
Introduction to the study of living organisms. Intended as a practical foundation for students interested in a basic knowledge of biological principles, terminology, and the scientific process. May serve as a bridge to transfer-level biology courses and is not open to students who have completed BIO 101 or 111. Lecture/Discussion/Demonstration. Field trips may be required. Materials fee may be required.

BIO 101—BIOLOGICAL PRINCIPLES 5 Units
Prerequisite: CHEM 142, 143, or 101
Study of general principles of biology in relationship to the process of all living organisms. Topics include an introduction to the nature of science, reproduction, development, evolution, energetics, molecular biology, genetics, cellular structure, homeostatic mechanisms, ecology, and taxonomy. Core course intended for biology and biology-related majors. Lecture/Laboratory. Field trips may be required. (CSU, UC) (CAN BIOL2, BIOL SEQ A; CC BIOL 2)
BIO 111—GENERAL BIOLOGY 4 Units
Introduction to principles of life, including reproduction, heredity, development, evolution; historical development of biology, molecular biology and ecology. Not open to students who have completed BIO 101. Not a substitute for BIO 101. Field trips may be required. Lecture/Laboratory. (CSU, UC) (CC BIOL 17)

BIO 115—GENETICS, EVOLUTION, AND SOCIETY 3 Units
Exploration of basic principles of genetics and evolution as unifying themes in the biological sciences. Emphasis on analysis of gene action, mutation, inheritance, natural selection, evolution of life and of species, biotechnologies and their implications for society. Lecture. (CSU, UC)

BIO 128—THE SIERRA NEVADA 3 Units
A study of the Sierra Nevada mountain range: the people, physical features, fungi, plants and animals. Field trips may be required. Lecture. (CSU, UC)

BIO 130—INTRODUCTION TO MARINE VERTEBRATES 3 Units
Recommended for Success: High school or college biology.
Groups of vertebrates adapted to marine environment; structural, physiological, and behavioral modifications making adaptation possible; species within those groups common to Pacific coastline. Field trips may be required. Lecture. (CSU, UC)

BIO 130L—INTRODUCTION TO MARINE VERTEBRATES LABORATORY
Prerequisite: BIO 130 or concurrent enrollment.
In depth study of selected topics from BIO 130 through the use of specimens, slides, laboratory exercises and field trips. Laboratory. Field trips required. (CSU, UC)

BIO 140—INTRODUCTION TO MARINE BIOLOGY 4 Units
Introduction to the natural history of plants and animals of the temperate and tropical marine environment including rocky shores, mud flat, sandy beach, salt marsh, coral reef, mangal forest, open ocean, deep ocean, bay/estuary and Sacramento-San Joaquin Delta communities. Arctic and Antarctic marine ecosystems will also be introduced. Field trips may be required. Lecture/Laboratory. (CSU, UC)

BIO 145—INTRODUCTION TO FRESHWATER BIOLOGY 4 Units
Common organisms of the freshwater environment. Basic principles of energy flow and acquisition, nutrient cycling, population dynamics, community structure, and species interaction. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, UC)

BIO 151/151A,B,C—BIOLOGY FIELD STUDIES ¾,1,2,3 Units
Prerequisite: Previous completion or concurrent enrollment in any college level biology, zoology or botany course.
Field trips to representative and unique ecosystems. Emphasis on life histories, adaptations and biological interactions of organisms within the ecosystem studied. Field experiences will include sampling methods, preparation of field notes and field identification of species characteristic of the ecosystem. Field trips are required. Lecture/Laboratory. Four maximum completions in any combination not to exceed 6 units. Materials fee required. Not offered every semester (CSU)

BIO 165—PRINCIPLES OF SCIENTIFIC INVESTIGATION 1 Unit
Recommended for Success: MATH 90 or qualification by the MJC assessment process.
Also offered as CHEM 165.
Laboratory investigations emphasizing hands-on research methodology incorporating math skills and scientific writing. Students will generate questions, develop hypotheses, design experiments, collect, present and discuss data in oral and written form. Computer resources involving simulations, spread sheets, online search techniques, and statistical software will be taught. Two field trips are required: one to UCD and the other to a local research facility. (CSU, GR, Summer Only)

BIO 180/180A,B—SPECIAL PROJECTS IN BIOLOGY ¾,1,2 Units
Prerequisite: Previous completion of or concurrent enrollment in a biology course. Individual study, research 101, or project in the field of biology. Field trips required. Four maximum completions not to exceed 2 units in any combination. Lecture/Laboratory arranged. Materials fee may be required. (CSU)

BIO 264—FOUNDATIONS FOR INDUSTRIAL LABORATORY TECHNIQUES 3 Units
Concurrent Enrollment: BIO 101
Basic laboratory skills for entry-level lab technicians in industrial or research oriented labs requiring a background in chemistry. Topics include lab safety, lab tools and techniques, the scientific method, hazardous materials, basic microbiology, and data analysis. Note: course co-developed by MJC and 14 industrial lab sites in the Central Valley. Field trips required. Lecture/Laboratory. (CSU, CR/NC)

BIO 265—BEGINNING MOLECULAR BIOLOGY 1 Unit
TECHNIQUES
Recommended for Success: Previous course in biology or chemistry; instructor recommendation for high school students.
A short course designed to introduce basic laboratory techniques associated with molecular biology. Topics covered would include, but are not limited to, use of specific instrumentation associated with molecular biology, gel electrophoresis, bacterial growth curves, generation of standard curves, principles of transformation and preparation of chemical solutions and media. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, CR/NC)

BIO 266—ADVANCED MOLECULAR BIOLOGY 1 Unit
TECHNIQUES
Recommended for Success: Previous course in biology or chemistry; instructor recommendation for high school students.
A short course designed to explore a variety of molecular biology techniques involving both DNA and protein analysis. The specific topics and procedures will vary according to the class; examples of molecular techniques include, but are not limited to, gel electrophoresis, PCR, use of restriction enzymes, bacterial transformation followed by a mini-prep plasmid extraction, blotting techniques and protein separation techniques. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, CR/NC)

Botany (BOT)

"MBIO" in the Schedule of Classes

BOT 101—GENERAL BOTANY 4 Units
Prerequisite: BIO 101
Principles of plant life, plant morphology, anatomy, physiology, reproduction, genetics, evolution, and ecology of bacteria, fungi, algae, archae, slime molds, bryophytes, and vascular plants. Lecture/Laboratory. Field trips may be required. (CSU, UC) (CAN BIOL 6, BIOL SEQ A; CC BIOL 6)

BOT 110—PLANT BIOLOGY 3 Units
Introduction to plants, including structure and function, heredity, development, reproduction, ecology, and evolution as they pertain to plants. Not open to students who have completed Biology 101. Not a substitute for Botany 101. Lecture/Laboratory. Field trips may be required. (CSU, UC)

Bookkeeping
See Business Administration

Botany - Business Administration

Broadcasting
See Radio-Television

Building and Safety Code Administration
See Industrial Technology

Continued ➤
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 management to complete the Business Administration Program. Upon transferring to a four-year college or university, students may choose a concentration in areas such as accounting, business teacher education, executive secretarial administration, finance, insurance, international business, management information, marketing, production operations and systems management, and real estate and land use affairs.

**Accounting Program**

The Accounting A.A./A.S. Degree program is an intensive study of accounting theory as it applies to business and industry today. Accounting is a vital element of business. Accountants record the way business has grown and, after analyzing the figures, recommend its future direction. Beginning courses concentrate on recording, classifying, and reporting financial information resulting from business transactions. The student then learns the financial structure of business and analysis of financial information for management decision making. Double entry accounting, ledger and journal techniques and accounting cycles are emphasized. The use of computers in accounting is also an integral part of the program. Accounting courses are taught during the day and evening to allow students who work the opportunity to attend classes.

**Certificate: Accounting Clerk**

- **OFADM 301 [NP]** Beginning Keyboarding .......................... 1½ OR
- **OFADM 303 [NP]** Skillbuilding for Speed and Accuracy .......... ½
- **OFADM 356 [NP]** Introduction to Word Processing .................. 1
- **OFADM 359 [NP]** Introduction to Spreadsheets ...................... 1
- **OFADM 314 [NP]** Office Procedures and Technologies .......... 3
- **BUSAD 310 [NP]** Bookkeeping 1 ...................................... 1
- **BUSAD 331 [NP]** Beginning Computer Accounting Software .... 1
- **BUSAD 332 [NP]** Intermediate Computer Accounting Software .... 1
- **BUSAD 300 [NP]** Machine Calculation .............................. 2 OR
- **OFADM 375 [NP]** 10-Key on the Computer .......................... 1
- **MATH 50 [NP]** Business Math ........................................ 3

**TOTAL UNITS FOR CERTIFICATE ........................................ 14.5**

**Certificate: Accounting**

The Accounting Certificate is designed for students entering into the accounting field at the entry level. If you wish to pursue professional certification (i.e., Certified Public Accountant and/or Certified Management Accountant), you should plan to earn at least a bachelor’s degree in Business Administration with a major in Accounting.

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 18 units**

- **BUSAD 201 [NP]** Financial Accounting ............................... 4
- **BUSAD 202 [NP]** Managerial Accounting ............................ 4
- **BUSAD 203 [NP]** Computer Accounting ............................... 3
- **BUSAD 200 [NP]** Spreadsheet Skills for Financial Accounting ....... 2
- **BUSAD 204 [NP]** Cost Accounting ..................................... 3 OR
- **BUSAD 336 [NP]** Tax Accounting ...................................... 3
- **BUSAD 300 [NP]** Machine Calculation ............................... 2

**ELECTIVE COURSES - Complete 6 units**

- **CMPS 201 [NP]** General Computer Literacy .......................... 3
- **CMPS 202 [NP]** Business Information Systems .......................... 3
- **BUSAD 377 [NP]** Human Relations in Business ........................ 3
- **BUSAD 230 [NP]** Personal Finance .................................... 3
- **MATH 50 [NP]** Business Math ........................................ 3
- **BUSAD 319 [NP]** Payroll Accounting ................................. 3
- **BUSAD 218 [NP]** Business Law ........................................ 4

**TOTAL UNITS FOR CERTIFICATE ........................................ 24**

**AA Degree: Accounting**

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

**REQUIRED COURSES - Complete 20 units**

- **BUSAD 201 [1]** Financial Accounting .................................. 4
- **BUSAD 202 [2]** Managerial Accounting ............................... 4
- **CMPS 201 [2]** General Computer Literacy .......................... 3
- **BUSAD 203 [3]** Computer Accounting ................................. 3
- **BUSAD 218 [4]** Business Law ........................................ 4
- **BUSAD 200 [1]** Financial Accounting on Spreadsheet ....... 2

**TOTAL UNITS FOR A.A. MAJOR ...................................... 20**

**AS Degree: Accounting**

- To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below.

**REQUIRED COURSES - Complete 20 units**

- **BUSAD 201 [1]** Financial Accounting .................................. 4
- **BUSAD 202 [2]** Managerial Accounting ............................... 4
- **CMPS 201 [2]** General Computer Literacy .......................... 3
- **BUSAD 203 [3]** Computer Accounting ................................. 3
- **BUSAD 218 [4]** Business Law ........................................ 4
- **BUSAD 200 [1]** Financial Accounting on Spreadsheet ....... 2

**ELECTIVE COURSES - Complete 10 units**

- **BUSAD 319 [3]** Payroll Accounting .................................... 3
- **BUSAD 204 [3]** Cost Accounting ...................................... 3
- **BUSAD 336 [3]** Tax Accounting ...................................... 3
- **CMPS 202 [2]** Business Information Systems ........................... 3
- **BUSAD 274 [3]** Human Resources Management ..................... 3 OR
- **BUSAD 377 [3]** Human Relations in Business ........................ 3 OR
- **BUSAD 245 [3]** Principles of Marketing ............................... 3
- **BUSAD 240 [3]** Principles of Management ............................ 3
- **BUSAD 100 [1]** Success in Business .................................. 1.5

**TOTAL UNITS FOR A.S. MAJOR ........................................ 30**
Bookkeeping Program

The Bookkeeping Certificate is designed for students planning to enter the job market at the entry level as a bookkeeper/accounting clerk after completing the required program courses here at Modesto Junior College. Students should have keyboarding skills. If not, he/she should take a beginning keyboarding course.

In the Bookkeeping A.A./A.S. Degree program at Modesto Junior College, students learn to analyze and enter transactions in journals, post to ledgers, complete worksheets, prepare the company's payroll, calculate employer payroll taxes, prepare the federal and state payroll tax forms, use various bookkeeping registers, prepare adjusting and closing entries, prepare classified earnings and capital statements, and prepare balance sheets. Students also learn about depreciation, bad debts, cost of goods sold, notes receivable, notes payable, inventory valuation and business taxes. The use of computers is also an important part of the bookkeeping program.

Certificate: Bookkeeping

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 19 units
- MATH 50 [NP] Business Math .......................................................... 3
- BUSAD 310 [NP] Bookkeeping 1 ......................................................... 3
- BUSAD 320 [NP] Bookkeeping 2 ......................................................... 3
- BUSAD 203 [NP] Computer Accounting ........................................... 3
- BUSAD 319 [NP] Payroll Accounting ................................................. 3
- BUSAD 300 [NP] Machine Calculation ............................................ 2

ELECTIVE COURSES - Complete 6 units
- CMPSC 202 [NP] Business Information Systems ............................... 3
- BUSAD 248 [NP] Introduction to Business ....................................... 3
- BUSAD 259 [NP] Small Business Management .................................. 3
- OFADM 203C [NP] Keyboarding ...................................................... 2
- OFADM 305 [NP] Records Management ........................................... 3
- BUSAD 377 [NP] Human Relations in Business .................................. 3

TOTAL UNITS FOR CERTIFICATE .................................................. 25

AA Degree: Bookkeeping

• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 19 units
- BUSAD 310 [1] Bookkeeping 1 ......................................................... 3
- BUSAD 320 [2] Bookkeeping 2 ......................................................... 3
- MATH 50 [1] Business Math ............................................................. 3
- BUSAD 319 [3] Payroll Accounting .................................................. 3

ELECTIVE COURSES - Complete 3 units

TOTAL UNITS FOR A.A. MAJOR ..................................................... 22

AS Degree: Bookkeeping

• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQURED COURSES - Complete 19 units
- BUSAD 310 [1] Bookkeeping 1 ......................................................... 3
- BUSAD 320 [2] Bookkeeping 2 ......................................................... 3
- MATH 50 [1] Business Math ............................................................. 3
- BUSAD 319 [3] Payroll Accounting .................................................. 3

ELECTIVE COURSES - Complete 3 units

TOTAL UNITS FOR AS MAJOR ..................................................... 30

Business Administration Program

This curriculum plan is intended for those interested in transferring to a four-year college or university. Students are encouraged to consult with the business staff or counselor in order to modify the curriculum to reflect their career interests and the career goals of the major. Students who plan to pursue a Business Administration major at a four-year institution should check the catalog of the senior school for specific requirements. Visit www.assist.org for specific transfer information.

AA Degree: Business Administration

• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework. It is suggested that the student who plans to transfer complete the UC/CSU IGETC pattern or the CSU/GE pattern.

REQUIRED COURSES - Complete 15 units

ELECTIVE COURSES - Complete 5 units
- Any courses in Office Administration, Business Administration, or Computer Graphics Applications, Computer Science, Real Estate and Economics (ECON 101 and 102 only)

TOTAL UNITS FOR A.A. MAJOR .................................................. 20

AS Degree: Business Administration

• To earn an Associate in Science Degree, students must complete the 15 Required Units for the Associate Degree, plus 15 units of coursework from Office Administration, Business Administration, Real Estate, Economics, or Computer Science, and the MJC Graduation Requirements.
  * 4 units of vocational work experience will be accepted for the A.S. Degree as part of the 30-unit major requirement; none will be accepted for the A.A. Degree.

TOTAL UNITS FOR AS MAJOR ................................................... 30
Business Operations Program

The Business Operations major is designed for those students seeking an A.A./A.S. degree in management and/or marketing activities of organizations. The major offers two separate tracks for those students wishing to specialize in either area.

The Management track in Business Operations will prepare students for careers in both profit and nonprofit organizations. The basic functions of management are applied in organizations of all sizes and types. These functions include planning, organization, directing, and controlling. Students will learn the theory and techniques of problem solving, communication, motivation, and quality performance.

AA Degree:
Business Operations: Management

* To earn an Associate in Arts Degree, the student must complete the 20 Required Units, and meet the MJC Graduation Requirements.

REQUIRED COURSES - Complete 20 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 240</td>
<td>Principles of Management</td>
<td>[1]</td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>Business Communications</td>
<td>[3]</td>
</tr>
<tr>
<td>CMPGR 215</td>
<td>Business Presentation Graphics</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>[2]</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>[4]</td>
</tr>
<tr>
<td>BUSAD 245</td>
<td>General Principles of Marketing</td>
<td>[2]</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.A. MAJOR ........................................ 20

AS Degree:
Business Operations: Management

* To earn an Associate in Science Degree, the student must complete the Required units for A.A. Degree, the MJC Graduation Requirements in addition to the following coursework.

ELECTIVE COURSES - Complete 10 units

Any courses in Business Administration, Computer Science, or Office Administration

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

International Business Program

The International Business Certificate is designed for those students seeking an entrepreneurial or organizational career in global commerce. It may be obtained as an individual certificate or incorporated into other appropriate majors. Courses are designed to provide an essential understanding of both domestic and international business practices. Economic and cultural considerations are addressed in relation to business of all sizes and types.

Certificate: International Business

* To earn a Certificate of Achievement, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 17 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>[1]</td>
</tr>
<tr>
<td>BUSAD 208</td>
<td>Survey of International Business</td>
<td>[1]</td>
</tr>
<tr>
<td>BUSAD 209</td>
<td>Introduction to Importing/Exporting</td>
<td>[2]</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>[3]</td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>[3]</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE ........................................ 17

Marketing Program

The Marketing track is designed for those students interested in activities relating to the presentation, purchase, and distribution of goods and services in profit and nonprofit organizations. Students will learn the central role that marketing plays in organizations of every size and type, public and private.

AA Degree: Marketing

* To earn an Associate in Arts Degree, student must complete the 20 Required Units and meet the MJC Graduation Requirements.

REQUIRED COURSES - Complete 20 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 245</td>
<td>Principles of Marketing</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 358</td>
<td>Sales and Ad Promotion</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 259</td>
<td>Small Business Management</td>
<td>[3]</td>
</tr>
<tr>
<td>CMGR 215</td>
<td>Business Presentation Graphics</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>Business Communications</td>
<td>[3]</td>
</tr>
<tr>
<td>BUSAD 299A,B</td>
<td>Marketing Projects</td>
<td>[1]</td>
</tr>
<tr>
<td>CMPSC 201</td>
<td>General Computer Literacy</td>
<td>[1]</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR MAJOR .............................................. 20

AS Degree: Marketing

* To earn an Associate in Science Degree, the student must complete the Required units for A.A. Degree, the MJC Graduation Requirements in addition to the following coursework.

ELECTIVE COURSES - Complete 10 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 310</td>
<td>Bookkeeping</td>
<td>[NP]</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>[NP]</td>
</tr>
<tr>
<td>ANY 4-5 UNITS OF COURSEWORK IN BUSAD, OFADM OR CMPSC</td>
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</tr>
</tbody>
</table>

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

Professional Selling Program

The Professional Selling Certificate program concerns itself with the activities that take place in the sale and distribution of goods and services in a world economy. It includes such areas of creative selling as marketing and business communication. Professional Selling is an important part of the marketing process. The salesperson must be able to interpret product and service features in terms of benefits and advantages to the consumer, and to then persuade the buyer to select that product or service. In the Professional Selling Program, the student is trained for entry-level jobs in sales.

Certificate: Professional Selling

* To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 20 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>[3]</td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>[3]</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE ........................................ 17
REQUIRED COURSES - Complete 27 units
BUSAD 210 [NP] Business Communication.........................3
BUSAD 245 [NP] Principles of Marketing..........................3
BUSAD 377 [NP] Human Relations in Business....................3
MATH 50 [NP] Business Math........................................3
SPCOM 100 [NP] Fundamentals of Public Speaking..............3
ENGL 101 [NP] Composition and Reading.........................3 OR
ENGL 50 [NP] Basic Composition and Reading ..................3
BUSAD 201 [NP] Financial Accounting......................4 OR
BUSAD 310 [NP] Bookkeeping 1.................................3
BUSAD 259 [NP] Small Business Management...................3
BUSAD 358 [NP] Sales and Ad Promotion........................3

ADDITIONAL ELECTIVE COURSES - Complete 3 units
Any courses in Business Administration, Computer Science, or Office Administration

TOTAL UNITS FOR CERTIFICATE .................................................. 30

Office Administration Program

SEE OFFICE ADMINISTRATION FOR:

• RECORDS MANAGEMENT
• OFFICE SUPPORT
• OFFICE COMPUTER APPLICATIONS

Retail Management Program

The Retail Management Certificate Program is designed for individuals who are interested in or are currently employed in the retail industry and seek advancement into a managerial position in that field. Course work includes: retail store management, information systems, business mathematics, workplace writing, accounting, human resource management, marketing and business communications. Certificates are awarded to students in recognition of completion of specified requirements, which indicate proficiency. All certificate Required Courses must be passed with a "C" grade or better. Interested students should consult division advisors.

Certificate: Retail Management (WAFC)

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 30 units.
MATH 50 [1] Business Math..............................................3
ENGL 50 [1] Basic Composition and Reading....................3 OR
ENGL 101 [NP] Composition and Reading.........................3
CMPSC 201 [1] General Computer Literacy..........................3 OR
CMPSC 274 [NP] (Preferred) Microcomputer Applications......3
SPCOM 100 [1] Fundamentals of Public Speaking..............3 OR
SPCOM 101 [NP] Basic Voice Improvement.........................3 OR
SPCOM 102 [NP] Introduction to Human Communication......3 OR
SPCOM 106 [NP] Group & Organizational Communication......3
BUSAD 240 [2] Principles of Management........................3 OR
SJJPR 351 [NP] Elements of Supervision........................3
BUSAD 310 [2] Bookkeeping 1........................................3 OR
BUSAD 201 [NP] Financial Accounting............................4

Business Administration Courses

BUSAD 100—STUDIES IN BUSINESS SUCCESS 1½ Units
Recommended for Success: GUIDE 110
Discussion of academic and other requisites for success in various business fields. Students will create a personal development plan for meeting academic requirements, acquisition of necessary skills, and entry into the job market of their elected field. Lecture. (CSU)

BUSAD 200—SPREADSHEET SKILLS FOR FINANCIAL ACCOUNTING 2 Units
Prerequisite: Concurrent or previous enrollment in BUSAD 201 or 320.
Introduction to spreadsheet software. Spreadsheet analysis, design, testing and documentation as they relate to the field of accounting will be covered; hands-on experience using a microcomputer. Microsoft Excel or a similar spreadsheet application will be used. Lecture/Laboratory. (CSU)

BUSAD 201—FINANCIAL ACCOUNTING 4 Units
Recommended for Success: BUSAD 310 and ENGL 101 placement eligibility.
Introduction to double entry accounting cycle, including journals, ledgers, adjustments, closing, and financial statements. Accounting for sole proprietorships and corporations; exposure to cash flows; merchandising operations; current and long-term assets and liabilities, including notes, bonds, and stocks. Emphasis on conceptual understanding. Lecture. (CAN BUS 2, CAN BUS SEQ A, CSU, UC) (CC BUSAD 1B)

BUSAD 202—MANAGERIAL ACCOUNTING 4 Units
Prerequisite: BUSAD 201
Introduction to Management Accounting, including treatment of accounting for the manufacturer, analysis of (1) cost-volume-profit relationships, (2) responsibility accounting and performance evaluation, (3) budgeting, (4) standard costing and variance analysis, (5) decision analysis for pricing and capital expenditures, (6) Just in Time accounting, (7) statement of cash flows, bonds and partnerships. Emphasis on managerial applications. Lecture. (CAN BUS 4, CAN BUS SEQ A, CSU, UC) (CC BUSAD 1B)

BUSAD 203—COMPUTER ACCOUNTING 3 Units
Prerequisite: BUSAD 201 or 310.
Recommended for BUSAD 320 if BUSAD 310 is used to satisfy the prerequisite.
Introduction to the use of the computer in accounting/bookkeeping. Practical applications of accounting through hands-on experiences on the personal computer using a variety of current computer accounting software packages. Lecture/Laboratory. (CSU)

BUSAD 204—COST ACCOUNTING 3 Units
Prerequisite: BUSAD 201 and 202.
Introduction to cost accounting theory and practice. Control of material, labor and burden costs; methods of applying expenses; job order and process cost system; cost statements. Lecture. (CSU).

BUSAD 208—INTRODUCTION TO INTERNATIONAL BUSINESS 3 Units
Recommended for Success: BUSAD 248
Also offered as AGEC 208.
A comprehensive overview of international business. Offers a global perspective of international trade, international organizations and the political and cultural impact of world trade. Lecture. Field trips may be required. (CSU)
**BUSAD 209—IMPORT/EXPORT FUNDAMENTALS** 3 Units

Recommended for Success: BUSAD 208

Overview of processes and procedures involved in importing and exporting products and services. Special emphasis on finance and financial documentation. Lecture. Field trips may be required. (CSU)

**BUSAD 210—BUSINESS COMMUNICATION** 3 Units

Prerequisite: ENGL 101 eligibility. Principles and applications of written and oral business communications, including letter writing, persuasive writing, dictating techniques, oral communication, and informative report writing. Lecture. (CSU) (CC OFTEC 25)

**BUSAD 218—BUSINESS LAW** 4 Units

Recommended for Success: Third semester Business major.

Laws and regulations affecting managerial decisions; legal concepts and case analyses in the areas of ethics, employment, consumer transactions, competition, the environment, business torts and crimes, contracts, agency, business organizations, and international business. Lecture. (CAN BUS 12, CSU, UC) (CC BUSAD 18)

**BUSAD 220—PERSONAL FINANCE** 3 Units

Principles and practices of business from the consumer's point of view; factors involved in intelligent management of income and expenditure and ethical maximization of personal financial gain. Income and wealth distribution; occupational earnings; wise buying; consumer rights and legislation and protective agencies; credit and borrowing; financial services; automobiles; property, liability, health, life, and disability insurance; retirement, social security, pensions, annuities; housing; savings and investment; taxes; estate planning. Lecture. (CSU)

**BUSAD 233—INVESTMENTS** 3 Units

Recommended for Success: BUSAD 230, and at least one semester of accounting.

Thorough study of corporate stocks and bonds, with time deposits, government securities, mutual funds, real estate, commodity futures, options and less common investment media receiving brief consideration. Emphasis on careful, critical investigation of risk and reward—rigorous mathematical analysis expected. Field trips may be required. Lecture. (CSU)

**BUSAD 239A,B—MARKETING PROJECTS** 1,2 Units

Independent analysis or design of computer accounting software or work in specialized BUSAD topics. Projects must have the approval of instructor. Conference with the instructor: minimum of 1 per month. Completions up to 4 maximum units. Laboratory. (CSU)

**BUSAD 240—PRINCIPLES OF MANAGEMENT** 3 Units

(Not open to those who have completed management telecourse.) An introductory study of the basic business management functions: planning, organizing, leading, and controlling. Lecture. (CSU) (CC BUSAD 40)

**BUSAD 245—PRINCIPLES OF MARKETING** 3 Units

Understanding customer needs and behavior; developing a product and/or service mix to satisfy customer needs profitably; determining promotional strategy; selecting channels and methods of distribution; establishing appropriate prices. Legal, political, cultural, social, economic, competitive and ethical aspects of marketing. Field trips may be required. Lecture. (CSU) (CC BUSAD 30)

**BUSAD 246—STORE MANAGEMENT** 3 Units

An examination of the resources, abilities and knowledge necessary to establish and operate a retail business successfully. Subjects studied include site selection, merchandising policies and management, buying policies and activities, pricing, retail promotion, customer service and credit, personal selling and marketing research for retailers. Lecture. (CSU)

**BUSAD 247—WEB MARKETING** 3 Units

Designed to provide an understanding of the World Wide Web and its potential as a marketing tool. Includes application basics, design, and utilization in primary or supportive e-commerce roles. Lecture.

**BUSAD 248—INTRODUCTION TO BUSINESS** 3 Units

Survey of business principles, problems and operations; legal, ethical, moral, and social issues; ownership; human resources; management, production, marketing; finance; managerial controls; government regulation; risk management. Lecture. (CSU, UC) (CC BUSAD 20)

**BUSAD 249—BUSINESS INTERNSHIP** 4 Units

An internship program with selected business firms dealing with either accounting, computer science, marketing, business law, office administration, bookkeeping, or retail management practices in public or private agencies. Student interns will be under joint supervision of the employers and a faculty member. Intended to provide practical applications for students who have developed theoretical knowledge and effective interpersonal skills by completing their discipline's introductory level course(s). See appropriate instructor for required enrollment forms.

**BUSAD 259—SMALL BUSINESS MANAGEMENT** 3 Units

Provides those intending and those involved in small business with the tools to help insure success. Covers establishing marketing, managing, and financing the new firm. Field trips may be required. Lecture. (CSU)

**BUSAD 274—HUMAN RESOURCES MANAGEMENT** 3 Units

Principles and methods related to effective utilization of human resources in organizations. Understanding human relations involved in recruitment, selection, and placement of employees with regard to training, experience, and abilities. Discussion, illustrations, and case studies to develop techniques effective in dealing with personnel problems. Lecture. (CSU)

**BUSAD 300—MACHINE CALCULATION** 2 Units

Recommended for Success: MATH 20

Instruction in the operation of the electronic calculator including addition, subtraction, multiplication, and division using constant factors and automatic accumulation as applied to business applications. Major emphasis on 10-key touch operation. Lecture/Laboratory.
BUSAD 303 – INTRODUCTION TO THE CALIFORNIA GAMING INDUSTRY  
Recommended for Success: Basic English and basic arithmetic skills.  
Introduction to the history, current issues, laws, regulations, and career opportunities in the California Gaming Industry. Discusses the roles and responsibilities of gaming industry employees and provides hands-on training experiences in the terminology, skills and operations of legal games available throughout California. Students successfully completing this course will be prepared to seek employment within the gaming industry. Field trips required. Lecture/Laboratory. Students are required to replace lost or damaged course materials.

BUSAD 310—BOOKKEEPING 1  
Recommended for Success: BUSAD 300 or MATH 50.  

BUSAD 319—PAYROLL ACCOUNTING  
Prerequisites: BUSAD 310 or 201.  
Recommended for Success: BUSAD 320 if BUSAD 310 is used as a prerequisite.  
Completing the payroll register. Reporting payroll tax information to the federal and state governments, with emphasis on completing both quarterly and annual reports. Making the necessary journal entries to record payroll transactions. Computing payroll on the microcomputer. Lecture/Laboratory.

BUSAD 320—BOOKKEEPING 2  
Prerequisite: BUSAD 310  
Entries requiring analysis and interpretation; entries for promissory notes; adjustments for prepaid; unlearning and accrued items; depreciation of assets; property sales; closing of books; partnership and corporate accounting; cash flows and financial analysis. Lecture.

BUSAD 331—BEGINNING COMPUTER ACCOUNTING SOFTWARE  
Prerequisites: BUSAD 310 or 201.  
Recommended for Success: BUSAD 320 if BUSAD 310 is used to satisfy prerequisite.  
A beginning course using features of computerized accounting software package(s). Course is designed to enable students to learn and apply the features of computerized accounting software to record, process and communicate financial accounting data for a Service Company in the small business setting. Lecture. Two maximum completions.

BUSAD 332—INTERMEDIATE COMPUTER ACCOUNTING SOFTWARE  
Prerequisites: BUSAD 331  
A continuation of the beginning course using features of computerized accounting software package(s). Course is designed to enable students to learn and apply the features of computerized accounting software to record, process and communicate financial accounting data for a Merchandising Company in the small business setting. Lecture. Two maximum completions.

BUSAD 333—COMPUTER ACCOUNTING SOFTWARE  
Prerequisites: BUSAD 310 or 201.  
Recommended for Success: BUSAD 320 if BUSAD 310 is used to fill prerequisite.  
A combination of BUSAD 331 and BUSAD 332. A beginning course using features of computerized accounting software package(s). Course is designed to enable students to learn and apply the features of computerized accounting software to record, process and communicate financial accounting data for a Service Company and for a Merchandising Corporation in the small business setting. Lecture. Two maximum completions.

BUSAD 336—TAX ACCOUNTING  
Prerequisites: BUSAD 201 or 310 and BUSAD 320 or equivalent.  
Federal and California tax rules and accounting principles; preparation of tax returns, supplemental schedules and other forms for individuals and business firms, computation of Social Security and self-employment taxes, and reporting sales and payroll taxes. Lecture. (Fall)  

BUSAD 358—SALES AND ADVERTISING PROMOTION  
3 Units  
Fundamentals of personal selling and advertising. The sales process is defined and analyzed. The use of a variety of advertising techniques, methods, and media are explored. Stresses practical application. Lecture.

BUSAD 364—TOTAL QUALITY MANAGEMENT  
3 Units  
Recommended for Success: SUPR 351, BUSAD 240 or equivalent. Also offered as SUPR 364.  
Not open to those who have completed management telecourse.)  
This course provides an introduction to W. Edward Deming’s philosophy of Total Quality Management and its implications for improving the competitiveness of American business in the international economy. A variety of related management topics is also presented. Lecture.

BUSAD 377—HUMAN RELATIONS IN BUSINESS  
3 Units  
People and their roles in the business and non-profit community. The nature of work, the work environment, personal skills and performance, work groups, and solving human relations problems. Lecture.

BUSAD 379—CUSTOMER RELATIONS  
1 Unit  
Provide the student with the skills necessary to be successful in the workplace. Focusing upon internal and external business interactions, customer satisfaction, departmental dynamics, appropriate procedure and protocol. Field trips may be required. Lecture.

BUSAD 380—CUSTOMER SERVICE  
1 Unit  
Provide the student with the skills necessary to establish effective customer service. Including public administration skills, sales techniques, and conflict management. Course is focused upon serving the public. Field trips may be required. Lecture.

BUSAD 391—LOGISTICS MANAGEMENT  
3 Units  
Basic aspects of Logistics Management: to include customer service, transportation, distribution, warehousing, inventory procurement, and materials handling management. Lecture. Field trips required.

Business Computer Information Systems  
See Computer Science

Business Operations  
See Business Administration

Chemistry (CHEM)  
"MCHEM" in the Schedule of Classes

CHEM 101—GENERAL CHEMISTRY 1  
5 Units  
Prerequisite: Satisfactory completion of CHEM 142 or CHEM 143 with C or better and Intermediate Algebra competency.  
Recommended for Success: Acceptable score on chemistry assessment test given on the first day of class and achievement of level 3 on the MJC Intermediate Algebra competency exam.  
Principles of chemistry emphasizing measurements, stoichiometry, gas laws and theory, thermodynamics, atomic structure, periodic properties, bonding, and solution chemistry. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN CHEM 2, CAN CHEM SEQ A, CSU, UC) (CC CHEM 1A)  
Continued ➢
COURSES AND ACADEMIC PROGRAMS

CHEM 102—GENERAL CHEMISTRY 2  5 Units
Prerequisite: Satisfactory completion of CHEM 101.
Continuation of Chemistry 101 emphasizing kinetics, electrochemistry, thermodynamics, radiochemistry, and descriptive chemistry. Lecture/Laboratory. (CAN CHEM 4, CAN CHEM SEQ A, CSU, UC) (CC CHEM 1B)

CHEM 103—GENERAL CHEMISTRY 2 LECTURE  3 Units
Prerequisite: Satisfactory completion of CHEM 101.
Lecture portion only of CHEM 102. Continuation of Chemistry 101 emphasizing kinetics, equilibrium, electrochemistry, thermodynamics, radiochemistry, and descriptive chemistry. Lecture. (CSU, UC)

CHEM 112—ORGANIC CHEMISTRY 1  5 Units
Prerequisite: Satisfactory completion of CHEM 102 or CHEM 103.
Nomenclature, structure, reactions, and spectroscopy of carbon containing compounds. Laboratory emphasizes basic techniques of synthesis, purification, and identification of organic compounds. Lecture/Laboratory/Discussion. Materials fee may be required. (CSU, UC, Fall)

CHEM 113—ORGANIC CHEMISTRY 2  5 Units
Prerequisite: CHEM 112
A continuation of CHEM 112 with emphasis on alcohols, amines, carboxyls, carboxyls, and biologically important compounds. Involves special topics in organic reactions and syntheses. Lecture/Laboratory. Materials fee may be required. (CSU, UC, Spr.)

CHEM 142—PRE-GENERAL CHEMISTRY  4 Units
Prerequisite: Satisfactory completion of or concurrent enrollment in MATH 90.
Principles of chemistry, emphasis on problem solving using factor-label method. Primarily for students planning to continue on to CHEM 101 or 144. Credit not granted to students who have completed CHEM 143. Lecture/Laboratory. Materials fee may be required. (CSU, UC)

CHEM 143—INTRODUCTORY COLLEGE CHEMISTRY  5 Units
Prerequisite: Eligibility for MATH 90. (AWAITING REQUISITE)
Designed to meet the requirements for certain nursing, dental hygiene, physical therapy, home economics, agriculture and forestry programs (inorganic chemistry). Principles of chemistry including an introduction to organic chemistry. Uses the factor-label method of problem solving. Credit not granted to students who have completed CHEM 142.
Lecture/Laboratory/Discussion. Materials fee may be required. (CAN CHEM 6, CAN CHEM SEQ B, CSU, UC) (CC CHEM 10)

CHEM 144—FUNDAMENTALS OF ORGANIC AND BIOCHEMISTRY  4 Units
Prerequisite: Satisfactory completion of CHEM 142 or CHEM 143.
Basic principles of organic and biochemistry. Uses inductive and deductive problem solving methods. Lecture/Laboratory. Materials fee may be required. (CAN CHEM 8, CAN CHEM SEQ B, CSU, UC, Spr.)

CHEM 150—EXPLORING OUR CHEMICAL ENVIRONMENT  3 Units
The interaction of mankind and the environment from a chemical perspective. Basic chemical principles are developed in order to understand such items as conventional, nuclear, and alternative energy sources, air and water pollution, fertilizers, pesticides, food preservatives, genetic engineering, and medicines and drugs. Field trips may be required. Lecture. (CSU, UC) (CC CHEM 20)

CHEM 164—CHEMISTRY LABORATORY FOR THE ELEMENTARY SCHOOL TEACHER  2 Units
Prerequisite: CHEM 150 or concurrent enrollment in CHEM 150.
Practical experience using applications in chemistry and physical science that can be used in an elementary school classroom. The scientific method and chemical principles will be stressed. Field trips may be required. Lecture/Laboratory. Materials fee may be required. Not offered every semester. (CSU, UC)

CHEM 165—PRINCIPLES OF SCIENTIFIC INVESTIGATION  1 Unit
Recommended for Success: MATH 90 or qualification by the MJC assessment process.
Also offered as BIO 165.
Laboratory investigations emphasizing hands-on research methodology incorporating math skills and scientific writing. Students will generate questions, develop hypotheses, design experiments, collect, present and discuss data in oral and written form. Computer resources involving simulations, spread sheets, online search techniques, and statistical software will be taught. Two field trips are required: one to UCD and the other to a local research facility. (CSU, Summer, GR)

Child Development (CLDDV)

"MCLDDV" in the Schedule of Classes

The Child Development program focuses on the growth and development of children from conception to late adolescence. Students use this knowledge to effectively guide children by creating nurturing learning environments, and by responding to the needs of children, families, staff, agencies, and the larger community. The Child Development program includes both theoretical and practical courses. Training prepares students for a wide variety of careers in direct services for children and support services for families.

Required coursework leads to certificates in a variety of professional areas, the Associate of Arts or the Associate of Science degrees, and transfer to four-year institutions. All Child Development core courses for degrees and/or certificates must be completed with a grade of "C" or better. This coursework is designed to meet the academic requirements of the California Early Start Community College Personnel Preparation Project in Early Intervention and the Child Development Permits, issued by the Commission on Teacher Credentialing (Title 5) and the California Department of Social Services (DSS Title 22).

The California Early Start Community College Personnel Preparation Project in Early Intervention and the Child Development Permit Matrix emphasize career and educational ladders that lead to the required training and experience for employment in licensed, state, and federal programs serving infants, children, and adolescents. Students should be advised that for the various levels of the Early Intervention Certificates and the Child Development Permits, there is an experience requirement and/or general education requirements. All required coursework, including both Child Development core courses and general education requirements, for the Early Intervention Certificates and the Child Development Permit must be completed with a grade of "C" or better. The Program Director Permit requires a Bachelor's degree.

It is recommended that first semester students select courses from the Child Development Associate Teacher Certificate. Students are encouraged to consult a child development advisor for enrollment and program details. Advisors will assist students in the selection of proper courses and sequences.

Associate Degrees in Child Development

AA Degree: Child Development

- To earn an Associate in Arts Degree, the student must complete the 24 required units for the program with a C or better and the MJC Graduation Requirements, and . See Program Matrix page 97 for program requirements

REQUIRED CLDDV UNITS ................................................................. 24

Continued on page 96 ➤
Child Development Program Overview

The Child Development program focuses on the growth and development of children from conception to late adolescence. Students use this knowledge to effectively guide children by creating nurturing learning environments, and by responding to the needs of children, families, staff, agencies, and the larger community. The Child Development program includes both theoretical and practical courses. Training prepares students for a wide variety of careers in direct services for children and support services for families. Review the matrix below to see course requirements for each academic award, any corresponding State permits, and the recommended course sequence for each award.

<table>
<thead>
<tr>
<th>CLDDV DEGREES</th>
<th>CLDDV CERTIFICATES</th>
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<tbody>
<tr>
<td>AA Degree</td>
<td>AS Degree</td>
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<td>101</td>
<td>101</td>
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<tr>
<td>103 or 104+105</td>
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Required Courses in Child Development

<table>
<thead>
<tr>
<th>CLDDV Units</th>
<th>24-25</th>
<th>26-27</th>
<th>6-7</th>
<th>12-13</th>
<th>24-25</th>
<th>26-27</th>
<th>60</th>
<th>60</th>
<th>6-7</th>
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<th>32-33</th>
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<th>32-33</th>
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</table>

State of California Child Care Permits

<table>
<thead>
<tr>
<th>CHILD CARE PERMIT MATRIX</th>
<th>EARLY START COMMUNITY COLLEGE PERSONNEL PREPARATION PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant</td>
<td>Associate</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>16 General Education Units</td>
<td>16 General Education Units</td>
</tr>
<tr>
<td>Early Intervention Specialist 1</td>
<td>Early Intervention Specialist 2</td>
</tr>
</tbody>
</table>

Additional Coursework

<table>
<thead>
<tr>
<th>Hours*</th>
<th>50 days at 3+ hours per day within 2 years</th>
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</thead>
<tbody>
<tr>
<td>N/A</td>
<td>175 days at 3+ hours per day within 2 years</td>
</tr>
<tr>
<td>N/A</td>
<td>350 days at 3+ hours per day within 4 years</td>
</tr>
</tbody>
</table>

* Students may design their own Master Teacher specializations; however, all specializations for a permit are subject to approval by the California Commission on Teacher Credentialing.

**6-UNIT OPTIONS** (required for AS Degree and Master Teacher Certificate)

<table>
<thead>
<tr>
<th>Creative Curriculum</th>
<th>Early Intervention</th>
<th>Families and Culture</th>
<th>Family Child Care</th>
<th>Infant/Toddler</th>
<th>Literacy and Language</th>
<th>School-Age and Paraprofessional</th>
</tr>
</thead>
<tbody>
<tr>
<td>290</td>
<td>262</td>
<td>261</td>
<td>262</td>
<td>291</td>
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<td>261</td>
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<td>261</td>
</tr>
</tbody>
</table>

* Students may design their own Master Teacher specializations; however, all specializations for a permit are subject to approval by the California Commission on Teacher Credentialing.
TOTAL UNITS FOR CERTIFICATE ........................................... 97 for program requirements.

Credentialing, when they have completed the required hours of work*, plus 16 general education units in specific categories, and have earned the MJC Child Development “Assistant” Certificate. See Program Matrix page 97 for program requirements.

TOTAL UNITS FOR CERTIFICATE ........................................... 97

Certificate: Teacher
Aligns with: California "Teacher" Permit authorizes the holder to provide service in the care, development, and instruction of children in a childcare and development program, and supervise a CDP Associate Teacher, a CDP Assistant, and an aide. Students are prepared to apply for this permit, issued by the State of California, California Commission on Teacher Credentialing, when they have completed the required hours of work*, plus 16 general education units in specific categories, and have earned the MJC Child Development “Teacher” Certificate. See Program Matrix page 97 for program requirements.

TOTAL UNITS FOR CERTIFICATE ........................................... 24

Certificate: Master Teacher
Aligns with: California "Master Teacher" Permit authorizes the holder to provide service in the care, development, and instruction of children in a childcare and development program, and supervise a CDP Associate Teacher, CDP Associate Teacher, CDP Assistant, and an aide. The permit also authorizes the holder to serve as a coordinator of curriculum and staff development in a childcare and development program. Students are prepared to apply for this permit, issued by the State of California, California commission on Teacher Credentialing, when they have completed the required hours of work*, plus 16 general education units in specific categories, plus 6 specialization units, plus 2 units in adult supervision, and have earned the MJC Child Development “Master Teacher” Certificate. As part of the MJC Certificate program, the student may choose one of the following options as a specialization or create a specialization. See Program Matrix page 97 for program requirements.

• Creative Curriculum
• Family Child Care
• Literacy and Literature
• Families and Culture
• Infant/Toddler Development
• School-Age Paraprofessional
• Teacher/Early Intervention Assistant 2

TOTAL UNITS FOR CERTIFICATE ........................................... 32

Certificate: Site Supervisor
Aligns with: California "Site Supervisor" Permit authorizes the holder to supervise a childcare and development program operating at a single site; provide service in the care, development, and instruction of children in a childcare and development program; and serve as a coordinator of curriculum and staff development in a childcare and development program. Students are prepared to apply for this permit, issued by the State of California, California commission on Teacher Credentialing, when they have completed the required hours of work*, plus 16 general education units in specific categories, plus 6 units in administration, plus 2 units in adult supervision, and have earned an Associate Degree with a concentration in Child Development or have earned 60 units including 24 ECE/CD units including core courses in specific categories. See Program Matrix page 97 for program requirements.

TOTAL UNITS FOR CERTIFICATE ........................................... 32

Certificate: Teacher/Early Intervention Assistant 1
Reflects the Early Intervention Assistant Personnel Competencies for California’s Early Start Program. The Early Intervention Assistant 1 assists in providing direct Early Intervention program services and in conducting observations assessments in group settings under direct visual supervision of an Early Interventionist I or II. See Program Matrix page 97 for program requirements.

TOTAL UNITS FOR CERTIFICATE ........................................... 24

Certificate: Teacher/Early Intervention Assistant 2
Reflects the Early Intervention Assistant Personnel Competencies for California’s Early Start Program. The Early Intervention 2 provides direct Early Intervention program services and assists in conducting observations and assessments in a center or home setting with weekly face-to-face supervision of an Early Interventionist I or II. See Program Matrix page 97 for program requirements.

TOTAL UNITS FOR CERTIFICATE ........................................... 24
Child Development Courses

CLDDV 48A,B —FUNDAMENTAL COMMUNICATION SKILLS FOR CHILD DEVELOPMENT MAJORS

Recommended for success: enrollment in at least one of the Child Development courses

Emphasis on developing fundamental communication skills including reading comprehension, preparation of written assignments, and spoken communication specific to the terminology utilized in the field of child development. Credit in this course may not be used to satisfy Child Development requirements for graduation from Modesto Junior College. Class can be completed a maximum of four times, for a maximum of 8.0 units, combined between 48A and 48B. Lecture.

CLDDV 101—INTRODUCTION TO EARLY CHILDHOOD STUDIES

Recommended for success: ENGL 50

History and development of educational programs for young children, infant through school-age. Completion of an educational plan, field observation of children, positive guidance techniques, and program philosophies and applications. Lecture. (CSU)

CLDDV 103—CHILD GROWTH AND DEVELOPMENT

Recommended for success: ENGL 50

Infancy, childhood, and adolescence, including prenatal and birthing: physical, cognitive, social, emotional, and atypical development. Discussion of current research and application. Lecture. (CSU)

CLDDV 104—CHILD GROWTH & DEVELOPMENT - CONCEPTION THROUGH EARLY CHILDHOOD

Recommended for success: ENGL 50

First half of CLDDV 103 - Conception through early childhood, including prenatal and birthing: physical, cognitive, social, emotional, and atypical development. Discussion of current research and application. Lecture. (CSU)

CLDDV 105—CHILD GROWTH & DEVELOPMENT- LATE CHILDHOOD THROUGH LATE ADOLESCENCE

Recommended for success: ENGL 50

Second half of CLDDV 103 - Late childhood through late adolescence: physical, cognitive, social, emotional, and atypical development. Discussion of current research and application. Lecture. (CSU)

CLDDV 107—INTRODUCTION TO CHILD DEVELOPMENT CURRICULUM

Recommended for success: ENGL 50

Study of appropriate play, aesthetic and learning experiences including program content, use of materials and equipment and guidance of children’s experiences in developmentally appropriate fashion; techniques of meeting physical needs of children. Principles of learning, models of curricular philosophies and programs and integration of domains of development will be integrated. Discussion of cultural contexts, variations in development and inclusion of children with special needs. Lecture. (CSU)

CLDDV 109—CHILD - FAMILY - COMMUNITY

Recommended for success: CLDDV 278

Understanding a child in the context of that child’s family and community. Focus on resources and programs serving families with children. Impact of societal influences on children and their families. Lecture. (CSU)

CLDDV 110—SOCIAL RECREATION LEADERSHIP

Also offered as REC 110

Introduction to and application of recreation and leisure leadership techniques in group situations including social recreation. Lecture. (CSU)

CLDDV 121—GUIDANCE OF YOUNG CHILDREN

Recommended for success: CLDDV 101, or CLDDV 103, or CLDDV 104 and CLDDV 105

Developing effective relationships with young children through positive guidance practices. Identification and application of appropriate guidance techniques. Lecture. (CSU)

CLDDV 123—LEARNING ENVIRONMENTS FOR YOUNG CHILDREN

Recommended for success: CLDDV 101, or CLDDV 103, or CLDDV 104 and CLDDV 105

Development and evaluation of the learning environment for young children including physical environment, curriculum, goals, materials, and equipment. Exploration of the interaction of children, teachers, and families, and how those interactions affect programs and children’s development. Lecture. (CSU)

CLDDV 125—INFANT AND TODDLER DEVELOPMENT

Recommended for success: CLDDV 247

Prerequisite: CLDDV 103, or CLDDV 104 and CLDDV 105

A hands-on practical experience of planning developmentally appropriate activities for infants and toddlers. Includes teaching in an infant/toddler environment while utilizing positive and nurturing guidance techniques, and evaluating developmental levels of the children through authentic observational assessment. CLDDV 130 - Supervised Field Experience - may NOT be used as a substitute for lab practicum. Class may be completed for a maximum of 10 units. Lecture / Laboratory. (CSU)

CLDDV 127B,C,D,E—INFANT / TODDLER PRACTICUM

Recommended for success: CLDDV 122

TB clearance is required.

A hands-on practical experience of planning developmentally appropriate activities for infants and toddlers. Includes teaching in an infant/toddler environment while utilizing positive and nurturing guidance techniques, and evaluating developmental levels of the children through authentic observational assessment. CLDDV 130 - Supervised Field Experience - may NOT be used as a substitute for lab practicum. Class may be completed for a maximum of 10 units. Lecture / Laboratory. (CSU)

CLDDV 128B,C,D,E—PRESCHOOL PRACTICUM

Recommended for success: CLDDV 248

Prerequisite: CLDDV 101, or CLDDV 103, or CLDDV 104 and CLDDV 105; TB clearance is required.

A hands-on practical experience of planning developmentally appropriate activities for young children. Includes teaching in a preschool classroom environment while utilizing positive and nurturing guidance techniques, and evaluating developmental levels of the children through authentic observational assessment. CLDDV 130 - Supervised Field Experience - may NOT be used as a substitute for lab practicum. Class may be completed for a maximum of 10 units. Lecture / Laboratory. (CSU)

CLDDV 129B,C,D,E—SCHOOL-AGE PRACTICUM

Recommended for success: CLDDV 101, or CLDDV 103, or CLDDV 104 and CLDDV 105; TB clearance is required.

A hands-on practical experience of planning developmentally appropriate activities for school-age children. Includes hands-on experience in a classroom environment while utilizing positive and nurturing guidance techniques, and evaluating developmental levels of the children through authentic observational assessment. CLDDV 130 - Supervised Field Experience - may NOT be used as a substitute for lab practicum. Class may be completed for a maximum of 10 units. Lecture / Laboratory. (CSU)

CLDDV 130B,C,D—SUPERVISED FIELD EXPERIENCE

Recommended for success: CLDDV 249

Fingerprint and TB clearances are required.

Designed to combine experiences in an infant, toddler, preschool, school-age care facility, or K-12 classroom with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Provides an orientation to the structure of work experience education and develops specific knowledge and skills related to employment situations through the accomplishment of goals. 75 paid hours or 60 volunteer hours of related work experience are required for the 2-unit class; 150 paid hours or 120 volunteer hours of related work experience are required for the 3-unit class; 225 paid hours or 180 volunteer hours of related work experience are required for the 4-unit class. This course may NOT be used as a substitute for lab practicums. Class can be completed a maximum of four times, for a maximum of 16.0 units, Lecture / Field Experience. (CSU)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 150</td>
<td>ADMINISTRATION OF CHILDREN'S PROGRAMS</td>
<td>3</td>
<td>Laws governing private and public children's centers in California. Aspects of records, reports, health and safety, finances, staff management, children's programs, equipment, and parent-community relationships from the administrator's point of view. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 151</td>
<td>ADVANCED ADMINISTRATION OF CHILDREN'S PROGRAMS</td>
<td>3</td>
<td>An advanced course for directors and site supervisors in child care programs. Staff development and leadership techniques. Fiscal, advocacy, and current issues will be explored. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 154</td>
<td>ADULT RELATIONSHIPS AND MENTORING IN SCHOOLS</td>
<td>2</td>
<td>Impact of staff interaction upon children and other adults in the classroom environment. Roles and functions of adults as professionals. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 160</td>
<td>ATYPICAL DEVELOPMENT</td>
<td>3</td>
<td>Examines the interaction of genetic, biological, and environmental influences in the prenatal, natal, and postnatal environment that contribute to the development of the atypical child. Identification of a variety of special needs in children from birth to 12 years of age. Factors influencing development will be explored including family, community, and culture as the child is included in all environments. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 163</td>
<td>WORKING WITH CHILDREN WITH SPECIAL NEEDS</td>
<td>3</td>
<td>Introduction to inclusion of children with special needs, from infancy to adolescence in the school and community. Includes laws and policies. Emphasis on cognitive, social, emotional, and physical development for the child with disabilities in care and educational settings. Collaboration with parents as partners and methods for working with professionals. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 165</td>
<td>CHILDREN AT RISK</td>
<td>3</td>
<td>Examines risking conditions for prenatal, infants, and young children including prenatal drug exposure, very low birth weight, serious congenital infection, congenital anomaly, low Apgar scores at birth, and other potential neurologic problems. Introduces the characteristics and effects of major childhood stress, including parental divorce and remarriage, parental illness and death, childhood illness and disability, child abuse and family violence, and parental incarceration. Field trips may be required. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 167</td>
<td>OBSERVATION AND ASSESSMENT</td>
<td>3</td>
<td>Observation as a means of assessing developmental levels of infants, young and school age children. Introduction of various informal, formal, normed, standardized, and valid assessment and screening tools. Integration of observation techniques to perform reliable screenings and assessments to create a portfolio to be presented to parents. Field trips may be required. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 201</td>
<td>HEALTH AND SAFETY PRACTICES IN PROGRAMS FOR CHILDREN</td>
<td>3</td>
<td>Universal health precautions and other health and safety practices for children’s programs. Health and safety requirements mandated by county and state, including injury prevention, infant and child first aid and CPR (successful completion will earn student the Red Cross certificates in First Aid and CPR), prevention of infectious disease, caring for ill children, and recognizing signs of child abuse. Lecture (CSU)</td>
</tr>
<tr>
<td>CLDDV 231</td>
<td>OVERVIEW OF FAMILY CHILD CARE</td>
<td>3</td>
<td>Selected topics related to family child care including, but not limited to, securing a license from California Department of Social Services, interpersonal relations, business management, program development, policy formulation, health, safety, nutrition, food practices, child guidance, and environmental maintenance, including utilization of a rating schedule. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 232</td>
<td>HEALTHY CAREGIVER</td>
<td>3</td>
<td>Selected topics related to the professional growth of the family child care provider including interpersonal skills, communication styles, prevention of burn-out, and strategies for career success. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 244</td>
<td>OBSERVATIONAL STUDY OF CHILDREN</td>
<td>1</td>
<td>Study of children in a natural setting, how they develop, and the process by which developmental change takes place. Lecture / Laboratory. (CSU)</td>
</tr>
<tr>
<td>CLDDV 253</td>
<td>TODDLER AND INFANT ENVIRONMENTS</td>
<td>2</td>
<td>Development and evaluation of the learning environment for infants and toddlers including goals, programs, materials, and equipment and interaction of children, staff and families. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 262</td>
<td>DIVERSITY IN EARLY CHILDHOOD</td>
<td>3</td>
<td>An overview of biases in the classroom. Development of a diverse curriculum and environments for young children. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 266</td>
<td>MENTOR SEMINAR</td>
<td>1/2</td>
<td>Beginning Early Childhood Mentors attend seminars to explore issues related to their role as supervisors of early childhood student teachers. Seminar content will be individualized to meet the needs of each mentor. Class can be completed a maximum of four times, for a maximum of 2.0 units. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 267</td>
<td>DIRECTOR SEMINAR</td>
<td>1</td>
<td>Directors, site supervisors and other administrators of early childhood programs attend monthly seminars to explore issues related to professional duties. Seminars will include quality improvement efforts, advocacy, supervision and mentoring of colleagues. Seminar content will be individualized to meet the needs of participants. Class can be completed a maximum of four times, for a maximum of 4.0 units. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 271</td>
<td>HEADSUP! READING – 1</td>
<td>1</td>
<td>Research-based principles and practices for providing children birth through age five a strong foundation in early reading and writing within a developmentally appropriate approach. Part 1 of a three part series. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 272</td>
<td>HEADSUP! READING – 2</td>
<td>1</td>
<td>Research-based principles and practices for providing children birth through age five a strong foundation in early reading and writing within a developmentally appropriate approach. Part 2 of a three part series. Lecture. (CSU)</td>
</tr>
<tr>
<td>CLDDV 273</td>
<td>HEADSUP! READING – 3</td>
<td>1</td>
<td>Research-based principles and practices for providing children birth through age five a strong foundation in early reading and writing within a developmentally appropriate approach. Part 3 of a three part series. Lecture. (CSU)</td>
</tr>
</tbody>
</table>
CLDDV 274—EARLY LITERACY  3 Units
Recommended for success:  CLDDV 103, or CLDDV 104 and CLDDV 105
Research-based principles and practice for literacy, reading, writing, speaking, listening, and thinking development in an early childhood education setting. Field trips may be required. Lecture. (CSU)

CLDDV 279 – HEADSUP! READING 1, 2, 3  3 Units
Research-based principles and practices for providing children birth through age 5 a strong foundation in early reading and writing within a developmentally appropriate approach. Lecture. (CSU)

CLDDV 280 – SCHOOL-AGE DEVELOPMENT  3 Units
(Formerly listed as CLDDV 275)
A study of the developing child during the school-age years. Developmental characteristics of school-age children, influences on behavior and learning, and the fundamentals of planning and implementing curriculum in programs serving school-age children and their families. Lecture. (CSU)

CLDDV 281 – SCHOOL-AGE PROGRAM AND CURRICULUM  3 Units
(Formerly listed as CLDDV 276)
The fundamentals of planning, implementing, and evaluating curriculum for programs serving school-age children and their families. Developing and providing age appropriate activities, environment, and relationships in the context of an integrated and active curriculum. Lecture. (CSU)

CLDDV 290A,C – BRAIN DEVELOPMENT THROUGH MUSIC AND MOVEMENT ACTIVITIES  3 units
(Formerly listed as CLDDV 365)
Recommended for Success:  ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105
The brain and its connection to motor skill development in young children. Non-competitive group games, movement programs, and educational fitness. Lecture. (CSU)

CLDDV 291 – CREATIVE ACTIVITIES FOR YOUNG CHILDREN  3 units
(Formerly listed as CLDDV 364)
Recommended for Success:  ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105
Develop, implement, and analyze creative experiences in the young child’s learning process. Lecture. (CSU)

CLDDV 292 – MATH AND SCIENCE CURRICULUM FOR YOUNG CHILDREN  3 units
Recommended for Success:  ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105
Study of math and science exploration by young children. Evaluation and development of appropriate math and science activities and materials. Discussion of variations in developmental levels, inclusion of children with special needs, and respect of cultural differences. Lecture. (CSU)

CLDDV 350 – THE YOUNG CHILD  2 units
Basic concepts of growth and development of young children. Evaluating learning experiences for young children based on development. Lecture.

CLDDV 357 – CURRENT ISSUES: CHILD CARE DIRECTORS  1 unit
Study of current issues and planning decisions facing directors of child care programs; examination and analysis of new and proposed state regulations. Lecture.

CLDDV 366 – CURRENT ISSUES: INFANT/TODDLER TEACHERS  1 unit
Study of current issues in creating infant/toddler environments, evaluating development, and parent interaction. Lecture.

CLDDV 367 – CURRENT ISSUES: PRESCHOOL TEACHERS  1 unit
Study of current issues in creating preschool environments, evaluating development, and parent interaction. Lecture.

CLDDV 368 – ADAPTING PRESCHOOL FOR EXCEPTIONAL NEEDS CHILDREN  1 unit
Recommended for success:  CLDDV 161
Adapting preschool educational programs to include exceptional needs children. Observation of children with exceptional needs to assess development and plan activities. Lecture.

CLDDV 369 – CHILDREN AT RISK  1 unit
Understanding the impact of prenatal exposure to drugs and violence on children and families. Strategies to assist teachers, family child care providers, foster parents and other professionals in meeting needs of children prenatally exposed to drugs. Lecture.

CLDDV 370 – ISSUES IN CHILDREN’S NUTRITIONAL HEALTH  2 units
Also offered as FDNTR 370
Overview of entry level skills in the child nutrition program including sanitation, record keeping, and food production. Role and responsibilities in providing menus for children and youth which comply with budgetary parameters and meet their nutritional, social and emotional needs with sensitivity to culturally diverse foods. Lecture.

Chiropractic
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Cinematography
See Film

City and Regional Planning
See Architecture

Clerical
See Office Administration
COMMERCIAL FLORESTY - COMMUNICATION GRAPHICS

See Environmental Horticultural Science

COMMUNICATION GRAPHICS (CGR)
“MCGR” in the Schedule of Classes

In the Communication Graphics program, students learn each phase of printing and receive an overview of industry practices. Most courses offer the student a choice of scheduling laboratory hours among several alternatives. Open access and computer-assisted teaching techniques are incorporated with regular instruction. Communication Graphics courses are recommended for students majoring in Advertising, Art, Business, Journalism, and Vocational Printing.

COMMUNICATION GRAPHICS PROGRAM

COMPETENCIES (FOR CERTIFICATES ONLY)

READ 184  Critical Reading ........................................ 3 or
Reading Competency through Placement Exam
MATH 20  Pre-Algebra ........................................... 3 or
Eligibility for MATH 70 by MJC assessment process
SPCOM 102  Introduction to Human Communication .......... 3

Certificate: Flexographic Printing

• To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 17 units

CGR 211 [1]  Typography 1 (PageMaker and QuarkXpress) ........ 3
CGR 212 [1]  Electronic Prepress .................................. 3
CGR 214 [1]  Printing Presses and Bindery 1 ...................... 3
CGR 222 [2]  Image Assembly and Platemaking .................. 2
CGR 223 [1,2]  Printing Presses and Bindery 2 .................... 3
CGR 332 [2]  Production Presses and Bindery .................... 3
(focus on Flexographic Printing)

TOTAL UNITS FOR CERTIFICATE ........................................ 17

Certificate: Prepress

• To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 17 units

CGR 211 [1]  Typography 1 (PageMaker and QuarkXpress) ........ 3
CGR 212 [1]  Electronic Prepress .................................. 3
CGR 221 [1,2]  Image Capture and Manipulation ................. 3
CGR 222 [2]  Image Assembly and Platemaking .................. 2
CGR 224 [1,2]  Electronic Publishing Systems (Illustrator) ....... 3

TOTAL UNITS FOR CERTIFICATE ........................................ 17

Certificate: Presses and Bindery

• To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 14 units

CGR 201 [1]  Graphic Arts Fundamentals ....................... 3
CGR 214 [1]  Printing Presses and Bindery 1 ................. 3
CGR 222 [2]  Image Assembly and Platemaking ................ 2
CGR 223 [1,2]  Printing Presses and Bindery 2 ............... 3
CGR 332 [2]  Production Presses and Bindery ................. 3
(focus on Offset Presses)

TOTAL UNITS FOR CERTIFICATE ........................................ 14

Certificate: Printing Maintenance

• To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 15 units

CGR 214 [1]  Printing Presses and Bindery 1 ................. 3
CGR 223 [1,2]  Printing Presses and Bindery 2 ............... 3
CGR 332 [2]  Production Presses and Bindery ................. 3
MACH 301 [NP]  Machine Tool Technology (1 or 2) ............ 2
ELTEC 265 [NP]  Troubleshooting Techniques .................. 1
ELTEC 208 [NP]  The World of Electricity ....................... 3

TOTAL UNITS FOR CERTIFICATE ........................................ 15

*Students completing 2 or more certificates will need to replace the second or third GR 332 with a 399B Independent Study

Certificate: Communication Graphics Applications

• To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 21 units

CGR 201 [1]  Graphic Arts Fundamentals ....................... 3
CGR 211 [1]  Typography 1 (PageMaker, QuarkXpress, InDesign) .... 3
CGR 212 [1]  Electronic Prepress .................................. 3
CGR 214 [NP]  Printing Presses and Bindery 1 ................. 3
CGR 221 [NP]  Image Capture and Manipulation (Photoshop) .... 3
CGR 224 [NP]  Electronic Publishing Systems (Illustrator) ....... 3
CGR 331 [NP]  Typography 2 (PageMaker, QuarkXpress, InDesign) .... 3

ELECTIVE COURSES - Complete 15 units

CGR 222 [NP]  Image Assembly and Platemaking .............. 2
CGR 223 [2]  Printing Presses and Bindery 2 ............... 3
CGR 225 [NP]  Production Screen Printing ...................... 2
CGR 232 [4]  Graphic Design Portfolio Development ............ 1
CGR 332 [3,4]  Production Presses and Bindery ............... 3
CGR 333 [4]  Photo Techniques .................................. 3
CGR 352 [4]  Production Management ......................... 1

Continued ➤
AA Degree: Communication Graphics Applications

To earn an Associate in Arts Degree, students must complete all Required Courses as listed under the Certificate (21 units), and meet the MJC Graduation Requirements.  

TOTAL UNITS FOR A.A. MAJOR ........................................................................ 21

AS Degree: Communication Graphics Applications

To earn an Associate in Science Degree, students must complete all Required Courses as listed under the Certificate (21 units), plus 10 units from the Elective Courses and meet the MJC Graduation Requirements.  

TOTAL UNITS FOR A.S. MAJOR ........................................................................ 31

Graphic Design Program

The Graphic Design Program is structured to develop the capability of the student to creatively solve design problems related to the printed product. The Program incorporates both artistic and technical course work to address the total requirements of the profession.

The Graphic Design field distinguishes itself from the general arts field by emphasizing the application of visual knowledge. Possible job opportunities include: graphic artist, graphic designer, commercial artist, illustrator, and pre-press layout person.

Certificate: Graphic Design

To earn a Certificate of Achievement, the student must meet/complete the following competencies, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COMPETENCIES (FOR CERTIFICATE )

| READ  | Critical Reading ............................................. 3 or Reading Competency through Placement Exam |
| MATH  | Pre-Algebra ................................................. 3 or Eligibility for MATH 70 by MJC assessment process |
| SPCOM| Introduction to Human Communication ................. 3 |

REQUIRED COURSES - Complete 37 units

| ART   | Basic Drawing 1 ............................................. 3 |
| ART   | Color and Design 1 .......................................... 3 |
| ART   | Color and Design 2 .......................................... 3 |
| CGR   | Graphic Arts Fundamentals .................................. 3 |
| CGR   | Typography 1 (PageMaker, QuarkXPress, InDesign).... 3 |
| CGR   | Electronic Prepress ........................................... 3 |
| CGR   | Image Capture and Manipulation (Photoshop) .......... 3 |
| CGR   | Electronic Publishing Systems (Illustrator) .......... 2 |
| CGR   | Graphic Design Portfolio Development .................. 1 |
| CGR   | Typography 2 (PageMaker, Quark, InDesign) .......... 3 |
| CGR   | Advanced Copy and Design .................................. 2 |
| CGR   | Communication Graphics Internship ..................... 2 |

TOTAL UNITS FOR CERTIFICATE ................................................................. 37

AA Degree: Graphic Design

To earn an Associate in Arts Degree, students must complete the 21 units of Required Courses, and complete the MJC Graduation Requirements.

REQUIRED COURSES - Complete 21 units

| ART   | Basic Drawing 1 ............................................. 3 |
| ART   | Color and Design 1 .......................................... 3 |
| CGR   | Graphic Arts Fundamentals .................................. 3 |
| CGR   | Typography 1 (PageMaker, QuarkXPress, InDesign).... 3 |
| CGR   | Electronic Prepress ........................................... 3 |
| CGR   | Electronic Publishing Systems (Illustrator) .......... 3 |
| CGR   | Graphic Design ............................................... 3 |
| CGR   | Independent Study (with advisors approval) .......... 1 |

TOTAL UNITS FOR A.A. MAJOR ........................................................................ 21

AS Degree: Graphic Design

To earn an Associate in Science Degree, students must complete all Required Courses for Associate Degree plus the additional units listed below, and meet the MJC Graduation Requirements.

ADDITIONAL REQUIRED COURSES FOR A.S. DEGREE

| ART   | Color and Design 2 .......................................... 3 |
| CGR   | Image Capture and Manipulation (Photoshop) .......... 3 |
| CGR   | Graphic Design Portfolio Development .................. 1 |
| CGR   | Typography 2 (PageMaker, QuarkXPress, InDesign).... 3 |
| CGR   | Independent Study (with advisors approval) .......... 1 |

TOTAL UNITS FOR A.S. MAJOR ........................................................................ 32

Communication Graphics Courses

CGR 201—GRAPHIC ARTS FUNDAMENTALS 3 Units

History of major printing processes; application of layout and design, hot and cold type composition, proofreading, paste-up, process photography, offset production procedures, paper, printing inks, bindery and photographic legal restrictions. Field trips may be required. Lecture. Material fee required. (CSU, Fall)

CGR 211—TYPOGRAPHY 1 3 Units

Basic fundamentals of typesetting and composition. Includes instruction in the printer's point system, type face identification and mark-up procedures. Operation of display and typesetting equipment. Note: PageMaker software. Field trips may be required. Lecture/Laboratory. (CSU, Fall)

CGR 212—ELECTRONIC PREPRESS 3 Units

Recommended for Success: Concurrent enrollment in CGR 211. Terminology, materials, equipment, facilities and methods used in electronic prepress. Electronic job planning and layout basics, such as: file formats, fonts, imposition, trapping, screen angling, preflight, postscript output, imagesetters, proofing and output to plates. Techniques of preparing electronic files for output to: postscript printers, imagesetters, and direct to plate. Procedures for preparing line art, black and white photos, color photos, clip art and software created illustration. Scaling graphics to layout specs and working with single multicolored layouts. Note: Illustrator software. Field trips may be required. Lecture/Laboratory. (CSU, Fall)
CGR 214—PRINTING PRESSES AND BINDERY 1 3 Units
Formerly listed as GRC 214.
Introduction to bindery work; printing, paper cutting, folding, assembling, finish work and packaging. Introduction to single color small offset presses. Operations and maintenance of feeders and printing units. Fundamentals of press chemistry. Use press adjustments to control ink and water systems. Fundamental use of offset plates. Field trips may be required. Lecture/Laboratory. (CSU, Fall)

CGR 221—IMAGE CAPTURE AND MANIPULATION 3 Units
Optical and digital methods of image capture and manipulation. Photographic materials and equipment for the graphic arts. Densitometry, light sources, pin register, film assembly, exposure and development control. Contact frame, camera, and scanner theory and practice. Students will use a variety of flat bed scanners, transparency scanners, and digital cameras. Photoshop will be used to manipulate the images. Materials fee may be required. Lecture/Laboratory. (CSU, Spr.)

CGR 222—IMAGE ASSEMBLY AND PLATEMAKING 2 Units
Planning for litho plating; handling and repair of litho negatives; special negative operations-scribing, opaquing, retouching, flat layout and imposition; step and repeat stripping; single and multiple negative masking. Lecture. Materials fee required. (CSU, Spr.)

CGR 223—PRINTING PRESSES AND BINDERY 2 3 Units
Recommended for Success: CGR 214
Formerly listed as GRC 223.
Intermediate skills in bindery work, including those listed in CGR 221 and specialty printing production to include: four-color, web-offset and letterpress. Intermediate skills in printing presses to include two or more colors with tight registration. Troubleshooting, maintenance, and planning for printing of multi color jobs. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, Fall)

CGR 224—ELECTRONIC PUBLISHING SYSTEMS 3 Units
Recommended for Success: OFADM 351
Formerly listed as GRC 224.
Introduction to electronic publishing systems, to include text generation, computer-designed graphics. Typographical applications and typesetting devices, to include imagesetters and direct to plate devices. Current options for hardware and software used in the graphic communication industry and the advantages and disadvantages. Postscript and its role in electronic publishing. Field trips may be required. Two maximum completions. Lecture/Laboratory. Not offered every semester. (CSU)

CGR 225—PRODUCTION SCREEN PRINTING 2 Units
Fundamentals of production screen printing on multi-media or substrates. Screen printing with single and multi-color with halftone registration. Field trips may be required. Materials fee required. Lecture/Laboratory. (CSU, Fall)

CGR 230—GRAPHIC DESIGN 3 Units
Recommended for success: ART 120, ART 124, CGR 211, CGR 212 and CGR 224.
Provides a knowledge of graphic design principles and application in business today. Note: Illustrator software. Lecture/Laboratory. Field trips required.

CGR 232—GRAPHIC DESIGN PORTFOLIO DEVELOPMENT 1 Unit
Development of a portfolio which orchestrates what is to be seen, how it is to be sequenced and the duration of its exposure. The portfolio will reflect creative ability, technical proficiency and an abundance of ideas. Field trips may be required. Lecture. Materials fee required. (GR, CSU)

CGR 331—TYPOGRAPHY 2 3 Units
Recommended for Success: CGR 211 and 212.
Instruction in advanced typesetting techniques relating to commercial printing. Operation of display, text, and computer assisted typesetting equipment. Advanced methods of form composition. Note: QuarkXPress software. Lecture/Laboratory. (GR, Spr.)

CGR 332—PRODUCTION PRESSES AND BINDERY 3 Units
Recommended for Success: CGR 214, 223 or equivalent training.
Formerly listed as GRC 332.
Fundamentals in care, maintenance and setting of rollers in large press systems. Includes instruction in operational procedures for large presses, including handling of press plates. Special attention given to complex color printing and production printing of all types. Production bindery in all areas to include: folding, stitching, coil binding, fastback binding, and specialty presses for bindery. The emphasis will be on production and quality control. Field trips may be required. Lecture/Laboratory. (GR, Fall)

CGR 333—PHOTO TECHNIQUES 3 Units
Recommended for Success: CGR 211 and 221.
Photo manipulation procedures: Photoshop training, image capture using scanners and digital cameras, output devices (proofing and image setters), special films, proofing methods and materials, and utilizing industry equipment and software. Note: Primary software (Photoshop). Lecture/Laboratory. (GR, Fall)

CGR 342—ADVANCED COPY DESIGN 2 Units
Prerequisite: CGR 212
Instruction in techniques required to design and prepare camera-ready copy for several types of printing media. Emphasis on mechanical skills and procedures required for the production of this artwork. Field trips may be required. Lecture/Laboratory. (GR, Spr.)

CGR 350—GRAPHIC COMMUNICATION INTERNSHIP 2 Units
Prerequisite: Minimum of 15 units completed in Communication Graphics major.

CGR 352—PRODUCTION MANAGEMENT 1 Unit
Prerequisite: Minimum of 15 units completed in Communication Graphics major.
Fundamentals of Graphics Production Management to include: job flow, production work, maintenance schedules, estimating, purchasing, production scheduling, and development of portfolios. Field trips may be required. Laboratory. (Spr.)

Electronics Technology - Computer Electronics

Certificate:
Electronics Technology - Computer Electronics

• To earn a Certificate of Achievement, the student must complete the coursework below. All required courses must be completed with a C or better.

REQUIRED COURSES - Complete 16 units

ELTEC 208* [1] The World of Electricity and Electronics………………..3
CMPET 212 [1] Digital Principles and Circuits…………………..…………..3
CMPET 214 [2,3,4] Microprocessor Programming and Interfacing …4
CMPET 206 [2,3,4] Personal Computer Assembling, Upgrading, and Repair ………………….…………..3
CMPSC 204 [2] Introduction to Programming…………………..…………..3

ELECTIVE COURSES - Complete 19 units, at least 6 in each area

Electronics Area

CMPET 210 [3,4] Intermediate Personal Computer Servicing …………………..3
CMPET 232 [NP] Introduction to Programmable Logic Controllers …..2
CMPET 234 [2,3,4] Advanced Topics in Programmable Logic Controllers …2
CMPET 269 [2,3,4] Network+ Certification Training Lab…………………..…1
ELTEC 221 [2,3,4]Instrumentation Devices and Systems ……………………..…3
Computer Electronics

**Computer Area**

CMPSC 213 [3,4] Programming with Visual Basic .......................... 4
CMPSC 263 [3,4] Networking Essentials .................................. 3
CMPSC 278 [3,4] Spreadsheet Software .................................... 3

**Electronics Category**

CMPET 210 [NP] Intermediate Personal Computer Servicing .............. 3
ELTEC 208 [1] The World of Electricity and Electronics ................. 3

**TOTAL UNITS FOR CERTIFICATE** .................................................. 35

**AA Degree: Computer Electronics**

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition the coursework below. All required and sufficient elective courses in the program must be completed with a C or better.

**REQUIRED COURSES - Complete 16 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 204</td>
<td>[2]</td>
<td>Introduction to Programming</td>
</tr>
<tr>
<td>CMPET 206</td>
<td>[2,3,4]</td>
<td>Personal Computer Assembling, Upgrading, and Repair</td>
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<tr>
<td>ELTEC 208</td>
<td>[1]</td>
<td>The World of Electricity and Electronics</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES - Complete 4 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPET 210</td>
<td>[3,4]</td>
<td>Intermediate Personal Computer Servicing</td>
</tr>
<tr>
<td>CMPET 227</td>
<td>[2,3,4]</td>
<td>Introduction to Automated Process Control Systems</td>
</tr>
<tr>
<td>CMPET 228</td>
<td>[2,3,4]</td>
<td>Integrated Automatic Process Control Systems</td>
</tr>
<tr>
<td>CMPET 232</td>
<td>[NP]</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>CMPET 234</td>
<td>[2,3,4]</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>CMPET 269</td>
<td>[2,3,4]</td>
<td>Network Certification Training Lab</td>
</tr>
<tr>
<td>CMPSC 205</td>
<td>[3]</td>
<td>Problem Solving and Programming 1</td>
</tr>
<tr>
<td>CMPSC 213</td>
<td>[3,4]</td>
<td>Programming with Visual Basic</td>
</tr>
<tr>
<td>CMPSC 263</td>
<td>[3,4]</td>
<td>Networking Essentials</td>
</tr>
<tr>
<td>CMPSC 278</td>
<td>[3,4]</td>
<td>Spreadsheet Software</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR MAJOR** .................................................................. 20

**AS Degree: Computer Electronics**

- To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition the coursework below. All required and sufficient elective courses in the program must be completed with a C or better.

**REQUIRED COURSES - Complete 16 units**

<table>
<thead>
<tr>
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<tr>
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<td>[2,3,4]</td>
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</tr>
<tr>
<td>CMPET 212</td>
<td>[1]</td>
<td>Digital Principles and Circuits</td>
</tr>
<tr>
<td>CMPET 214</td>
<td>[2,3,4]</td>
<td>Microprocessor Programming and Interfacing</td>
</tr>
<tr>
<td>ELTEC 208</td>
<td>[1]</td>
<td>The World of Electricity and Electronics</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES Complete 14 units, at least 6 in each area**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPET 210</td>
<td>[NP]</td>
<td>Intermediate Personal Computer Servicing</td>
</tr>
<tr>
<td>CMPET 232</td>
<td>[NP]</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>CMPET 234</td>
<td>[2,3,4]</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>CMPET 269</td>
<td>[2,3,4]</td>
<td>Network+ Certification Training Lab</td>
</tr>
<tr>
<td>ELTEC 221</td>
<td>[2,3,4]</td>
<td>Instrumentation Devices and Systems</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR MAJOR** .................................................................. 20

**Computer Science Area**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 205</td>
<td>[3]</td>
<td>Problem Solving and Programming 1</td>
</tr>
<tr>
<td>CMPSC 213</td>
<td>[3,4]</td>
<td>Programming with Visual Basic</td>
</tr>
<tr>
<td>CMPSC 263</td>
<td>[3,4]</td>
<td>Networking Essentials</td>
</tr>
<tr>
<td>CMPSC 278</td>
<td>[3,4]</td>
<td>Spreadsheet Software</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR MAJOR** .................................................................. 30

**Computer Electronics Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPET 206</td>
<td>[2,3,4]</td>
<td>Personal Computer Assembling, Upgrading, and Repair</td>
</tr>
<tr>
<td>CMPET 217</td>
<td>[2,3,4]</td>
<td>Introduction to Automated Process Control Systems</td>
</tr>
</tbody>
</table>

**COURSES AND ACADEMIC PROGRAMS** 105
CMPET 234—ADVANCED TOPICS IN PROGRAMMABLE LOGIC CONTROLLERS
2 Units
Recommended for Success: ELTEC 232/CMPS 232 or equivalent course.
Also offered as ELTEC 234.
Advanced study of programmable logic controllers and complete controller systems.
Emphasis on component selection, design and operation of industry-like controller systems. Lecture/Laboratory. (CSU, GR)

CMPET 260 – NETWORK+ CERTIFICATION TRAINING LAB 1 Unit
Concurrent Enrollment: CMPS 263
Recommended for Success: Any introductory computer course.
Also offered as CMPS 269.
Network + is quickly becoming the standard for introductory-level industry certification.
Designed for those interested in a career in network support, this vendor-neutral certification takes the student through installing and configuring a network client. This laboratory course along with the CMPS 263 course provides preparation for CompTIA’s Network+ certification exam. Extensive network lab projects will be required. Field trips may be required. Laboratory. Materials fee required. (CSU)

CMPET 302 - INTRODUCTION TO INDUSTRIAL NETWORKING WITH DEVCNET 1 Unit
Instruction on DeviceNet which is an open architecture system of smart sensors, controllers, and I/O all linked together on a common network and controlled by a PC that may or may not be networked to other PC’s. Exploration of device level hardware and software. Lecture.

Computer Graphics Applications (CMPSGR)
"MCMPGR" in the Schedule of Classes

The Computer Graphic Applications Associate Degree and Certificate program is structured to enable students to pursue a course of study and computer experience in career areas that rely on computer graphics applications. This program is designed to prepare students for employment, transfer to four-year institutions, or to allow employees within these industries to upgrade their skills.

Computer Graphics Applications Program

Certificate:
Computer Graphics Applications

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUARED COURSES - Complete 34-37 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 120</td>
<td>3</td>
<td>Basic Drawing</td>
</tr>
<tr>
<td>ART 124</td>
<td>3</td>
<td>Color and Design</td>
</tr>
<tr>
<td>CMPSGR 213</td>
<td>3</td>
<td>Applied Computer Graphics</td>
</tr>
<tr>
<td>CMPSGR 202</td>
<td>3</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>CMPSGR 215</td>
<td>3</td>
<td>Business Presentation Graphics</td>
</tr>
<tr>
<td>CMPSGR 217</td>
<td>3</td>
<td>Computer Illustration Software</td>
</tr>
<tr>
<td>CMPSGR 219*</td>
<td>1</td>
<td>Computer Graphics Portfolio Review</td>
</tr>
<tr>
<td>CMPSGR 225</td>
<td>3</td>
<td>3D Modeling and Animation</td>
</tr>
<tr>
<td>CMPSGR 235</td>
<td>3</td>
<td>Image Manipulation Software</td>
</tr>
<tr>
<td>CMPSGR 262</td>
<td>1 OR 3</td>
<td>Exploring the World Wide Web</td>
</tr>
<tr>
<td>CMPSGR 263</td>
<td>3</td>
<td>Internet Literacy</td>
</tr>
<tr>
<td>CMPSGR 264</td>
<td>3</td>
<td>Publishing on the World Wide Web</td>
</tr>
<tr>
<td>CMPSGR 263 [NP]</td>
<td>3</td>
<td>Internet Literacy</td>
</tr>
<tr>
<td>CMPSGR 284 [2]</td>
<td>3</td>
<td>Desktop Video Animation</td>
</tr>
<tr>
<td>CMPS 201 [1]</td>
<td>3 OR</td>
<td>General Computer Literacy</td>
</tr>
<tr>
<td>CMPS 202 [1]</td>
<td>3 OR</td>
<td>Business Information Systems</td>
</tr>
<tr>
<td>CMPS 274 [1]</td>
<td>4</td>
<td>Microcomputer Applications</td>
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</table>

ELECTIVE COURSES - Complete 2-5 units

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ART 160</td>
<td>3</td>
<td>Appreciation of Art</td>
</tr>
<tr>
<td>ART 170</td>
<td>3 OR</td>
<td>Basic Photography</td>
</tr>
<tr>
<td>ART 181</td>
<td>1½ OR</td>
<td>Basic Photography 1</td>
</tr>
<tr>
<td>ART 182</td>
<td>1½</td>
<td>Basic Photography 2</td>
</tr>
<tr>
<td>CGR 201</td>
<td>3</td>
<td>Graphic Arts Fundamentals</td>
</tr>
<tr>
<td>CGR 211</td>
<td>2</td>
<td>Typography 1 (PageMaker and QuarkXpress)</td>
</tr>
<tr>
<td>CGR 224</td>
<td>2</td>
<td>Electronic Publishing</td>
</tr>
<tr>
<td>ART 123</td>
<td>3</td>
<td>Figure Drawing</td>
</tr>
<tr>
<td>ELTEC 315</td>
<td>2</td>
<td>Introduction to Media Systems</td>
</tr>
<tr>
<td>ENGTC 210</td>
<td>1</td>
<td>Introduction to C.A.D.</td>
</tr>
<tr>
<td>CMPS 201 [1]</td>
<td>3</td>
<td>General Computer Literacy</td>
</tr>
<tr>
<td>CMPSGR 262</td>
<td>1</td>
<td>Exploring the World Wide Web</td>
</tr>
<tr>
<td>CMPSGR 263</td>
<td>3</td>
<td>Internet Literacy</td>
</tr>
<tr>
<td>CMPSGR 264</td>
<td>3</td>
<td>Publishing on the World Wide Web</td>
</tr>
<tr>
<td>CMPSGR 265</td>
<td>3</td>
<td>Multimedia on the World Wide Web</td>
</tr>
<tr>
<td>CMPSGR 267</td>
<td>3</td>
<td>Dreamweaver in Website Design</td>
</tr>
<tr>
<td>CMPSGR 268</td>
<td>3</td>
<td>Flash: Web Graphics and Animation</td>
</tr>
<tr>
<td>CMPSGR 269</td>
<td>3</td>
<td>Flash: Web Graphics and Animation 2</td>
</tr>
<tr>
<td>CMPSGR 285A,B</td>
<td>1.2</td>
<td>Special Projects</td>
</tr>
<tr>
<td>CMPSGR 287</td>
<td>3</td>
<td>Introduction to Multimedia</td>
</tr>
<tr>
<td>CMPSGR 298A,B</td>
<td>1.2</td>
<td>Special Topics (with approval)</td>
</tr>
<tr>
<td>RATV 134</td>
<td>3</td>
<td>Television Studio Operations</td>
</tr>
<tr>
<td>ARCH 110</td>
<td>1</td>
<td>Descriptive Drawing</td>
</tr>
<tr>
<td>CMPSGR 267</td>
<td>1</td>
<td>Microsoft Windows - Advanced</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE ........................................ 39
* Not required for AS Degree

AS Degree:
Computer Graphics Applications

To earn an Associate in Science Degree, students complete the Required and Elective courses for certificate, with the exception of CMPSGR 219, and complete the MJC Graduation Requirements.

TOTAL UNITS REQUIRED FOR AS MAJOR ........................................ 39

Computer Graphics Courses

CMPSGR 201 – ANIMATION: A GLOBAL VIEW
3 Units

History of animation and its relationship to societies and cultures. Explores the development of animation from its earliest attempts in prehistoric times through the present day integration of technology. Strategies for production are presented, including animation techniques, design, layout, editing, timing, composition, color, lighting, music, sound effects, voice, story, concept, content, theme, historical relationship, social context, ethical context, purpose, audience, and philosophy. Field trips may be required. Lecture. (CSU) (CAN CSCI 2)

CMPSGR 202—INTRODUCTION TO COMPUTER GRAPHICS
3 Units

Also offered as ART 102.

An introductory course in the field of computer graphics using various applications and tools. Topics explored include, but are not limited to, original image creation, photograpic editing, scanning, printing, two-dimensional animation, sound digitizing pens, mouse, and digital camera. Field trips may be required. Materials fee required. Lecture/Laboratory (CSU)
**CMPGR 213—APPLIED COMPUTER GRAPHICS** 3 Units
Also offered as ART 103.
Concepts and techniques in computer graphics as related to fine and applied art applications. Field trips may be required. Materials fee required. Lecture/Laboratory. (CSU)

**CMPGR 214—DIGITAL CAPTURE FOR COMPUTER GRAPHICS** 3 Units
Recommended for Success: Any previous computer graphics course.
Explore digital capture and image editing techniques using such hardware devices as scanners, capture boards, digital cameras and video. Students must have access to a digital camera. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 215—BUSINESS PRESENTATION GRAPHICS** 3 Units
Recommended for Success: Any introductory computer science class.
The use of a computer as a vehicle for preparing, producing, and controlling the presentation of visuals within the business environment. Both qualitative and quantitative data and selection of appropriate visual display format and media will be covered. Hardware and peripheral equipment as well as commercially available software will be covered. Emphasis is placed on the use of existing commercially available software with "hands on" experience being provided in an open lab environment. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)(CC CMPSC 11)

**CMPGR 217—COMPUTER ILLUSTRATION SOFTWARE** 3 Units
Recommended for Success: CMPGR 202 or ART 102
Introduction to illustration software as applied to visual and data presentation. Explores the techniques and tools used by artists, designers, and illustrators to produce artwork for print, publishing, multi-media graphics, web page design or illustration. Hands-on experience with microcomputer graphics systems required. Field trips may be required. Materials fee required. Lecture/Laboratory. (CSU)

**CMPGR 219—COMPUTER GRAPHICS** 1 Unit
Prerequisite: This course follows the completed courses of the Computer Graphics majors/certificate requirements.
Also offered as ART 119.
Prepares the student majoring in or receiving a certificate in Computer Graphics with the necessary visual and business skills to develop a portfolio; emphasizes the creative and applied business needs for individuals entering the professional field of Computer Graphics. Field trips may be required. Lecture/Laboratory. (CSU, GR)

**CMPGR 225—3D GRAPHICS AND ANIMATION** 3 Units
Graphic animation techniques utilizing microcomputers and 3D software. 3D modeling, scene composition, materials editing, object and camera movement, character development and story-boarding will be explored. Students will have intensive hands-on experience with IBM or Mac graphic systems and related peripheral devices. Field trips may be required. Two maximum completions. Lecture/Laboratory. Material fee required. (CSU)

**CMPGR 226—ADVANCED PHOTOSHOP APPLICATIONS** 3 Units
Prerequisite: CMPGR 235 or equivalent skills.
Advanced skills in Adobe Photoshop including layout and publication, image processing, web skills and illustration. Students will have extensive hands-on experience with IBM or MAC graphic systems and related peripheral devices. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 262—EXPLORING THE WORLD WIDE WEB** 1 Unit
Introduction to the World Wide Web (Web). Use of a graphical browser for accessing, viewing, and saving Web documents. Use of E-mail, search engines and bookmarks. Current and emerging Web technologies, and the impact on education, business, organizations, and our professional and personal lives. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 263—INTERNET LITERACY** 3 Units
Recommended for Success: Any introductory computer class.
Provides the conceptual background and the online skills needed to become Internet literate. Covers internet services: e-mail, listserv, newsgroups, FTP, telnet and the World Wide Web (WWW). Emphasis will be placed on the WWW, types of access (ISP), usage, software (browsers and other support software) and internet etiquette in a global environment. Introduction to publishing and multimedia. Usage of search engines to conduct research and copyright issues and bibliographic style. Reflects on the impact of emerging technologies on the future of commerce and communications as well as societal issues. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 264—PUBLISHING ON THE WORLD WIDE WEB** 3 Units
Recommended for Success: CMPGR 282, CMPSC 201

**CMPGR 265—MULTIMEDIA ON THE WORLD WIDE WEB** 3 Units
Prerequisite: CMPGR 264 or 287
Intermediate course covering multimedia components of the World Wide Web. Development with animation, sound and video. Emphasis on further development of programming techniques and skills for advanced features for Web pages. Extensive hands-on lab experience. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 267—DREAMWEAVER IN WEB SITE DESIGN** 3 Units
Recommended for Success: CMPGR 202 or ART 102.
Macromedia's Dreamweaver web design software, including templates, libraries, Cascading Style Sheets, and FTP Strategies for creating intuitive and accessible web sites such as audience considerations, site map, and navigational building, and testing. Lecture/Laboratory. (CSU)

**CMPGR 268—FLASH: WEB GRAPHICS AND ANIMATION 1** 3 Units
Recommended for Success: CMPGR 202 or ART 102.
Introduction to Micromedia’s FLASH. Covers the tools and concepts of FLASH and its many interactive possibilities and functions, including drawing, image, text, animation, sound, and action-scripting integration. Explores the strategies for creating intuitive and accessible FLASH productions from start-to-finish, such as audience considerations, site map and navigation building, and the effective use of content and animation, output, optimization and testing. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 269—FLASH: WEB GRAPHICS AND ANIMATION 2** 3 Units
Prerequisite: CMPGR 268
In-depth look into how FLASH is effectively used by real-world interactive designers and developers. Explore advanced FLASH concepts and tools such as dynamic text, tell-targeting movie clips, drop-down menus, scrolling text, scriptable masks, embedded video, streaming and event sound, and the integration of FLASH with HTML. Gain an understanding of how to use Action Scripting for more powerful interactivity and animation by exploring the use of variables, properties, expressions, functions, and operators. Bring together the FLASH methods learned into the creation of a final, online portfolio presentation. Lecture/Laboratory. Materials fee required. (CSU)

**CMPGR 284—DESKTOP VIDEO ANIMATION** 3 Units
Recommended for Success: Basic Computer Graphics literacy such as CMPGR 202 or ART 102
Concepts and techniques utilizing computers and related technologies, with the video media. Video image capture enhancement, recording and exportation for use in graphic image production/presentation, computer animation, web and CD will be explored. Students will have intensive “hands on” experience on the MAC or IBM graphic system and related video peripheral devices. Field trips may be required. Lecture/Laboratory. Materials fee required for special printer/plotter paper, inks, and film. (CSU)
Computer Graphics Applications - Computer Science

CMPGR 287—INTRODUCTION TO MULTIMEDIA  3 Units
Recommended for Success: Basic Computer literacy such as CMPSC 201.
Introduction to multimedia software and hardware on microcomputers. Students will have
intensive "hands on" experience working with a variety of media such as text, numbers,
sound, music, graphics, animation and video. Techniques of media capture, generation
and editing and subsequent interactive multimedia development will be explored. Field
trips may be required. Lecture/Laboratory. Materials fee required. (CSU).

CMPGR 288—INTERMEDIATE MULTIMEDIA  3 Units
Prerequisite: CMPGR 287
Continuation of Multimedia concepts and applications. Working with a variety of media
forms such as text, numbers, sound, music, graphics, animation and video. Emphasis is
placed on further development of scripting and interactive design. Discussion of needs
assessment, design issues, implementation and presentation will be combined with "hands
on" projects. Field trips may be required. Two maximum completions. Lecture/Laboratory.
Materials fee required. (CSU).

CMPGR 298A,B—SPECIAL TOPICS IN
COMPUTER GRAPHICS  1,2 Units
Prerequisite: Varies with topic.
Participation in discussion, analysis, and evaluation of a special topic in computer graphics,
microcomputer applications, and related technologies. Topic to be announced in class
schedule. Field trips may be required. Four maximum completions for a maximum of 6
units in any combination. Lecture or Lecture/Lab. (CSU)

Certificate:
Computer Applications Specialist
This certificate is designed for students who will work in a small business
performing general computer application procedures such as document
preparation, simple calculations using electronic spreadsheets, or simple
database management.

• To earn a Certificate of Achievement, the student must complete the
following coursework. Each course must be completed with a grade of C or
better.

REQUIRED COURSES - Complete 11 units
CMPSC 201 [1] General Computer Literacy..........................3
CMPSC 274 [1] Microcomputer Applications...............4
CMPGR 262 [1] Exploring the Internet.........................1

REQUIRED OPTION - Complete one option for 6 units

Spreadsheets
CMPSC 278 [1] Spreadsheet Software (EXCEL).............3

Databases
CMPSC 276 [2] Database Programming (VBA)..................3

Publishing
CMPSC 231 [1] Intermediate Word Processing...............3

Microsoft Windows
CMPSC 265 [1] Beginning Microsoft Windows.................1
CMPSC 266 [1] Intermediate Microsoft Windows..........1
CMPSC 267 [1] Advanced Microsoft Windows...............1

TOTAL UNITS FOR CERTIFICATE............................................17

Computer Information Systems Program

The Computer Science A.S. Degree program at Modesto Junior College is
designed to meet the needs of non-transfer students who wish to acquire
the new computer skills needed in today's work environment. The Computer
Science program provides students with a general knowledge of computer
literacy and information systems, microcomputer hardware and software
systems, the ability to work with a wide variety of applications software, and
an opportunity to develop programming and problem-solving skills.

Students who wish to major in Computer Science and transfer to a four-year
institution should ask for program planning assistance from a business program
advisor. Modesto Junior College offers a Computer Science transfer major to
meet the major requirement for the Associate Degree. Transfer institutions vary
in lower division (first two years of college) major department
requirements. Meeting the Modesto Junior College Associate Degree major
requirements does not necessarily mean a given transfer institution's major
requirements have been met.

AA Degree:
Computer Information Systems

Student may earn an Associate in Arts degree in Business Computer
Information Systems by completing the coursework below and completing
the MJC Graduation Requirements. Students are urged to meet with a
Computer Science faculty advisor to assist them plan their specific program
for graduation.

REQUIRED COURSES - Complete 21 units
BUSAD 201 [1] Financial Accounting.........................4
BUSAD 218 [4] Business Law.................................4

TOTAL UNITS FOR MAJOR..................................................21
Computer Programming Program

Certificate: Computer Programming Specialist

This certificate will prepare students to work as an entry level programmer in the areas of JAVA programming, C++ programming, or Visual BASIC programming.

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10 units

<table>
<thead>
<tr>
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<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CMPSC 204</td>
<td>3</td>
<td>Introduction to Programming</td>
</tr>
<tr>
<td>CMPSC 205</td>
<td>3</td>
<td>Problem Solving and Programming I</td>
</tr>
<tr>
<td>CMPSC 206</td>
<td>3</td>
<td>UNIX/Linux Systems and Programming</td>
</tr>
<tr>
<td>CMPGR 262</td>
<td>1</td>
<td>Exploring the Internet</td>
</tr>
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</table>

REQUIRED OPTION - Complete one 6-unit option

Java

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 216</td>
<td>3</td>
<td>Java Script Programming</td>
</tr>
<tr>
<td>CMPSC 262</td>
<td>3</td>
<td>Object-Oriented Programming w/Java</td>
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</table>

Programming

<table>
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<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 261</td>
<td>3</td>
<td>Problem Solving &amp; Programming 2</td>
</tr>
<tr>
<td>CMPSC 291</td>
<td>3</td>
<td>Windows Programming w/Visual C++</td>
</tr>
</tbody>
</table>

Visual Basic

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 213</td>
<td>3</td>
<td>Programming with Visual Basic</td>
</tr>
<tr>
<td>CMPSC 214</td>
<td>3</td>
<td>Advanced Visual Basic</td>
</tr>
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</table>

TOTAL UNITS FOR CERTIFICATE ............................................. 16

Computer Science Program

AA Degree: Computer Science

- Student may earn an Associate in Arts degree in Computer Science by completing the coursework below and completing the MJC Graduation Requirements. Students are urged to meet with a Computer Science faculty advisor to assist them plan their specific program for graduation.

- IMPORTANT: This program is intended to be a Transfer Program guide only. Graduation requirements, general education patterns, and junior standing requirements are subject to change. It is the student’s responsibility to consult the catalog for the targeted college/university. Students may consult a business division advisor for a sample four-semester plan and more detailed program-planning guidance.

RECOMMENDED PREPARATION - (Not part of major)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFADM 301</td>
<td>1½</td>
<td>Beginning Keyboarding or Equivalent Keyboarding Skills</td>
</tr>
</tbody>
</table>

REQUIRED COURSES - Complete 13 units

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<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 205</td>
<td>3</td>
<td>Problem Solving and Programming I</td>
</tr>
<tr>
<td>CMPSC 241</td>
<td>3</td>
<td>Assembly Language Programming</td>
</tr>
<tr>
<td>CMPSC 261</td>
<td>3</td>
<td>Problem Solving &amp; Programming 2</td>
</tr>
<tr>
<td>MATH 122</td>
<td>4</td>
<td>Functions and Analytical Geometry</td>
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</table>

ELECTIVE COURSES - Complete 3-4 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 262</td>
<td>3</td>
<td>Object-Oriented Programming with Java</td>
</tr>
<tr>
<td>MATH 144</td>
<td>3</td>
<td>Applied FORTRAN</td>
</tr>
<tr>
<td>MATH 173</td>
<td>4</td>
<td>Calculus: Third Course</td>
</tr>
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</table>

Total units for major .................................................. 20

AS Degree: Computer Science

- Student may earn an Associate in Science degree in Computer Science by completing the coursework below and completing the MJC Graduation Requirements. Students are urged to meet with a Computer Science faculty advisor to assist them plan their specific program for graduation.

ADDITIONAL ELECTIVE COURSES - Complete 3-4 units

Any course in Business Administration, Computer Science, or Office Administration

TOTAL UNITS FOR MAJOR .................................................. 20

COURSES AND ACADEMIC PROGRAMS 109
COURSES AND ACADEMIC PROGRAMS

Network Administration Program

Certificate: Computer Network Administration

This certificate is designed for students seeking entry-level job positions in computer network administration, designing networks, installing server and client operating systems, configuring network services, and implementing network security.

**Note:** All of these courses are also preparation for Microsoft certification as a Microsoft Certified Professional (MCP) in the individual subject. A student who has completed the Network Administration Certificate would be eligible to complete the Microsoft Certified Systems Engineer (MCSE) certification with the completion of just one additional course from the options list.

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 14 units


**ELECTIVE COURSES** - Complete 3 units

- CMPSC 220 [2] SQL Server Administration (MCP)..........................3

TOTAL UNITS FOR CERTIFICATE .......................................................... 17

Certificate: Computer Network Technician

This certificate is designed for students seeking an entry-level position in computer network hardware installation, troubleshooting and repair.

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 14 units

- CMPSC 201 [1] General Computer Literacy......................................3
- CMPET 206 [1] Personal Computer Assembly, Upgrading and Repair...3
- CMPGR 262 [1] Exploring the Internet..............................................1
- CMPSC 269 [2] CompTIA NETWORK + Lab......................................1

**ELECTIVE COURSES** - Complete 3 units

- ELTEC 208 [1] World of Electricity and Electronics......................3
- CMPSC 271 [1] Inside Microsoft Windows (MCP)..........................3

TOTAL UNITS FOR CERTIFICATE .......................................................... 16

Computer Science Courses

**CMPSC 103—SYMBOLIC LOGIC** 3 Units

Also offered as PHILO 103. An introduction to modern deductive logic; includes sentential and predicate logic with identity theory and definite descriptions. Lecture. Not offered every semester. (CSU, UC, CAN PHIL 6)

**CMPSC 201—GENERAL COMPUTER LITERACY** 3 Units

Survey of the functions and uses of computers in business, education, industry, and science with emphasis on the personal computer; study of computers and peripheral equipment as integrated systems; exploration of the impact of computers on society; introduction to problem-solving and programming techniques; experience with popular internet and application packages on the laboratory microcomputers. Field trips may be required. Lecture. Laboratory arranged. Materials fee required. (CSU, UC, CAN CSCI 2) (CC CMPSC 1)

**CMPSC 202—BUSINESS INFORMATION SYSTEMS** 3 Units

Prerequisite: BUSAD 201 or 310 and CMPSC 201. Introduction to design, development, and use of information system models to improve managerial decision making. Study of information systems hardware and software; advanced computer codes; systems analysis and planning; systems security; application development using decision support systems; and expert systems. Lab work will focus on Internet research and advanced spreadsheet, database, and word processor functions for solutions to business problems. Field trips may be required. Lecture. Laboratory arranged. Materials fee required. (CSU, UC, CAN BUS 6)

**CMPSC 204—INTRODUCTION TO PROGRAMMING** 3 Units

Recommended for Success: Satisfactory completion of MATH 90 or qualification by MJC assessment process.

The first course in computer programming for students with little or no programming experience. General computer literacy issues describing computer hardware, software development, operating systems, and telecommunications will be covered. Beginning problem-solving analysis, documentation, algorithm design, control structures, program coding, using BASIC and C++, file input and output, and program testing and program maintenance will be stressed. Field trips may be required. Lecture/Laboratory. Materials fee required. (CR/NC, CSU, UC).

**CMPSC 205—PROBLEM SOLVING AND PROGRAMMING 1** 3 Units

Prerequisite: CMPSC 204

Designed for computer science transfer majors but open to all students. Emphasizes algorithm development and problem analysis skills for computer science. Software engineering skills will be developed for both procedural programming and object-oriented programming. Solution algorithms will be implemented using either the C++ or Java programming languages. Extensive programming projects demonstrating problem solving and implementation skills will be assigned throughout the semester. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN CSCI 22, CSU, UC) (CC CMPSC 22)
CMPSC 206—INTRODUCTION TO UNIX/LINUX 3 Units
SYSTEMS AND PROGRAMMING
Recommended for Success: CMPSC 204
Introduction to the UNIX operating system using Linux. Coverage will include using UNIX shells, commands, the role of the system administrator, the UNIX file system, editors, file processing, shell programming utilities, PERL and CGI programming, C and C++ programming, and recent developments in UNIX and the S Windows graphical user interface. Extensive hands-on experience using UNIX operating system and programming within the UNIX environment. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, UC) (CC CMPSC 206)

CMPSC 213—PROGRAMMING WITH VISUAL BASIC 3 Units
Prerequisite: CMPSC 204
Concepts in programming a computer using the language called Visual BASIC. Emphasis on structured design, graphical user interfacing, and documentation. Includes user screen development, control constructs, array processing, elementary file processing, and database access. Extensive interaction with computers will be expected. Lecture/Laboratory. Materials fee required. (CAN CSCI 6, CSU, UC) (CC CMPSC 26)

CMPSC 214—ADVANCED VISUAL BASIC 3 Units
Prerequisite: CMPSC 213 or equivalent.
Advanced concepts of computer programming using Microsoft Visual BASIC. Students will program user interfaces with Microsoft Word, Excel and Access. They will also create Internet and general business interfaces. Graphics and game structure applications will be covered. Lecture/Laboratory. (CSU, UC Spr.)

CMPSC 216 - JAVASCRIPT PROGRAMMING FOR THE INTERNET 3 Units
Prerequisite: CMPGR 264 and CMPSC 204
Developing World Wide Web applications with HTML and JavaScript. An introduction to creating interactive HTML documents through manipulation of the WWW.DOM (Document Object Model). Designing Web-based applications, validating and processing user input, creating dynamic documents utilizing DHTML. Extensive programming projects demonstrating problem solving and implementation skills will be assigned throughout the semester. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU, UC)

CMPSC 220 – SQL SERVER ADMINISTRATION 3 Units
Prerequisite: CMPSC 275
Provides students with the knowledge and skills required to install, configure, administer, and troubleshoot Microsoft SQL Server client/server database management system version 7.0 or higher. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU). Not offered every semester.

CMPSC 225 – SQL DATABASE IMPLEMENTATION 3 Units
Prerequisite: CMPSC 275
Provides students with the technical skills required to implement a database solution with SQL Server. Topics include: architecture, key features of SQL Server, reviewing SQL Server programming tools, Transact-SQL, creating databases, data integrity, planning and creating indexes, advanced query techniques, summarizing data, managing transactions and locks, implementing views, stored procedures and triggers, working with distributed data, and advanced text queries. Two maximum completions. Lecture. Laboratory arranged. Materials fee required. (CSU). Not offered every semester.

CMPSC 231—INTERMEDIATE WORD PROCESSING 3 Units
Recommended for Success: OFADM 203 and either OFADM 330 or CMPSC 274. Also offered as OFADM 231.
Intermediate word processing features such as mail merge, macros, styles, graphics, tabs, and sorts. Features will be applied in creating business documents. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

CMPSC 241—ASSEMBLY LANGUAGE PROGRAMMING 3 Units
Prerequisite: CMPSC 204
Designed for Computer Science transfer majors, but open to all students. Introduction to microcomputer hardware architecture and assembly language programming. A microprocessor instruction set will be examined in detail. Memory addressing modes, logic and control, data representations and manipulation, table processing, and device I/O control processes will be examined. Macros, program modules, and interrupts will be studied. Extensive hands-on computer projects implementing course objectives will be assigned. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN CSCI 10, CSU, UC) (CC CMPSC 40)

CMPSC 261—PROBLEM SOLVING AND PROGRAMMING 2 3 Units
Prerequisite: CMPSC 205 or CAN CSCI 22 course equivalent, or ACM CS 1 course equivalent.
Introduction to simple data structures and object-oriented programming. Includes more advanced features of high-level languages such as C++ or Java. Continued emphasis on good programming methodologies and problem solving techniques and analysis. Programming problems implementing lists, stacks, queues, and trees will be emphasized. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN CSCI 24, CSU, UC) (CC CMPSC 24)

CMPSC 262—OBJECT-ORIENTED PROGRAMMING WITH JAVA 3 Units
Prerequisite: CMPSC 205 or CAN CSCI 22 course equivalent, or ACM CS 1 course equivalent.
Introduction to object-oriented programming and applications development using the Java language. A study of the features and architecture of the Java language and how it is optimized for object-oriented, distributed, multithreaded computing. Problem solving through classes, multithreading, class libraries, and Java run-time environments. Designed for programmers with a background in C/C++ programming. Hands-on computer programming projects will be assigned. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, UC) (CAN CMPSC 18) (CC CMPSC 10)

CMPSC 263—NETWORKING ESSENTIALS 3 Units
Prerequisite: An introductory computer class.
Concepts of networking technologies. Includes design, media, hardware, standards, protocols, architectures, operations, administration, support, distributed networks, WANs, troubleshooting, and the internet. Designed to help individuals prepare for Microsoft Certification Exam #70-058. Hands-on computer assignments required. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU) (CC CMPSC 10)

CMPSC 264—WINDOWS 2000 SERVER 3 Units
Prerequisite: CMPSC 263
Technical study of the Windows 2000 Server operating system. Includes server hardware, installation, configuration, clients, management, network protocols, activity directory and security, remote access and virtual private networks, interoperability, Internet and intranets, monitoring, tuning, and troubleshooting. Designed to help individuals prepare for Microsoft Certification Exam #70-215. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU) (CC CMPSC 4)

CMPSC 265—BEGINNING MICROSOFT WINDOWS 1 Unit
Formerly listed as CMPSC 268A.
Introduction to Microsoft Windows. Fundamentals of operating systems using a graphical user interface. Presents the desktop metaphor and introduces using the keyboard, a mouse, menus, dialogue boxes, buttons, scrolling, and help. Management of disk drives, program applications, and data files and folders. Lecture/Laboratory. (CSU) (CC CMPSC 4)

CMPSC 266—INTERMEDIATE MICROSOFT WINDOWS 1 Unit
Recommended for Success: CMPSC 265
Intermediate features of Microsoft Windows. Designed to cover intermediate elements of the Desktop, the Windows Explorer, and printer control within Windows. Hands-on experience in using Windows to manage application programs and files. Lecture/ Laboratory. (CSU)
Computer Science

**CMPSC 267—ADVANCED MICROSOFT WINDOWS**  1 Unit
Recommended for Success: CMPSC 266
Advanced features of Microsoft Windows. Covers advanced elements of the system files, telephony, and networking features. Hands-on experience in using Windows to manage application programs, files, and advanced systems tools. Lecture/Laboratory. (CSU)

**CMPSC 268—WINDOWS 2000 NETWORK**  3 Units
Prerequisite: CMPSC 264 or 288.
Technical study of the Windows 2000 Network infrastructure. Includes network analysis and design, planning network services, TCP/IP and automated IP configuration with DHCP, name resolution with DNS, WINs, NAT, Proxy Server, VPNs, RRAS, RADIUS, and network management services. Designed to help individuals prepare for Microsoft Certification Exam #70-221. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 269 – NETWORK + CERTIFICATION TRAINING LAB**  1 Unit
Concurrent Enrollment: CMPSC 263
Recommended for Success: Any introductory computer course
Also offered as CMPET 269.
Network+ is quickly becoming the standard for introductory-level industry certification. Designed for those interested in a career in network support, this vendor-neutral certification takes the student through installing and configuring a network client. This laboratory course along with the CMPSC 263 course provides preparation for CompTIA's Network+ certification exam. Extensive network lab projects will be required. Field trips may be required. Laborator. Materials fee required. (CSU)

**CMPSC 270—UNDERSTANDING DATA COMMUNICATIONS**  3 Units
How data communications systems and their various hardware and software components work. Includes communication between personal computer systems, database services, electronic bulletin boards, and the Internet. Hands-on computer assignments required. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 271—INSIDE MICROSOFT WINDOWS**  3 Units
Technical study of the Windows operating system. Includes installation, architecture, customization, setting profiles, networking, disk utilities and management, print management, system applications, plug and play features, and troubleshooting. Designed to help individuals prepare for Microsoft Certification Exam #70-063. Hands-on computer assignments required. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 274—MICROCOMPUTER APPLICATIONS**  4 Units
Recommended for Success: Minimum touch-keyboarding ability of 30 WPM.
Concepts and techniques for using microcomputer applications. Instruction and extensive practice in Windows, word processing, spreadsheets, database management, Internet basics, file transfers between applications, and related auxiliary applications. Lecture. Laboratory arranged. Materials fee required. (CSU)

**CMPSC 275—DATABASE MANAGEMENT SYSTEMS/MICROCOMPUTERS**  3 Units
Introduction to database management systems (DBMS). Instruction on the design, setup and maintenance of a DBMS. Applications in inventory control, mailing lists, report construction and format, sorting and indexing operations, general file relationships and information retrieval. Hands-on experience using a microcomputer. Emphasis on Microsoft Access or similar DBMS software. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 276—DATABASE PROGRAMMING**  3 Units
Prerequisite: CMPSC 274, 275, or comparable experience with Microsoft Access, or similar DB software.
Build customized applications for small business database management systems using a database programming language such as Visual Basic for Microsoft Access (VBA). Emphasizes structured programming concepts, program and systems design strategies, programming documentation and presentation style. Two maximum completions. Lecture. Laboratory arranged. Materials fee required. (CSU)

**CMPSC 277—WINDOWS 2000 ACTIVE DIRECTORY**  3 Units
Prerequisite: CMPSC 263.
Technical study of the Windows 2000 Active Directory. Includes planning, designing and implementing Active Directory and Active Directory Domain Structures. Additional coverage includes multiple domain structures, directory sites, directory replication, groups, policies, recovery and maintenance, directory connectors, certificates, and upgrading Windows NT domain models to Active Directory. Designed to help individuals prepare for Microsoft Certification Exam #70-217. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 278—SPREADSHEET SOFTWARE AND PROGRAMMING**  3 Units
Recommended for Success: Any introductory computer class.
Introduction to spreadsheet software. Spreadsheet analysis, design, testing, and documenting will be covered. Data entry, data management, graphing and keystroke macros will be emphasized. Applications in various areas will be explored with emphasis in business, professional and educational use. Hands-on experience using a microcomputer. Emphasis on Microsoft Excel or similar spreadsheet application. Lecture/Laboratory. Materials fee required. (CSU) (CC CMPSC 30)

**CMPSC 279—SPREADSHEET DESIGN AND PROGRAMMING**  3 Units
Technical study of the communications protocol on Windows 2000. Includes installation and configuration of networking protocols and services including: TCP/IP, DNS, DHCP, VPN's and remote access, WINS, IP routing, Gateway Services, RIS security, protocol security, IPSEC, and Certificate Services. Designed to help individuals prepare for Microsoft Certification Exam #70-220. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 281—WINDOWS 2000 SECURITY**  3 Units
Prerequisite: CMPSC 264 or 286.
Technical study of security for Windows 2000 networks. Includes assessing security risks, planning administrative access and user accounts, securing communication channels, securing file and print resources, secure access to remote users and offices, securing network access to Internet users, extending the network to partner organizations, designing a public key infrastructure, and developing a security plan. Designed to help individuals prepare for Microsoft Certification Exam #70-220. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 282—WINDOWS 2000 NETWORKING**  2 Units
Prerequisite: CMPSC 263.
Technical study of the communications protocol on Windows 2000. Includes installation and configuration of networking protocols and services including: TCP/IP, DNS, DHCP, VPN’s and remote access, WINS, IP routing, Gateway Services, RIS security, protocol security, IPSEC, and Certificate Services. Designed to help individuals prepare for Microsoft Certification Exam #70-216. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 286—WINDOWS 2000 PROFESSIONAL**  3 Units
Prerequisite: CMPSC 263.
Technical study of the Windows 2000 Professional operating system. Includes installation, administrative resources, hardware devices and drivers, optimizing system performance and reliability, the desktop environment, network protocols and services, security, and troubleshooting. Designed to help individuals prepare for Microsoft Certification Exam #70-210. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**CMPSC 289 – WINDOWS 2000 DIRECTORY SERVICES**  3 Units
Prerequisite: CMPSC 264 or 286.
Technical study of the Windows 2000 Directory Services. Includes analyzing business requirements, information technology structures, software, hardware and network requirements, macro and micro Active Directory design, group policy design, directory services and security design, design topology and locations, replication and disaster recovery. Designed to help individuals prepare for Microsoft Certification Exam #70-219. Hands-on computer assignments required. Field trips may be required. Two maximum completions. Lecture. Laboratory arranged. Materials fee required. (CSU)
CMPSC 291—WINDOWS PROGRAMMING  3 Units
WITH VISUAL C++
Prerequisite: CMPSC 205, or CAN CSCI 22 course equivalent, or ACM CS-1 course equivalent.
Introduction to the Microsoft Visual C++ programming environment. Review of the C++ language and object-oriented programming concepts. Emphasis on using Visual C++ to build user applications, user interfaces, ActiveX applications, Internet programming, and advanced programming techniques. Hands-on computer programming projects will be required. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, UC).
CMPSC 298A,B,C—SPECIAL TOPICS  1,2,3 Units
IN COMPUTER SCIENCE
Prerequisite: Varies with topic.
Participation in discussion, analysis, and evaluation of a special topic in computer science, microcomputer applications, and related technologies. Topic to be announced in class schedule. Twelve maximum units in any combination. Fields trips may be required. Lecture. Materials fee required. (CSU)

Construction Management
See Architecture

Correctional Science (CORSC)
"MCORSC" in the Schedule of Classes

The Administration of Justice Program offers an in-service corrections program designed to enhance the skills and knowledge of those employed in correctional agencies. Students directing their program toward an AA/AS degree should refer to the Administration of Justice program.

Correctional Science Courses
CORSC 323—BASIC CORRECTIONS OFFICER  3 Units
TRAINING COURSE
Prerequisites: No felony convictions or weapon restrictions.
Professional standards, principles, and procedures in correctional management. Emphasis is on modern principles and procedures utilized in local detention facilities and institutions. Meets the training standards mandated by the California Department of Corrections for local detention facility personnel. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR)

Crop Science
See Plant Science

Culinary Arts (CLART)
"CLART" in the Schedule of Classes

Culinary Arts Program

Certificate: Culinary Arts

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 28 units
CLART  301 [NP]  Culinary Academy 1  .................................................. 14
CLART  302 [NP]  Culinary Academy 2  .................................................. 14

TOTAL UNITS FOR CERTIFICATE  ................................. 28

AS Degree: Culinary Arts

• To earn an Associate in Science Degree in Culinary Arts, student must complete the coursework below, in addition to meeting the MJC Graduation Requirements.

REQUIRED COURSES - Complete 28 units
CLART  301 [NP]  Culinary Academy 1  .................................................. 14
CLART  302 [NP]  Culinary Academy 2  .................................................. 14
ELECTIVE COURSES - Complete 2 units
FDTR  219 [NP]  Nutrition ................................................................. 3
FDTR  351 [NP]  Practical Nutrition ....................................................... 3
FDSER  323 [NP]  Catering ................................................................. 2

TOTAL UNITS FOR MAJOR ................................................. 30

Certificate of Completion: CLART 301

• This Certificate of Completion is awarded through the Culinary Arts program. Upon completion, certificate will be granted by the instructor.

REQUIRED COURSE - Complete 14 units
CLART  301 [NP]  Culinary Academy 1  .................................................. 14

TOTAL UNITS FOR CERTIFICATE OF COMPLETION  .................. 14

Culinary Arts Courses

CLART 211—FOOD SAFETY AND SANITATION  2 Units
Formerly listed as: CLART 311
Law and practices related to sanitation and safety in the food preparation industry. Field trips may be required. Three maximum completions. Not offered every semester. Lecture/Laboratory.(CC HPMGT 120)

CLART 301—CULINARY ACADEMY 1  14 Units
An introductory course designed to familiarize the student with basic culinary skills development. The daily production will emphasize techniques of roasting, grilling and braising utilizing menus that reflect American regional cuisine. Students will be introduced to stocks, soups, mother sauces, sauce derivatives, thickening agents, and flavoring agents. Identification and function, purchasing and receiving, and proper storage procedures of ingredients and products will be discussed. The baking module will provide students with the opportunity to prepare breads, rolls, biscuits, muffins, pies, tarts and cookies. Field trips may be required. Lecture/Laboratory. Fee for food supplies. Not offered every semester. (Fall)

CLART 302—CULINARY ACADEMY 2  14 Units
Prerequisite: CLART 301
Daily production will emphasize techniques of specialty desserts, pastries, garde manger, and advanced cooking techniques that reflect modern American and international cuisine. Areas of specialized studies include management and supervision, cost control, computers, menu planning and facility planning. Field trips may be required. Lecture/Laboratory. Fee for food supplies. Not offered every semester. (Spring)
Dairy Industry (DAIND)

"MDAIND" in the Schedule of Classes

This program will develop skills and knowledge to work in the dairy industry or to transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

Dairy Industry Program

Certificate: Dairy Industry Technician

To earn a Certificate of Achievement, the student must complete the following coursework, each course must be completed with a grade of C or better.

I. Agriculture Career Courses - Complete 2 units
AG 349 B [NP] Dairy Processing Work Experience........................................2

II. Agriculture Breadth Courses - Complete 12 units
DAIND 301 [NP] Good Management Practices/Sanitation................................1
DAIND 302 [NP] Fluid Stream.................................................................1
DAIND 303 [NP] Industrial Safety.........................................................1
DAIND 304 [NP] Sensory Evaluation & Grading...........................................1
DAIND 305 [NP] Food Safety/HACCP.....................................................1
DAIND 306 [NP] Dairy Industry Employability Skills..................................1
DAIND 307 [NP] Process Equipment & Engineering....................................1
DAIND 308 [NP] Laboratory Skills........................................................1
DAIND 310 [NP] Transportation of Dairy Products....................................1
DAIND 311 [NP] Cheese and Whey Processing.........................................1
DAIND 312 [NP] Warehousing/Dry & Refrigerated.....................................1

III. Agriculture Major Elective Units - Complete 3 units
AGEC 225 [NP] Agriculture Computer Applications..................................3

TOTAL UNITS FOR CERTIFICATE ...................................................... 17

AS Degree: Dairy Industry

The student may earn an Associate in Science degree in Dairy Industry by completing the coursework below and completing the MJC Graduation Requirements.

I. Agriculture Career Courses - Complete 5 units
AG 115 [I] Introduction to Agricultural Education and Careers.....1
AG 349 A-D [NP] Work Experience.....................................................4 OR
AG 249 [NP] Agriculture Internship..................................................4

II. Agriculture Science Breadth Courses - Complete 9 units
ANSC 200 [NP] Introduction to Animal Science.................................3
PLSC 200 [NP] Introduction to Plant Science.....................................3
NR 200 [NP] Soils.................................................................................4
AGM 200 [NP] Introduction to Mechanical Technology.....................1
AGEC 225 [NP] Agriculture Computer Applications.........................3 OR
AGEC 210 [NP] Elements of Agriculture Economics..........................3 OR
AGEC 200 [2,3,4] Agriculture Accounting & Analysis..........................3

III. Agriculture Major Courses - Complete 12 units
DAIND 301 [NP] CMP/Sanitation..........................................................1
DAIND 302 [NP] Fluid Stream.............................................................1
DAIND 303 [NP] Industrial Safety.......................................................1

DAIND 304 [NP] Sensory Evaluation & Grading....................................1
DAIND 305 [NP] Food Safety/HACCP..................................................1
DAIND 306 [NP] Dairy Industry Employability Skills..........................1
DAIND 307 [NP] Process Equipment & Engineering............................1
DAIND 308 [NP] Laboratory Skills.....................................................1
DAIND 309 [NP] Dairy Products & Marketing......................................1
DAIND 310 [NP] Transportation of Dairy Products..............................1
DAIND 311 [NP] Cheese and Whey Processing....................................1
DAIND 312 [NP] Warehousing/Dry & Refrigerated...............................1

IV. Agriculture Major Electives - Complete 4 units
ANSC 222 [NP] Milk Production & Technology.................................3

and any other Agriculture course approved by major advisor ..........................1

TOTAL UNITS FOR MAJOR ................................................................. 30

Dairy Industry Courses

DAIND 301—GOOD MANUFACTURING PRACTICES AND SANITATION

Introduction to dairy plant sanitation, good manufacturing practices, guidelines and implementation. Introduction to chemicals, pH and their roles in functional cleaning of the dairy plant and associated equipment. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 302—FLUID STREAM

Introduction to the basic elements of routing and uses of fluid milk throughout the dairy plant. Demonstration of how fluids are utilized. Process flow from incoming raw milk throughout the plant to pasteurized finished products. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 303—INDUSTRIAL SAFETY

Introduction to the elements of industrial safety as it relates to a dairy processing facility. Topics to be covered: illness and injury prevention, confined space entry, lock-out, tag-out programs, hazard communication programs, and industrial lift programs. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 304—SENSORY EVALUATION

Develop skills for sight, taste, smell and touch in the evaluation of various dairy products. Course content follows the California Agriculture Teaching Association Curricular Code used for Career Development Events--dairy product evaluation. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 305—HAZARDOUS ANALYSIS CRITICAL CONTROL POINT AND FOOD SAFETY

Introduction to hazardous analysis critical control point programs including the importance of HACCP and the identification of critical control points. The class will demonstrate how to design and implement an HACCP program. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 306—DAIRY INDUSTRY EMPLOYABILITY SKILLS

Resume preparation, interviewing skills, and job search techniques that are unique to the dairy processing industry. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 307—PROCESS EQUIPMENT AND ENGINEERING

Introduction and identification of equipment used in the processing facility. Cleaning, sanitizing and maintenance of processing equipment. Performance of equipment breakdowns for inspection. Discussion of required regulatory licensing. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 308—LABORATORY SKILLS

Demonstration and analysis of common laboratory tests. Identification of various equipment used in the dairy lab, proper safety, and chemical disposal. Designed for the plant technician, not a laboratory technician. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 309—DAIRY PRODUCTS AND MARKETING

Introduction to the standards of identifying milk, dairy foods and elementary dairy products. Marketing and handling will be covered. Field trips required. Two maximum completions. Lecture. (GR)
DAIND 310—TRANSPORTATION OF DAIRY PRODUCTS  
Introduction to aspects of raw milk-pick up, routing, transportation to the milk plant, loading and transporting of finished/packaged dairy products. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 311—CHEESE AND WHEY PROCESSING  
Introduction to aspects in the art of cheese making. Elementary techniques of whey processing. Field trips required. Two maximum completions. Lecture. (GR)

DAIND 312—WAREHOUSING/DRY AND REFRIGERATED  
Introduction to aspects in routing, storage and rotation of finished/packaged dairy products. Outline of pest control management essentials. Introduction of quality issues surrounding all raw material receiving. Field trips required. Two maximum completions. Lecture. (GR)

**Dairy Industry - Dental Assisting**

**Eligibility for the Dental Assisting Program**

**PROGRAM SPECIFIC REQUIREMENTS**

If students are enrolled at MJC and have completed all steps necessary to attend MJC, they may submit a Dental Assisting Program Application to Allied Health between the first day of the spring semester and April 15. If space is still available after April 15, applications will continue to be accepted until all spaces are filled or August 15, whichever comes first.

**REQUIRED COMPETENCIES**

- **ENGL 50** [NP] Basic Composition and Reading .......................... 5 or
- **ENGL 101** [NP] Composition and Reading ............................... 3
- **MATH 10** [NP] Introduction to Mathematics ............................ 3 or
- **MATH 20** Eligibility through placement exam .......................... 3
- **READ 184** [NP] Critical Reading ........................................ 3 or
- **AND** CPR Certification (Basic Life Support) that meets the standards of the American Heart Association or the American Red Cross. CPR certification must be valid throughout the program.

**PROOF OF HEALTH AND IMMUNIZATIONS**

Students will need to submit proof of the following to the Allied Health division office.

1. A **medical history and physical examination** completed by a physician, physician’s assistant or nurse practitioner within 3 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees or patients.

2. Documentation of required immunizations.

3. A **negative PPD skin test**. A negative result must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

**RECOMMENDED PREPARATION**

Though no prerequisites are required for the Dental Assisting program, students are strongly advised to complete a computer literacy course (high school or college level) and the following required courses prior to entering the Dental Assisting program.

- **ENGL 50** [1,2] Basic Composition and Reading ....................... 5 OR
- **ENGL 101** [1,2] Composition and Reading ............................. 3
- **PSYCH 51** [1,2] Psychology in Everyday Life .......................... 3

*Required for Certificate

**Certificate: Dental Assisting**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 38 units

- **ENGL 50** [1,2] Basic Composition and Reading .......................... 5 OR
- **ENGL 101** [1,2] Composition and Reading ............................. 3
- **PSYCH 51** [1,2] Psychology in Everyday Life .......................... 3
- **DTAST 360** [1] Introduction to Dental Assisting ..................... 3
- **DTAST 361** [1] Prevention of Disease Transmission .................. 2

**Dairy Science Program**

See Animal Science

**Data-Processing**

See Computer Science

**Debate**

See Speech Communications

**Drafting**

See Architectural Drafting Technology or Engineering Drafting Technology

**Dental Assisting (DTAST)**

"MDTAST" in the Schedule of Classes

The Dental Assisting Program at Modesto Junior College prepares students to take the Dental Assisting National Board Examination (DANB) to become a Certified Dental Assistant (CDA) and the California State Board Examination leading to licensure as a Registered Dental Assistant (RDA). A Radiation Safety certificate is issued by Modesto Junior College. This Program is accredited nationally by the American Dental Association’s Commission on Dental Accreditation and on a state level by the Dental Board of California.

The Dental Assisting Program begins in the fall semester of each year. It is a full-time, 10 month program. An A.S. Degree in Dental Assisting is also available. The estimated cost of the program is $1000 per semester which includes enrollment, materials fees, health clearance, uniforms, books, and licensure and certification examinations. For additional Program information, contact Allied Health, 575-6362. For academic advising, contact the Counseling Office, 575-6080. Please note. The MJC Catalog is the official document for program requirements. Program brochures are used for advisory purposes only.
DTAST 362 [1] Dental Science .................................................. 3
DTAST 363 [1] Introduction to Clinical Dentistry ......................... 2
DTAST 364 [1] Dental Materials ............................................. 2
DTAST 367 [2] Expanded Functions ........................................ 2
DTAST 369 [2] Clinical Dental Radiology ................................. 3
DTAST 370 [2] Clinical 1 ...................................................... 6
DTAST 371 [3] Clinical 2 ...................................................... 1

TOTAL UNITS FOR CERTIFICATE ........................................... 38

AS Degree: Dental Assisting
To earn an Associate of Science Degree in Dental Assisting, students must complete the courses required for a dental assisting certificate AND complete the MJC Graduation Requirements.

TOTAL UNITS FOR A.S. MAJOR ............................................... 38

DENIAL OF CERTIFICATION/LICENSURE
The Dental Board of California and the Dental Assisting National Board reserve the right to deny application of certification/licensure for specific crimes and/or actions. Anyone considering a career in dental assisting, who might be denied certification/licensure, is advised to discuss this issue with the respective boards, prior to entering the Dental Assisting Program.

Dental Assisting National Board, Inc.
676 N. St. Clair Street, Suite 1880
Chicago, Illinois 60611-9796
1-800-367-3262
www.danb.org

Dental Board of California
1428 Howe Avenue, Suite #58
Sacramento, CA 95825-3241
(916) 262-2595 (x 207)
www.comda.ca.gov

Dental Assisting Courses
DTAST 360 – INTRODUCTION TO DENTAL ASSISTING 3 Units
Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuer from the American Red Cross or the Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.

Concurrent Enrollment: DTAST 360, 361, 362, 363, 364 and 365

An introduction to the profession of dentistry including the educational requirements, legal and ethical responsibilities of each member of the dental team. Discussion of current issues facing the dental profession. Overview of the career opportunities available to the registered dental assistant. Introduction to data gathering on dental patients, including oral diagnosis and treatment planning. Instruction in evaluating the medically compromised dental patient and preparing for medical emergencies. Field trips may be required. Lecture. Materials fee required (GR, Fall)

DTAST 361 – PREVENTION OF DISEASE TRANSMISSION 2 Units

Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuer from the American Red Cross or the Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.

Concurrent Enrollment: DTAST 360, 362, 363, 364 and 365

This course covers the knowledge and skills required for dental health care professionals to control, prevent the spread of disease, properly manage hazardous chemicals and maintain a safe dental office environment. Protocols established by the American Dental Association, Dental Board of California, California Dental Association, Center for Disease Control and Prevention, OSAP, and OSHA regulations with emphasis on Bloodborne Pathogen Standard and the Hazard Communication Standard. Field trips may be required. Lecture/Laboratory. Materials fee required (GR, Fall).

DTAST 362 – DENTAL SCIENCE 3 Units

Concurrent Enrollment: DTAST 360, 361, 363, 364 and 365

An overview of human anatomy and physiology with an emphasis on the head and neck. The knowledge of the structures of the head and oral cavity including identification of oral landmarks and to recognize whether any abnormalities or lesions exist. The study of tooth morphology and the relationship to form and function of the dentition. Recognize conditions that are variations of normal but not considered pathological. Field trips may be required. Lecture. Materials fee required (GR, Fall).

DTAST 363 – INTRODUCTION TO CLINICAL DENTISTRY 2 Units

Concurrent Enrollment: DTAST 360, 361, 362, 364 and 365

Introduction to dental assisting, role of the chairside assistant, basic skills for preparing the dental patient for treatment. Intracural tasks delegated to qualified dental assistants which are related to operative dentistry. Field trips may be required. Lecture/Laboratory. Materials fee required (GR, Fall).

DTAST 364 – DENTAL MATERIALS 2 Units

Concurrent Enrollment: DTAST 360, 361, 362, 363 and 365

The dental assistant’s role in the manipulation of dental materials used in the oral environment. Instruction in the properties, characteristics, and manipulation of dental materials. Identification of government regulations and compliance with health and safety procedures when using dental materials. The study of drugs, their composition, uses, effects and contraindications as applied to the dental patient. Identification of laws regulating safe use of medication for the dental patient. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, Fall).

DTAST 365 – THEORY OF DENTAL RADIOLOGY 3 Units

Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuer from the American Red Cross or the Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.


Introduction to the principles of dental radiology, basic concepts of x-ray generation, occupational safety procedures, materials and equipment used in producing dental x-rays. Theory of dental radiological techniques. DTAST 365 (Fall) and DTAST 369 (Spring) have been designed to meet the standards set forth by the Dental Board of California for the California Radiation Safety Licensure. Both courses must be completed with a grade of C or better in order to qualify for licensure. Field trips may be required. Lecture. Materials fee required. (GR, Fall)

DTAST 366 – ADMINISTRATIVE DENTAL ASSISTING 2 Units

Prerequisite: DTAST 360, 361, 362, 363, 364 and 365

Concurrent Enrollment: DTAST 367, 368, 369 and 370

Basic dental office business concepts and procedures including communication skills, patient relations, record management, risk management and application of current technology. Employment skills necessary to obtain a position as an administrative dental assistant. Field trips may be required. Lecture. Materials fee required. (GR, Spr.)
DTAST 367 – EXPANDED FUNCTIONS 2 Units  
**Prerequisite:** DTAST 360, 361, 362, 363, 364 and 365 with a C or better.  
**Concurrent Enrollment:** DTAST 366, 367, 368, and 370.  
Achievement of a healthy and functional dentition through the prevention of new and recurring diseases by the means of dental plaque control techniques. Procedures in which plaque and stains on the surface of the teeth are removed from the coronal surfaces. Specific intraoral tasks that are completed as a procedure delegated to the expanded function dental assistant. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, Spr.)

DTAST 368 – ADVANCED DENTAL ASSISTING 3 Units  
**Prerequisite:** DTAST 360, 361, 362, 363, 364 and 365 with a C or better.  
**Concurrent Enrollment:** DTAST 366, 367, 368, and 370.  
Advanced training in the areas of dental specialties including prosthodontics, endodontics, periodontics, pediatric dentistry, orthodontics and oral surgery. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, Spr.)

DTAST 369 – CLINICAL DENTAL RADIOLOGY 3 Units  
**Prerequisite:** DTAST 360, 361, 362, 363, 364 and 365 with a C or better.  
**Concurrent Enrollment:** DTAST 366, 367, 368, and 370.  
Applied advanced dental radiography techniques. Identification and interpretation of anatomical landmarks related to dental radiography, exposure, processing and evaluation techniques, and applied quality assurance techniques. Emphasis on infection control as applied to dental radiography, evaluation of the exposed and processed dental radiograph used for diagnostic interpretation using manual and automatic processing. DTAST 365 (Fall) and DTAST 369 (Spring) have been designed to meet the standards set forth by the Dental Board of California for the California Radiation Safety Licensure. Both courses must be completed with a grade of C or better in order to qualify for licensure. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, Spr.)

DTAST 370 – CLINICAL 1 6 Units  
**Prerequisite:** DTAST 360, 361, 362, 363, 364 and 365 with a C or better.  
**Concurrent Enrollment:** DTAST 366, 367, 368, and 369.  
Role of the chairside dental assistant; basic skills for preparing the dental patient for treatment including knowledge and skills essential to the functions of the registered dental assistant during clinical experience. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, Spr.)

DTAST 371 – CLINICAL 2 1 Unit  
**Prerequisite:** DTAST 366, 367, 368, and 369 and 370 with a C or better.  
Role of the chairside dental assistant; advanced skills for preparing the dental patient for treatment including knowledge and skills essential to the functions of the registered dental assistant. Field trips may be required. Laboratory. Materials fee required. (GR, Summer).

**Earth Science (EASCI)**  
“MEASCI” in the Schedule of Classes

EASCI 161—EARTH SCIENCE 4 Units  
Designed to bring together geology, oceanography, meteorology and astronomy areas with rocks and minerals, mountain building, earthquakes and volcanoes, sea floor spreading, ocean and shoreline features, planets and stars. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, UC)

**Economics (ECON)**  
“MECON” in the Schedule of Classes

ECON 101—ECONOMIC PRINCIPLES: 3 Units  
MACROECONOMICS  
Recommended for Success: High school algebra or MATH 70.  
Introduction to macroeconomic theory in the context of a managed market economy. Covers basic concepts in economics, particularly those relating to macroeconomics. Concepts include scarcity, trade-offs, and opportunity costs. The role of government in the macroeconomy is defined and evaluated. Discusses business cycles, fiscal and monetary policy, international trade and finance. Lecture. (CAN ECON 2, CSU, UC) (CC ECON 10)

ECON 102—ECONOMIC PRINCIPLES: 3 Units  
MICROECONOMICS  
Recommended for Success: High school algebra or MATH 70.  
An introductory course focusing on individual economic units. Topics include scarcity, opportunity costs, comparative advantage, supply, demand, elasticity, cost theory, price and output determination under various market structures and factor markets. Related topics such as international trade, public choice, income distribution, externalities and government regulation may be included. Lecture. (CAN ECON 4, CSU, UC) (CC ECON 11)

ECON 115—ECONOMIC HISTORY OF THE UNITED STATES 3 Units  
Recommended for Success: ENGL 101  
Also offered as HIST 115.  
Analysis of origins and development of business, labor and agriculture from the colonial period to the present. Emphasis on the federal government’s part in the development and regulation of business, labor and agriculture; the government’s role in the national economic process. Lecture. (CSU, UC)

**Electrician**  
See Industrial Technology

**Electronics Technology (ELTEC)**  
“MELTEC” in the Schedule of Classes

The Electronics Technology Program prepares students to enter industry as Electronics Technicians or to transfer to a four-year university program. An Industrial Electronics study option and a Computer Electronics study option are available. Students receive theoretical and laboratory instruction in electrical/electronic principles, analog and digital devices, electrical/electronic systems, computer hardware, industrial equipment and control systems. Consult with an Electronics Advisor for selection of courses and options.

Classes in Electronics Technology are offered in theoretical and manipulative skills leading to the associate degree. Students may also select a program for transfer to a state university.
Industrial Electronics Program

Certificate: Industrial Electronics

• To earn a Certificate of Achievement, the student must complete all required courses with a C or better, and complete the electives as indicated.

REQUIRED COMPETENCIES

READ 184 Critical Reading .................................................. 3 or Reading Competency through Assessment
MATH 70 Elementary Algebra ............................................. 5 or Qualification for MATH 90 through Assessment

REQUIRED COURSES - Complete 28 units

ELTEC 205 [1] Electronics Fabrication and Assembly Techniques ...... 3
ELTEC 221 [3] Instrumentation Devices and Systems .................... 3
ELTEC 223 [2] Industrial Electrical Components and Control Devices .... 3
ELTEC 227 [4] Introduction to Automated Process Control Systems ... 2
ELTEC 232 [2] Introduction to Programmable Logic Controllers ......... 2
ELTEC 265 [1] Troubleshooting ............................................. 1
CMPET 206 [2,3,4] Personal Computer Assembling, Upgrading, and Repairing ............................................. 3

ELECTIVE COURSES - Complete 7 units

ELTEC 214 [2,3,4] Microprocessor Programming and Interfacing ........ 4
ELTEC 228 [NP] Integrated Automatic Process Control Systems .......... 2
INTEC 202 [NP] Fundamentals of Industrial Technology .................. 2
INTEC 203 [NP] Industrial Mechanical Components & Equip ............... 3

TOTAL UNITS FOR CERTIFICATE ........................................... 35

AS Degree: Industrial Electronics

• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below. All required and sufficient elective courses in the program must be completed with a C or better.

REQUIRED COURSES - Complete 25 units

ELTEC 205 [1] Electronics Fabrication and Assembly Techniques ...... 3
ELTEC 208 [1] The World of Electricity and Electronics .................. 3
ELTEC 221 [3] Instrumentation Devices and Systems .................... 3
ELTEC 223 [2] Industrial Electrical Components and Control Devices .... 3
ELTEC 227 [4] Introduction to Automated Process Control Systems ... 2
ELTEC 232 [2] Introduction to Programmable Logic Controllers ......... 2
ELTEC 265 [1] Troubleshooting ............................................. 1

ELECTIVE COURSES - Complete 5 units

ELTEC 214 [2,3,4] Introduction to Microprocessors and Digital Systems ... 4
INTEC 202 [NP] Fundamentals of Industrial Technology .................. 2
INTEC 203 [NP] Industrial Mechanical Components & Equip ............... 3

TOTAL UNITS FOR A.S. MAJOR ............................................. 30

Electronics Technology Courses

ELTEC 205—ELECTRONICS FABRICATION AND ASSEMBLY TECHNIQUES 3 Units
Introduction to current fabrication and assembly techniques used in the electronics industry. Manual and automated techniques used in component manufacturing, circuit assembly, and system integration. Materials fee required. Lecture/Laboratory. (CSU)

ELTEC 208—THE WORLD OF ELECTRICITY AND ELECTRONICS 3 Units
Recommended for Success: MATH 20
An overview of electrical and electronic phenomena as applied to common consumer and industrial devices. The course examines the physical nature of electricity and magnetism and the application of the scientific method. The historical development and the socioeconomic aspects of the “electronic age” are examined. Lecture/Laboratory. Materials fee required. (CSU).

ELTEC 212—DIGITAL PRINCIPLES AND CIRCUITS 3 Units
Prerequisite: Completion of MATH 70 or concurrent enrollment. Also offered as CMPET 212.
Introduction to digital circuits. Use and application of digital components in electronic devices and computers. Interfacing input and output devices to digital circuits. Introduction to programmable logic devices. Materials fee required. Lecture/Laboratory. (CSU)

ELTEC 213—INTRODUCTION TO SEMICONDUCTOR DEVICES AND CIRCUITS 4 Units
Prerequisite: ELTEC 211
Introduction to semiconductor devices and circuits. Use of diodes, transistors, operational amplifiers, thyrsters in electronic circuits. Materials fee required. Lecture/Laboratory. (CSU, GR)

ELTEC 214—MICROPROCESSOR PROGRAMMING AND INTERFACING 4 Units
Prerequisite: ELTEC 212/CMPET 212
Also offered as CMPET 214.
Introduction to the structure and operation of microprocessors as controllers for today’s electronic device and systems. Basic microprocessor hardware including memories, registers, counters, input/output ports, decoders, and arithmetic logic using the popular PIC RISC microcontroller. Machine language simulation and development on personal computers. Emphasis on interfacing to electronic hardware. Materials fee required. Lecture/Laboratory. (CSU, GR)

ELTEC 211—INSTRUMENTATION DEVICES AND SYSTEMS 3 Units
Prerequisite: ELTEC 211 or 208.
An introduction to industrial instrumentation devices and systems. The principles and operation of mechanical and electrical transducers. Analysis of industrial instrumentation systems. Lecture/Laboratory. Materials fee required. (CSU, GR)

ELTEC 223—INDUSTRIAL ELECTRICAL COMPONENTS AND CONTROL DEVICES 3 Units
Also offered as INTEC 223.
An introduction to common components and control devices found in the manufacturing and processing industry. Content includes basic terminology, component identification, manufacturer’s specifications, and maintenance procedures for the components and devices. Lecture/Laboratory. Materials fee required. (CSU, GR)

ELTEC 226—MOTORS, CONTROLS AND CONTROLLERS 3 Units
Prerequisite: ELTEC 211 and 208.
Also offered as INTEC 226.
An introduction to AC and DC motors and the circuits which control them. Use and programming of variable frequency drive motor controllers. Lecture/Laboratory. Materials fee required. (CSU, GR)
Electronics Technology - Emergency Medical Technician

ELTEC 227—INTRODUCTION TO AUTOMATED PROCESS CONTROL SYSTEMS 2 Units
Prerequisite: ELTEC 234 or equivalent experience
Basic automated control theory and applications. The use of Man-Machine-Interface (MMI) software and hardware to industrial control systems. Software programming and hardware implementation. Two maximum completions. Lecture/laboratory: 6 hours. (CSU)

ELTEC 232—INTRODUCTION TO PROGRAMMABLE LOGIC CONTROLLERS 2 Units
Also offered as CMPET 232.
Introduction to the basic concepts of programmable logic controllers. Installation, programming, maintaining, and troubleshooting of microsized programmable logic controller systems. Lecture/Laboratory. (CSU)

ELTEC 234—ADVANCED TOPICS IN PROGRAMMABLE LOGIC CONTROLLERS 2 Units
Recommended for Success: ELTEC 232/CMPET 232 or equivalent course.
Advanced study of programmable logic controllers and complete controller systems. Emphasis on component selection, design, and operation of industry-like controller systems. Lecture/Laboratory. (CSU)

ELTEC 265 — TROUBLESHOOTING TECHNIQUES 1 Unit
Also offered as INTEC 265.
Common troubleshooting methodologies used in manufacturing today. One-solution and multiple-solution problems commonly found in everyday life through industrial processes. Prepares students to actively solve problems in personal and professional life. Lecture. (CSU)

ELTEC 320 — ELECTRICAL SAFETY 1 Unit

Emergency Medical Technician Program

PREREQUISITES
All of the following must all be valid through the end of the course and EMT certification examination. With instructor approval, these prerequisites may be completed concurrently with EMT 390.

HE 101 Advanced First Aid/CPR for the Professional ................. 1, OR
Proof of completion of a Basic First Aid course from the American Heart Association . OR
or the National Safety Council.............................................................. OR
“CPR for the Professional Rescuer” card from the American Red Cross

Certificate: Emergency Medical Technician

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 4 units
EMT 390 [NP] Emergency Medical Technician 1 .................................. 4

TOTAL UNITS FOR CERTIFICATE ...................................................... 4

POLICY FOR DENIAL OF CERTIFICATION
The law provides for denial of certification for crimes or acts which may in any way be related to pre-hospital medical care i.e., sex crimes, drug crimes and crimes of violence or dishonesty. In such cases it is the applicant’s responsibility to present sufficient evidence of rehabilitation to the Mountain-Valley Emergency Medical Services Agency prior to applying for certification. The Mountain-Valley EMS Agency will evaluate applicants individually. Any student considering a career as an Emergency Medical Technician, who might be denied certification, is advised to address this issue with this Agency prior to taking this course.

Mountain-Valley Emergency Medical Services Agency
1101 Standiford Avenue, Suite D1
Modesto, California 95350
(209) 529-5085

Certificate:
Emergency Medical Technician

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 4 units
EMT 390 [NP] Emergency Medical Technician 1 .................................. 4

TOTAL UNITS FOR CERTIFICATE ...................................................... 4

POLICY FOR DENIAL OF CERTIFICATION
The law provides for denial of certification for crimes or acts which may in any way be related to pre-hospital medical care i.e., sex crimes, drug crimes and crimes of violence or dishonesty. In such cases it is the applicant’s responsibility to present sufficient evidence of rehabilitation to the Mountain-Valley Emergency Medical Services Agency prior to applying for certification. The Mountain-Valley EMS Agency will evaluate applicants individually. Any student considering a career as an Emergency Medical Technician, who might be denied certification, is advised to address this issue with this Agency prior to taking this course.

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1101 Standiford Avenue, Suite D1
Modesto, California 95350
(209) 529-5085

Certificate:
Emergency Medical Technician

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 4 units
EMT 390 [NP] Emergency Medical Technician 1 .................................. 4

TOTAL UNITS FOR CERTIFICATE ...................................................... 4

POLICY FOR DENIAL OF CERTIFICATION
The law provides for denial of certification for crimes or acts which may in any way be related to pre-hospital medical care i.e., sex crimes, drug crimes and crimes of violence or dishonesty. In such cases it is the applicant’s responsibility to present sufficient evidence of rehabilitation to the Mountain-Valley Emergency Medical Services Agency prior to applying for certification. The Mountain-Valley EMS Agency will evaluate applicants individually. Any student considering a career as an Emergency Medical Technician, who might be denied certification, is advised to address this issue with this Agency prior to taking this course.

Mountain-Valley Emergency Medical Services Agency
1101 Standiford Avenue, Suite D1
Modesto, California 95350
(209) 529-5085
Emergency Medical Technician - Engineering

Emergency Medical Technician Courses

EMT 391 — EMERGENCY MEDICAL TECHNICIAN 1 1 Unit
REFRESHER COURSE
Prerequisite: EMT 390 with a grade of "C" or better or equivalent.
Provides new and updated information for the Emergency Medical Technician, as well as reinforcement of basic knowledge and skills. Meets requirements for re-certification as an EMT in California. Unlimited completions. Lecture. (GR)

Engineering (ENGR)
"MENGR" in the Schedule of Classes

The Engineering program prepares students to transfer to four-year college and university programs. Most universities have a common undergraduate core of classes regardless of the student's eventual area of specialization (i.e. civil, mechanical, electrical/electronic, aeronautical, agricultural, ceramic, chemical, industrial, metallurgical, mining, etc.) The student should consult closely with the engineering staff to ensure that required transfer courses are completed for the specific college that the student selects.

The program is for students interested in preparing for a career in the engineering profession. The course work will present a foundation of engineering and scientific knowledge necessary for the transfer student.

Engineering Program

AS Degree: Engineering

• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below.

REQUIRED COURSES - Complete 12 units
ENGR 127 [1] Engineering Design and Graphics ................................. 4
MATH 171 [1] Calculus: First Course ............................................. 4
MATH 172 [2] Calculus: Second Course ........................................... 4

ELECTIVE COURSES - Complete 18 units
Engineering - Student may complete one of the following pairs of courses
ENGR 130 [2] Properties of Materials ............................................. 3 AND
OR
ENGR 130 [2] Properties of Materials ............................................. 3 AND
ENGR 140 [4] Introduction to Circuit Analysis (w/o Lab) ..................... 3

Physics - Student may complete one of the following pairs of courses
PHYS 102 [3] General Physics ...................................................... 4
OR
PHYS 103 [4] General Physics ...................................................... 4

Student may complete 4 or more units from the following
ENGR 100 [1] Introduction to Engineering & Architecture .................. 1
ENGR 101 [NP] Introduction to Surveying and Technology ............... 3
MATH 173 [3] Calculus: Third Course .......................................... 4
MATH 174 [4] Introduction to Linear Algebra and Ordinary
Differential Equations ............................................................. 4
CHEM 101 [1] General Chemistry 1 .............................................. 5
CHEM 102 [2] General Chemistry 2 .............................................. 5
CHEM 103 [2] General Chemistry 2 Lecture ................................. 3

TOTAL UNITS FOR A.S. MAJOR .................................................. 30

Engineering Courses

ENGR 100—INTRODUCTION TO ENGINEERING 1 Unit
AND ARCHITECTURE
Also offered as ARCH 100.
Introduction to the vocational and academic opportunities at MJC with special emphasis on engineering, architecture and related technologies. Topics include models of student success, characteristics of the professions, development of educational plans, graduation requirements, importance of teamwork, and self assessment. Activities include field trips, practice labs, and presentations by MJC counselors and practicing engineers and architects. Lecture. Materials fee may be required. (CSU, UC, Fall)

ENGR 101—INTRODUCTION TO SURVEYING AND TOPOGRAPHY 3 Units
Prerequisite: Successful completion of MATH 115 or MATH 122.
Introduction to principles and techniques for measurement of distances, directions, and angles. Additional topics include measurement errors, traverse computations, global positioning systems, Total Station, topographic surveys, and building and curve layout. Lecture/Laboratory. Field trips may be required. (CSU, UC) (CAN ENGR 10)

ENGR 121—INTRODUCTION TO ENGINEERING DRAFTING 4 Units
AND DESIGN
Development of sketching and computer-assisted drafting (CAD) skills for engineering drafting. Topics include geometric construction, sketching, solids modeling, orthographic projection, sectional drawings, auxiliary views, dimensioning, tolerancing, threaded fasteners, and working drawings. Lecture/Laboratory. Field trips may be required. (CSU, UC)

ENGR 127—ENGINEERING DESIGN AND GRAPHICS 4 Units
Recommended for Success: Previous drafting and CAD experience or ENGR 121 and successful completion of MATH 90 or equivalent.
Introduction to engineering design. Graphical solution of problems involving points, lines, and planes in three-dimensional space. Graphical representation and analysis of various types of engineering data. Solids modeling and analysis. Design project required. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN ENGR 2, CSU, UC)

ENGR 130—PROPERTIES OF MATERIALS 3 Units
Prerequisites: CHEM 101 and PHYS 101.
Investigation of the internal structure of metals, ceramics, polymers, composites and semiconducting materials and their effect on mechanical, electrical, magnetic and thermal properties. Laboratory investigations include metallography, tensile/compression and heat treatment analysis. Field trips required. Lecture/Laboratory. Materials fee required. (CAN ENGR 4, CSU, UC, Spr.)

ENGR 135—ENGINEERING MECHANICS — STATICS 3 Units
Prerequisites: PHYS 101 and MATH 172.
Statics of particles and rigid bodies; vector notation; analytical solutions of two- and three-dimensional structures in equilibrium; centroids, center of gravity, moments of inertia and friction. Lecture/Laboratory. Materials fee may be required (CAN ENGR 8, CSU, UC)

ENGR 140—INTRODUCTION TO CIRCUIT ANALYSIS (WITHOUT LAB) 3 Units
Prerequisites: MATH 173 and PHYS 102 or equivalent.
Concurrent Enrollment: PHYS 103 and MATH 174
Direct-current and alternating-current circuit analysis; steady and transient phenomena in RLC circuits; circuit theorems; single-phase and polyphase alternating-current circuits. Field trips may be required. Lecture/Discussion. Materials fee may be required. (CAN ENGR 12, CSU, UC, Spr.)

ENGR 141—INTRODUCTION TO CIRCUIT ANALYSIS (WITH LAB) 4 Units
Prerequisites: MATH 173 and PHYS 102 or equivalent.
Concurrent Enrollment: PHYS 103 and MATH 174
Direct-current and alternating-current circuit analysis; steady and transient phenomena in RLC circuits; circuit theorems; single-phase and polyphase alternating-current circuits and laboratory demonstrations/exercises emphasizing circuit construction analysis and instrumentation. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN ENGR 6, CSU, UC, Spr.)
ENGR 220—BASIC ENGINEERING DRAFTING 1 2 Units
Introduction to engineering drafting utilizing freehand sketching and computer-assisted drafting (CAD). Topics include geometric construction, pictorial sketching, orthographic projection and sectional drawings. ENGR 220 and 221 are the two-semester equivalent of ENGR 121. Lecture/Laboratory. Materials fee may be required. (CSU)

ENGR 221—BASIC ENGINEERING DRAFTING 2 2 Units
Prerequisite: Satisfactory completion of ENGR 220. Continuation of ENGR 220 to include dimensioning, tolerancing, threaded fasteners, and working drawings. ENGR 220 and 221 are the two-semester equivalent of ENGR 121. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, Spr.)

ENGR 230—FIELD SURVEYING 2 Units
Recommended for success: Math 70 or AG 280. Also offered as AGM 230.
Selection, care and checking of tapes, levels, GPS and laser systems. Introduction to total station care and use. Field observations, note taking and office computations; use of surveying instruments and equipment for land measurement and mapping; practice in differential, profile, and contour leveling; horizontal angles, traverses, and construction problems used in public lands surveying, legal descriptions, and county records. Lecture/ Laboratory. Field trips required. (CSU)

Engineering Drafting Technology Program

The Engineering Drafting Technology program prepares students to enter the field of engineering drafting at the entry level as a drafter, plans checker, engineering aide, estimator, etc.

The program is for students interested in the mechanical, electrical, and technical systems, and provides the student with course work in drawing, mathematics, and engineering.

AS Degree: Engineering Drafting Technology

- Including the Required Units, a minimum of 30 units must be completed from required mathematics, science, and Elective Courses for an Associate in Science Degree. MJC Graduation Requirements must also be completed. Consult with an advisor for selection of courses.

REQUIRED COURSES - Complete 16-19 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ENGR 121</td>
<td>Introduction, to Engineering Drafting &amp; Design</td>
<td>4</td>
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<tr>
<td>ENGR 220</td>
<td>Basic Engineering Drafting 1</td>
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<tr>
<td>ENGR 221</td>
<td>Basic Engineering Drafting 2</td>
<td>2</td>
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<tr>
<td>ENGR 127</td>
<td>Engineering Design and Graphics</td>
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<tr>
<td>ENGR 250</td>
<td>Materials in Engineering</td>
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<tr>
<td>ENGR 251</td>
<td>Properties of Materials</td>
<td>1</td>
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<tr>
<td>ENGR 255</td>
<td>Statics and Strength of Materials</td>
<td>3</td>
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<tr>
<td>MATH 90*</td>
<td>Intermediate Algebra</td>
<td>5</td>
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<tr>
<td>MATH 115*</td>
<td>Plane Trigonometry</td>
<td>3</td>
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<tr>
<td>Physical Science (with Lab)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*OR MATH above MATH 90 (9 Maximum Units)

MACH 211D, E or F; 212D, E or F; WELD 200 (6 Maximum Units)

TOTAL UNITS FOR A.S. MAJOR.................................................... 30

Elective Courses

ENGR 100    | Introduction to Engineering & Architecture          | 1     |
ENGT 212    | Advanced Topics in CAD                              | 1     |
ENGR 222    | Engineering Drafting and Design 1                   | 2     |
MACH 211D-F | Machine Tool Technology 1                           | 4 or 6 |
WELD 200    | Arc and Gas Welding                                 | 3     |

TOTAL UNITS FOR A.S. MAJOR.................................................... 30

Engineering Technology (ENGTC)

"MENGTC" in the Schedule of Classes

The Engineering Technology program prepares students to transfer to four-year college and university programs. It is for students interested in learning the more pragmatic and applications aspects of engineering, and is directed to the application of established scientific and engineering knowledge and methods. Consult with an engineering advisor for selection of courses.

Engineering Technology Program

AS Degree: Engineering Technology

- To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below. Consult with an advisor for selection of courses.

REQUIRED COURSES - Complete 23 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 121</td>
<td>Introduction to Engineering Drafting &amp; Design</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 220</td>
<td>Basic Engineering Drafting 1</td>
<td>2</td>
</tr>
<tr>
<td>ENGR 221</td>
<td>Basic Engineering Drafting 2</td>
<td>2</td>
</tr>
<tr>
<td>ENGR 127</td>
<td>Engineering Design and Graphics</td>
<td>4</td>
</tr>
<tr>
<td>ENGT 250</td>
<td>Materials in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ENGT 251</td>
<td>Properties of Materials</td>
<td>1</td>
</tr>
<tr>
<td>ENGT 255</td>
<td>Statics and Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATH 90*</td>
<td>Intermediate Algebra</td>
<td>5</td>
</tr>
<tr>
<td>MATH 115*</td>
<td>Plane Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>Physical Science (with Lab)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*OR MATH above MATH 90 (9 maximum units)

MACH 211D, E or F; 212D, E or F; WELD 200 (6 Maximum Units)

TOTAL UNITS FOR A.S. MAJOR.................................................... 30

Engineering Technology Courses

ENGT 210—INTRODUCTION TO COMPUTER-ASSISTED DRAFTING 1 Unit
Introduction to the use of the computer as a drafting tool. Topics include basic drawing, editing and utility commands of AUTOCAD. Three maximum completions. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU) (CC DRAFT 50A)

ENGT 211—INTERMEDIATE TOPICS IN COMPUTER-ASSISTED DRAFTING 1 Unit
Prerequisite: Previous experience with PC based CAD or ENGT 210. Continuation of ENGT 210 to include topics on the use of layers, blocks, inserts, attributes, dimensioning, three-dimensional applications, and system management. Three maximum completions. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU) (CC DRAFT 50A)
ENGT 212—ADVANCED TOPICS IN COMPUTER-ASSISTED DRAFTING  1 Unit
Prerequisite: ENGT 211, or previous experience with PC based CAD.
Advanced topics in computer-assisted drafting including solids modeling, file management, and customization. Three maximum completions. Field trips may be required. Lecture/Laboratory. Materials fee may be required (CSU).

ENGT 214—3D CAD APPLICATIONS FOR ARCHITECTS AND ENGINEERS  1 Unit
Recommended for Success: Previous CAD experience, preferably Autocad. Introduction to the use of the computer for 3D imaging. Topics include: creating wireframe and surface models from 2D data, creating 3D images and walk-through animations, and efficient techniques for use of software and hardware. Field trips may be required. Three maximum completions. Lecture/Laboratory. Materials fee required. (CSU, CR/NC).

ENGT 215—INTRODUCTION TO SOLID MODELING  1 Unit
Recommended for Success: Previous CAD or drafting experience. Formerly listed as ENGR 215.
Introduction to use of the computer as a Solid Modeler. Topics include working in the draft environment, solids construction, solids editing, drawing views, dimensioning, and assembly drawings. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, Spr.)

ENGT 222—ENGINEERING DRAFTING AND DESIGN 1  2 Units
Prerequisite: Satisfactory completion of ENGR 220 and ENGR 221 and experience with CAD.
Mechanical drafting using computer (CAD) with emphasis on mechanical design. Specific topics include geometric dimensioning and tolerancing per ANSI 14.5, threads, fasteners, weldments, and assembly drawings. Lecture/Laboratory/Discussion. Materials fee may be required. (CSU)

ENGT 223—ENGINEERING DRAFTING AND DESIGN 2  2 Units
Prerequisite: ENGT 222
A continuation of ENGT 222. Topics include multicomponent assemblies, piping, sheet metal, materials selection and design. Lecture/Laboratory. Materials fee may be required. Not offered every semester. (CSU).

ENGT 250—MATERIALS IN ENGINEERING  3 Units
A study of the structure of metals, ceramics, polymers, composites, and semiconducting materials and their effect on mechanical, electrical, magnetic, and thermal properties. Methods used in manufacture and processing. Field trips may be required. Lecture. Materials fee may be required. (CSU)

ENGT 251—PROPERTIES OF MATERIALS  1 Unit
Recommended for Success: Completion of ENGT 250 or concurrent enrollment.
Materials testing, analysis, and evaluation of response models of metals, ceramics, polymers, and composites. Field trips required. Laboratory. Materials fee may be required. (CSU)

ENGT 255—STATICS AND STRENGTH OF MATERIALS  3 Units
Recommended for Success: MATH 115 or MATH 122 or placement by MJC assessment process.
Study of force and moment systems. Concept of equilibrium stresses, and deformation. Effects of forces and moments acting on beams, structures, and shafts. Field trips may be required. Lecture. Material fees may be required. (CSU)

ENGT 375—CONSTRUCTION BLUEPRINT READING  2 Units
Reading and interpreting basic two-dimensional blueprints, sketching. Terminology symbols, notes and building code practices for building trades. Field trips may be required. Lecture/Laboratory. Not offered every semester.

ENGT 376—MECHANICAL BLUEPRINT READING  2 Units
Reading and interpreting basic two-dimensional mechanical drawings; sketching. Terminology symbols, notes, and practices for manufacturing and fabrication trades. Field trips may be required. Lecture/Laboratory. Not offered every semester.

English (ENGL)
"MENGL" in the Schedule of Classes

For those who love to read, write, interpret, and create, majoring or minoring in English is the right choice. English courses are designed to give proficiency in skills that are highly regarded by society: the ability to read with comprehension and critical judgment; to communicate accurately and effectively both orally and in writing; to think logically; to do research and organize materials; and to interpret and appreciate literature.

The English major can lead to a career in teaching as well as in professional fields such as law, publishing, information science, and business. In addition to pre-collegiate composition courses (English 49 and English 50) and transfer-level courses (English 101, 102, and 103), the English program includes survey courses in English, American and world literature; introductory genre courses in poetry, fiction, and drama; and a number of topical courses such as Shakespeare, Bible as literature, ethnic literatures, folklore, and children's literature. The program also offers creative writing courses in poetry, fiction, and script writing. English majors choose to take survey, writing, and literature courses based upon their areas of interest, but they should include a balanced load of genre and survey courses. Many students who become English majors at four-year colleges and universities are required to take introductory survey courses in American and British literature (English 135, English 136, English 137, and English 138). However, prospective English majors and minors are strongly urged to discuss their plans with MJC counselors and English faculty advisors regarding the specific lower-division requirements at the four-year colleges and universities they plan to attend.

Placement in English Courses

For students who have not already completed an English composition course at Modesto Junior College or at any other college, placement in English 49, 50, and 101 requires the English Placement Examination.

PLACEMENT REQUIREMENTS FOR ENGLISH COURSES

English 49: Placement by examination or successful completion of ESL 47 or ESL 48. Completion of ENGL 44 or ENGL 48 does not guarantee readiness for ENGL 49.

English 50: Placement by examination or completion of English 49 with a grade of C or better.

English 101: Placement by examination or completion of ENGL 50 with a grade of C or better.

English 102: Completion of ENGL 101 with a grade of C or better.

English 103: Completion of ENGL 101 with a grade of C or better.

English Program

AA Degree: English

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 9 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101 [NP]</td>
<td>Composition and Reading………………………….3</td>
</tr>
<tr>
<td>ENGL 102 [NP]</td>
<td>Advanced Composition and Introduction to Literature ..3</td>
</tr>
</tbody>
</table>
Shakespeare Academy Program

Certificate:
Shakespeare Academy

To earn a Certificate of Achievement, the student must complete the coursework that follows. Each course must be completed with a C or better.

REQUIRED COURSES - Complete 6 units
ENGL 103 [NP]  Advanced Composition and Critical Thinking .......... 3

ELECTIVE COURSES - Complete 11 units
ENGL 105 [NP]  Creative Writing: Poetry .................................. 3
ENGL 106 [NP]  Creative Writing: Short Fiction .......................... 3
ENGL 108 [NP]  Creative Writing: Autobiography ....................... 3
ENGL 109 [NP]  Scriptwriting: Dramatic Writing for Film, Television, and Theater .................. 3
ENGL 110 [NP]  Novel Writing ................................................. 3
ENGL 112 [NP]  Introduction to the Novel and Short Story .......... 3
ENGL 114 [NP]  Introduction to Poetry ...................................... 3
ENGL 116 [NP]  Introduction to Drama ..................................... 3
ENGL 131 [NP]  Introduction to World Literature to 1500 .............. 3
ENGL 132 [NP]  Introduction to World Literature from 1500 to Present .. 3
ENGL 135 [NP]  American Literature: to 1850 ........................... 3
ENGL 136 [NP]  American Literature: 1850 to Present .................. 3
ENGL 137 [NP]  Survey of English Literature to the 18th Century .... 3
ENGL 138 [NP]  Survey of English Literature: 18th Century to the Present .......... 3
ENGL 151 [NP]  Folklore ......................................................... 3
ENGL 156 [NP]  The Bible as Literature -- The Hebrew Canon and Intertextual Readings .................. 3
ENGL 157 [NP]  The Bible as Literature -- The New Testament ........ 3
ENGL 161 [NP]  Film Appreciation ........................................... 3
ENGL 162 [NP]  History of Cinema ............................................ 3
ENGL 163 [NP]  Introduction to Shakespeare .............................. 3
ENGL 168 [NP]  Adolescent Literature ....................................... 3
ENGL 169 [NP]  Children's Literature ........................................ 3
ENGL 171 [NP]  Introduction to African-American Literature ......... 3
ENGL 172 [NP]  Introduction to Chicano Literature ....................... 3
ENGL 173 [NP]  Introduction to Latin American Literature ............. 3
ENGL 175 [NP]  Women in Literature ....................................... 3
ENGL 178 [NP]  Mass Media and the Public ................................ 3
ENGL 179 [NP]  Introduction to Native American Literature, Mythology, and the Oral Tradition .... 3
ENGL 183 [NP]  Introduction to Tutoring Composition .................... 2
ENGL 184 [NP]  Advanced Tutoring of Composition ....................... 2
ENGL 198 [NP]  Special Topics in English .................................. 3

TOTAL UNITS FOR CERTIFICATE ........................................... 17

English Courses

ENGL 25—COMPUTER-ASSISTED ESL WRITER’S WORKSHOP 1 Unit
Non-degree course.
Recommended for Success: Completion of ESL 45 and/or enrollment in ESL 46, 47, 48, 70.
Formerly listed as ENGL 25A.

ENGL 26—COMPUTER-ASSISTED WRITER’S WORKSHOP 1 Unit
Non-degree course.
Recommended for Success: Completion of ESL courses and/or enrollment in ENGL 49, 50 or 101.
Formerly listed as ENGL 26B.

ENGL 44—FUNDAMENTALS OF GRAMMAR 1 Unit
Non-degree course
A computer-based and workshop-based course for student who want to review English. Offered in the Center for Learning Assistance. Orientation required. Recommended for students who need preparation to succeed in English 49. Open-entry/Open-exit. (CR/NC)

ENGL 46 – COMPUTER-ASSISTED FUNDAMENTALS OF WRITING 1 Unit
Non-degree course
A computer-based course in the fundamentals of writing, focusing on basic written expression. Students must complete self-paced modules on selected topics. Students must log in for a minimum of three hours each week at the Center for Learning Assistance, complete the required writing exercises and computer-based modules, and meet with the Center for Learning Assistance instructor and tutors at specified times to receive credit for the course. Recommended for students whose English placement scores fall below entrance into ENGL 50. Open entry/open exit. (CR/NC)

ENGL 48—GRAMMAR REVIEW 1 Unit
Non-degree course.

ENGL 49—BASIC ENGLISH SKILLS 5 Units
Recommended for Success: Satisfactory completion of READ 40 or Reading Graduation Competency satisfied by the MJC assessment process.
Non-degree course.
Fundamentals of writing. Students will write and receive individual guidance on specific skills. Emphasis on improving writing fluency, developing sentence structure, and learning to edit for spelling, punctuation, and usage. Credit in this course may not be used to satisfy English requirements for graduation from Modesto Junior College.

TOTAL UNITS FOR A.A. MAJOR ............................................. 20

COURSES AND ACADEMIC PROGRAMS
<table>
<thead>
<tr>
<th>COURSES AND ACADEMIC PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>College. Field trips may be required. Lecture. (CC ENGL 250)</strong></td>
</tr>
<tr>
<td><strong>ENGL 50—BASIC COMPOSITION AND READING</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: Recommendation of the English Placement Examination or completion of ENGL 49 with a grade of “C” or higher. Practice in reading intelligently and writing effectively. The course focuses equally on improving critical reading and writing skills. Meets English composition requirements for graduation but does not meet the English requirements for college or university transfer. Field trips may be required. Lecture. (CC ENGL 151)**</td>
</tr>
<tr>
<td><strong>ENGL 90—WRITING THE RESEARCH PAPER</strong> 1 Unit</td>
</tr>
<tr>
<td>Prerequisite: Eligibility for ENGL 101 or concurrent enrollment in ENGL 50. Practice in the fundamentals of research and the writing of the research paper in both MLA and APA formats. Lecture.</td>
</tr>
<tr>
<td><strong>ENGL 101—COMPOSITION AND READING</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: Satisfactory completion of ENGL 50 or qualification by the MJC English assessment process. Recommended for success: Satisfactory completion of READ 184 or Reading Graduation Competency requirements. Practice in reading intelligently and writing effectively. The main focus is on improving writing with emphasis on exposition, argument, research, and information competency. Students must write a minimum of 6000 words, at least 6000 of which will be in papers that have a developed thesis. A 2000-3000 word research paper using current MLA guidelines is required. Field trips may be required. Lecture. (CAN ENGL 2, CAN ENGL SEQ A, CSU, UC) (CC ENGL 1A)**</td>
</tr>
<tr>
<td><strong>ENGL 102—ADVANCED COMPOSITION AND INTRODUCTION TO LITERATURE</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 with a “C“ grade or better. Intended primarily for university transfer students, but open to any qualified student. Advanced composition with an introduction to methods used in the analysis of literary texts. Field trips may be required. Lecture. (CAN ENGL 4, CAN ENGL SEQ A, CSU, UC) (CC ENGL 1B)**</td>
</tr>
<tr>
<td><strong>ENGL 103—ADVANCED COMPOSITION AND CRITICAL THINKING</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 Advanced composition course that focuses on critical inquiry and the techniques and principles of effective writing argument. Examines style, diction, inference, evidence, reasoning, and rhetorical strategies in written argument. Field trips may be required. Lecture. (CSU, UC) (CC ENGL 1C)**</td>
</tr>
<tr>
<td><strong>ENGL 105—CREATIVE WRITING: POETRY</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 Instruction and practice in writing poetry. Two maximum completions. Lecture. (CSU, UC)**</td>
</tr>
<tr>
<td><strong>ENGL 106—CREATIVE WRITING: SHORT FICTION</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 Instruction and practice in writing shorter forms of fiction. Two maximum completions. Lecture. (CAN ENGL 6, CSU, UC) (CC ENGL 1D)**</td>
</tr>
<tr>
<td><strong>ENGL 108—CREATIVE WRITING: AUTOBIOGRAPHY</strong> 3 Units</td>
</tr>
<tr>
<td>Instruction and practice in the writing of an autobiography. Two maximum completions. Lecture. (CU)**</td>
</tr>
<tr>
<td><strong>ENGL 109—SCRIPTWRITING: DRAMATIC WRITING FOR FILM, TELEVISION, AND THEATER</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 Instruction and practice in the writing of dramatic scripts for film, television, and theater. Field trips may be required. Two maximum completions. Lecture. (CSU, UC)**</td>
</tr>
<tr>
<td><strong>ENGL 112—INTRODUCTION TO THE NOVEL AND SHORT STORY</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: ENGL 101 Introduction to the novel and short story with emphasis on intelligent reading, analysis and discussion of a range of fiction representing various types and traditions. Field trips or alternate experiences may be required. Lecture. (CSU, UC)**</td>
</tr>
<tr>
<td><strong>ENGL 114—INTRODUCTION TO POETRY</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 Analysis and discussion of poetry. Field trips may be required. Lecture. (CSU, UC, CAN ENGL 20)**</td>
</tr>
<tr>
<td><strong>ENGL 116—INTRODUCTION TO DRAMA</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 Analysis and discussion of selected plays from classical Greek period to present. Field trips may be required. Lecture. (CSU, UC, CAN ENGL 22)**</td>
</tr>
<tr>
<td><strong>ENGL 118 – WRITING TECHNIQUES FOR THE WORLD WIDE WEB</strong> 3 Units</td>
</tr>
<tr>
<td>Prerequisite: Eligibility for ENGL 101 Recommended for Success: Satisfactory completion of READ 184 or Reading Graduation Competency satisfied. Satisfactory completion of CMPGR 263. Introduction to writing for the world wide web through rhetorical study and practical experience. Emphasizes conscientious reading of on-line materials and excellence in on-line writing. Intended for students who are interested in on-line reading and writing beyond the casual use of the web for browsing or who would like some preparation for positions that may demand web writing. Lecture. Field trips may be required. Not offered every semester. (CSU)**</td>
</tr>
<tr>
<td><strong>ENGL 131—INTRODUCTION TO WORLD LITERATURE TO 1500</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 Classical and medieval literature including historical backgrounds and reading in Asian, Greek, Roman, Teutonic, and Italian literature. Lecture. (CSU, UC)**</td>
</tr>
<tr>
<td><strong>ENGL 132—INTRODUCTION TO WORLD LITERATURE FROM 1500 TO PRESENT</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 ENGL 131 is not a prerequisite. ENGL 132 is a continuation of English 131, reading from the Renaissance to contemporary literature of Italy, Spain, France, Germany, Russia and Scandinavia. Lecture. (CSU, UC)**</td>
</tr>
<tr>
<td><strong>ENGL 135—AMERICAN LITERATURE: TO 1850</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 Survey of American literature from its beginning to mid-nineteenth century. Lecture. (CAN ENGL 14, CAN ENGL SEQ C, CSU, UC) (CC ENGL 17)**</td>
</tr>
<tr>
<td><strong>ENGL 136—AMERICAN LITERATURE: 1850 TO THE PRESENT</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 ENGL 135 is not a prerequisite. Survey of American literature from mid-nineteenth century to the present. Lecture. (CAN ENGL 16, CAN ENGLISH SEQ C, CSU, UC) (CC ENGL 18)**</td>
</tr>
<tr>
<td><strong>ENGL 137—SURVEY OF ENGLISH LITERATURE TO THE 18TH CENTURY</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 and 102 Survey of English literary history from the Anglo-Saxons to the 18th century with detailed study of the writings of Chaucer, Marlowe, Spenser, Shakespeare, Milton, and others. Lecture. (CAN ENGL 8, CAN ENGL SEQ B, CSU, UC) (CC ENGL 46)**</td>
</tr>
<tr>
<td><strong>ENGL 138—SURVEY OF ENGLISH LITERATURE: 18TH CENTURY TO THE PRESENT</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 and 102 Literary history of the 18th and 19th centuries with detailed study of the writings of Pope, Wordsworth, Coleridge, Byron, Keats, Shelley, Tennyson, and others. Lecture. (CAN ENGL 10, CAN ENGL SEQ B, CSU, UC) (CC ENGL 47)**</td>
</tr>
<tr>
<td><strong>ENGL 151—FOLKLORE</strong> 3 Units</td>
</tr>
<tr>
<td>Recommended for Success: ENGL 101 Interrelationships of people throughout the world through discussion and analysis of our folk heritage. Folk themes and symbolism in literature also will be discussed. Field trips may be required. Lecture. (CSU, UC)**</td>
</tr>
</tbody>
</table>
ENGL 156—THE BIBLE AS LITERATURE: THE HEBREW CANON AND INTERTESTAMENTAL WRITINGS 3 Units
Recommended for success: Eligibility for ENGL 101.
Literary criticism and an appreciation of historical background and textual transmission of selected books of the Hebrew Bible (Old Testament) and Intertestamental Writings (also known as the Apocrypha) in translation. Lecture. Field trips may be required. (CSU, UC)

ENGL 157—THE BIBLE AS LITERATURE: THE NEW TESTAMENT 3 Units
Recommended for success: Eligibility for ENGL 101.
Literary criticism and an appreciation of historical background and textual transmission of selected books of the New Testament. Lecture. Field trips may be required. (CSU, UC)

ENGL 161—FILM APPRECIATION 3 Units
An introductory course in film appreciation, emphasizing the development of sensitivity and critical judgment in audience response to film. Field trips may be required. Lecture/Viewing. (CSU, UC) (CC ENGL 11)

ENGL 162—HISTORY OF CINEMA 3 Units
Also offered as INDIS 162.
Examines the international development of cinema from 1895 to the present. Covers a wide range of both American and foreign films and offers a broad survey of major movements, styles, and genres in the history of motion pictures. Focuses specifically on the social, historical, technical, and technological factors that have shaped the film industry and the films produced by it. Field trips may be required. Lecture. (CSU, UC).

ENGL 163—INTRODUCTION TO SHAKESPEARE 3 Units
Recommended for Success: ENGL 101
A reading of six to nine representative comedies, histories, and tragedies; designed to introduce the student to Shakespeare’s art. Field trips may be required. Lecture. (CSU, UC) (CC ENGL 50)

ENGL 168—ADOLESCENT LITERATURE 3 Units
Recommended for Success: ENGL 101 eligibility.
Introduction to literature for adolescents (ages 9-16). Includes types of literature, and forms drawn from a variety of ethnic and cultural sources, ways to promote interest, themes, and criteria for choosing materials. Field trips may be required. Lecture. (CSU)

ENGL 169—CHILDREN’S LITERATURE 3 Units
Recommended for Success: ENGL 101 eligibility.
Introduction to literature for children. Includes types of literature and forms drawn from a variety of ethnic and cultural sources, storytelling, ways to promote interest, and criteria for choosing materials. Field trips may be required. Lecture. (CSU)

ENGL 171—INTRODUCTION TO AFRICAN-AMERICAN LITERATURE 3 Units
Recommended for Success: ENGL 101
An introduction to the contributions of Black Americans in American literature from the slave era through the present. The emphasis will be upon a chronological study of major works including the following: slave narratives, folk tales, poetry, short story, novel and drama. Field trips may be required. Lecture. (CSU, UC)

ENGL 172—INTRODUCTION TO CHICANO LITERATURE 3 Units
Recommended for Success: ENGLISH 101
Survey of Chicano literature in English from its beginnings to its contemporary form. Emphasis on influences that have shaped the literature and critical skills needed to evaluate and appreciate Chicano poetry, theater, fiction, and essay. Field trips may be required. Lecture. (CSU, UC)

ENGL 173—INTRODUCTION TO LATIN AMERICAN LITERATURE 3 Units
Recommended for Success: ENGL 101
An introduction to Latin American literature from its Colonial Period to the present. Emphasis on chronological survey of major works of Latin American writers studied in English translation and selected from the following: indigenous legends, chronicles, epistles, poetry, novel, drama, and short story. Field trips may be required. Lecture. (CSU, UC)

ENGL 174—INTRODUCTION TO MODERN ASIAN LITERATURE 3 Units
Recommended for Success: ENGL 101
An introductory course on Asian literature from the 19th century to the present in its English translation. Emphasis on major works that have made an impact on western literary tradition and the social, cultural, and historical forces that have shaped these works. Field trips may be required. Lecture.

ENGL 175—WOMEN IN LITERATURE 3 Units
Recommended for Success: ENGL 101
An introduction to literature by and about women, including an historical overview, archetypes, stereotypes, cultural impediments to women’s writing, methods of criticism, and recent literary achievements. Lecture. Field trips may be required. (CSU, UC)

ENGL 176—INTRODUCTION TO MEXICAN LITERATURE 3 Units
Recommended for Success: ENGL 101
Introduction to Mexican literature from its Colonial Period to the present. Emphasis on chronological survey of major works of Mexican writers studied in English translation and selected from the following: chronicles, epistles, poetry, novel, drama, and short story. Lecture.

ENGL 178—MASS MEDIA AND THE PUBLIC 3 Units
A non-technical course for the consumer of the mass media dealing with the way information is gathered and processed by the mass media, and the history of the mass media in the United States, theories of its role in society, and current problems and criticisms. Field trips may be required. Lecture. (CAN JOUR 4, CSU, UC)

ENGL 179—INTRODUCTION TO NATIVE AMERICAN LITERATURE, MYTHOLOGY, AND THE ORAL TRADITION 3 Units
Recommended for Success: ENGL 101
Study of traditional and contemporary Native American literature from a variety of nations, including some local Native American peoples. Traditional chronicle, oral tale, and myth. Relationship of contemporary writing to earlier cultural heritage. Place of Native American literature in the American literary tradition and canon. Close reading of contemporary autobiography, novels, short fiction, and poetry. Field trips may be required. Lecture. (CSU, UC)

ENGL 183—INTRODUCTION TO TUTORING COMPOSITION 2 Units
Prerequisite: ENGL 101 with a grade of “C” or better.
Introductory course in the tutoring process of English composition. Students will learn strategies for tutoring developmental to advanced writers. Specific focus will be on techniques for improvement of fluency, structure, revision, proofreading, and reading. Intended for students selected as tutors for the Division of Literature and Language Arts’ learning centers. Lecture. (CSU, GR)

ENGL 184—ADVANCED TUTORING OF COMPOSITION 2 Units
Prerequisite: Successful completion of ENGL 183 with a grade of “C” or higher.
Course in the advanced techniques of tutoring processes of English composition. Students will further develop strategies for tutoring developmental to advanced writers. Specific focus will be on advanced techniques for improvement of fluency, structure, revision, proofreading, and reading and on the study of timely issues affecting tutors and students. Intended for students selected as tutors for the Division of Literature and Language Arts’ learning centers. Field trips may be required. Lecture. (CSU, GR).
English as a Second Language (ESL)  “MESL” in the Schedule of Classes

The division offers two programs in ESL: a non-credit, adult basic education program of courses on four levels, and a six-level credit program intended for students who plan to pursue other academic and vocational study at the college. Most ESL courses are not degree applicable; no major is offered.

ESL Course Sequence

<table>
<thead>
<tr>
<th>ESL Level</th>
<th>Main Courses</th>
<th>Reading/Composition</th>
<th>Spoken English</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Intermediate</td>
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<tr>
<td>Advanced</td>
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</tr>
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</table>

English as a Second Language Courses

ESL 10—ENGLISH LANGUAGE 1  10 Units
Non-degree course.
Elementary course in speaking, listening, reading, and writing for persons learning English as another language. Field trips may be required. Lecture.

ESL 20—ENGLISH LANGUAGE 2  5 Units
Prerequisite: Placement in ESL 20 through assessment process or satisfactory completion of ESL 10 or equivalent course.
Non-degree course.
Continuation of ESL 10. Elementary English for persons learning English as another language. Emphasis on vocabulary and sentence structure for practical communication in school, community and work. Field trips may be required. Lecture/Laboratory.

ESL 23—SPOKEN ENGLISH 1  5 Units
Recommended for Success: Placement in ESL 20 or above.
Concurrent enrollment in ESL 20 or 30 recommended.
Non-degree course.
Elementary speaking improvement for students of English as a second language. Field trips may be required. Two maximum completions. Lecture/Laboratory.

ESL 24—ESL COMPOSITION AND READING 1  5 Units
Prerequisite: Placement in ESL 20 through assessment process or satisfactory completion of ESL 10 or equivalent course.
Concurrent enrollment in ESL 20 recommended.
Non-degree course.
Practice in reading and writing for students at the beginning (second semester) level. Field trips may be required. Lecture/Laboratory.

ESL 30—ENGLISH LANGUAGE 3  5 Units
Prerequisite: Placement in ESL 30 through assessment process or satisfactory completion of ESL 20 or equivalent course.
Non-degree course.
Continuation of ESL 20. Emphasis on more advanced elementary vocabulary and sentence structures. Practice in more fluent, accurate use of elementary English. Field trips may be required. Lecture/Laboratory.

ESL 34—ESL COMPOSITION AND READING 2  5 Units
Prerequisite: Placement in ESL 30 through assessment process or satisfactory completion of ESL 20 and ESL 24 or equivalent course.
Concurrent enrollment in ESL 30 recommended.
Non-degree course.
Practice in reading and writing for students at the high beginning (third semester) level of ESL courses. Continuation of ESL 24. Field trips may be required. Lecture/Laboratory.

ESL 40—ENGLISH LANGUAGE 4  5 Units
Prerequisite: Placement in ESL 40 through assessment process or satisfactory completion of ESL 30 or equivalent course.
Non-degree course.
Intermediate course in English for persons learning English as another language. Introduction to more difficult structures in English sentences. Review of elementary English. Field trips may be required. Lecture/Laboratory.

ESL 40A—SKILLS FOR SUCCESS IN INTERMEDIATE GRAMMAR  .5 Units
Designed to provide further practice on grammar points needed for success in ESL 40 or higher; in particular, for students who are weak in prerequisite skills and/or who have failed ESL 40. These courses do not serve as prerequisites for ESL 45. Lecture/Laboratory/Other.

ESL 43—SPOKEN ENGLISH 2  5 Units
Recommended for Success: Placement in ESL 40 or above.
Concurrent enrollment in ESL 40 or 45 recommended.
Non-degree course.
Speaking improvement for students of English as a second language. Field trips may be required. Two maximum completions. Lecture/Laboratory.

ESL 44—ESL COMPOSITION AND READING 3  5 Units
Prerequisite: Placement in ESL 40 through assessment process or satisfactory completion of ESL 30 and ESL 34 or equivalent course.
Concurrent enrollment in ESL 40 recommended.
Non-degree course.
Practice in composition and reading for students at the lower intermediate level of ESL. Continuation of ESL 34. Field trips may be required. Lecture/Laboratory.

ESL 45—ENGLISH LANGUAGE 5  5 Units
Prerequisite: Placement in ESL 45 through assessment process or satisfactory completion of ESL 40 or equivalent course.
Non-degree course.
Continuation of ESL 40. Introduction of structures and vocabulary common to academic and business writing. Continued speaking and writing practice with previously learned forms. Field trips may be required. Lecture/Laboratory.

Continued ➤
I. Agriculture Career Core - Complete 5 units

AG 115 [1] Introduction to Agricultural Education and Careers ....1
AG 349A-D [NP] Work Experience ........................................4 OR
AG 249 [NP] Agriculture Internship ..................................4

II. Agriculture Science Breadth Core - Complete 9 units

PLSC 200 [1] Introduction to Plant Science .........................3
NR 200 [NP] Soils .........................................................4
AGM 200 [NP] Introduction to Mechanical Technology ..........3 OR
AGEC 225 [NP] Agriculture Computer Applications ............3 OR
AGEC 210 [1] Elements of Agriculture Economics .............3 OR
AGEC 200 [2] Agriculture Accounting and Analysis ...........3

III. Agriculture Major Courses- Complete 27 units

EHS 201 [1,2] Plant Materials and Usage 1 ..................3
EHS 210 [1] Introduction to Environmental Horticulture ....3
EHS 212 [2,3,4] Floriculture Crop Production ..................3
EHS 280 [1] Beginning Floral Design ............................3
EHS 281 [2,3,4] Advanced Floral Design .........................3
EHS 282 [3,4] Floral Shop Management ..........................4
EHS 383 [1,2] Commercial Floristry Production ...............4
SPCOM 102 [1] Introduction to Human Communication ....3
BUSAD 259 [NP] Small Business Management ................3
PLSC 255 [NP] Plant Pest Control ..................................3

TOTAL UNITS FOR CERTIFICATE ........................................41

Environmental Horticultural Science Program

AS Degree:
Environmental Horticultural Science

- To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Core – Complete 5 units

AG 115 [1] Introduction to Agricultural Education and Careers ....1
AG 349A-D [NP] Work Experience ........................................4 OR
AG 249 [NP] Agriculture Internship ..................................4

II. Agriculture Science Breadth Core – Complete 9 units

ANSC 200 [1] Introduction to Animal Science ..................3
NR 200 [2] Soils .........................................................4
AGM 200 [1] Introduction to Mechanical Technology ..........3 OR
AGEC 225 [1] Agriculture Computer Applications ............3 OR
AGEC 210 [1] Elements of Agriculture Economics .............3 OR
AGEC 200 [2] Agricultural Accounting and Analysis ...........3

III. Agriculture Major Courses- Complete 9 units

PLSC 200 [1,2] Introduction to Plant Science .........................3
EHS 201 [1,2] Plant Materials and Usage 1 ..................3
EHS 202 [1,2] Plant Materials and Usage 2 ..................3
EHS 210 [1] Introduction to Environmental Horticulture ....3

IV. Agriculture Major Electives – Complete 7 units

AGM (ANY) Any class listed in Agricultural Mechanics ....1-4
EHS 200 [NP] Ornamental Gardening ...............................2
EHS 212 [3,4] Floriculture Crop Production ..................3
EHS 220 [3,4] Turfgrass Management ............................3
EHS 235 [NP] Plant Propagation/Production ....................3
EHS 250 [NP] Landscape Irrigation ..................................3
EHS 276 [1,2] Landscape Maintenance .........................3
Environmental Horticultural Science

COURSES AND ACADEMIC PROGRAMS

Landscape and Park Maintenance Program

In this program the student will develop skills in recognizing, using, propagation, planting and maintenance of ornamental plants and materials used in landscaping. Contact the division office in the Agriculture Building for advising assistance.

Certificate: Landscape and Park Maintenance

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

I. Agriculture Career Required Units - Complete 5 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>AG 115</td>
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<tr>
<td>AG 349A-D</td>
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II. Agriculture Breadth Core Units - Complete 9 units

<table>
<thead>
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<th>Course</th>
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<tr>
<td>AGM 200</td>
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<tr>
<td>AEGC 200</td>
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III. Agriculture Major Courses - Complete 21 units

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<td>EHS 215</td>
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<td>AGM 222</td>
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IV. Agriculture Major Electives - Complete 7 units

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<td>NR 230</td>
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<td>AGM 215</td>
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<tr>
<td>EHS 250</td>
<td>3</td>
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<tr>
<td>PLSC 250</td>
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</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE ........................................ 42

Landscape Architecture Program

The Landscape Architecture program prepares students to transfer to four-year college and professional programs. Landscape architecture encompasses a broad base of opportunity and service including environmental and resource conservation concerns. These concerns have created a need for more careful planning between man, his built environment, and his natural surroundings.

AS Degree: Landscape Architecture

• In addition to meeting the requirements below, student must complete the MJC Graduation Requirements. Consult with an advisor for selection of courses.

REQUIRED COURSES - Complete 22 units

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<td>ARCH 122</td>
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<td>ARCH 131</td>
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<td>NR 200</td>
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<td>EHS 201</td>
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<td>EHS* 202</td>
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ELECTIVE COURSES - Complete 8 units

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<td>ARCH 132</td>
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<td>ENGT 211</td>
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<tr>
<td>EHS 210</td>
<td>3</td>
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</tbody>
</table>

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

Landscape Design Program

The Landscape Design technician program prepares students to enter the field of landscape design at the entry level. The program is for students interested in learning the more pragmatic and applications aspect of landscaping and is directed to the application of established scientific and engineering knowledge and methods.

Certificate: Landscape Architecture/Landscape Design

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 28 units

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
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<tr>
<td>ARCH 110</td>
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</tr>
<tr>
<td>ARCH 111</td>
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</tr>
</tbody>
</table>
### Nursery Production Program

In this program, the student will develop skills relating to plant identification, propagation and growing for sale, operations and maintenance of plant nursery equipment and structures. Contact the division office in the Agriculture Building for advising assistance.

#### Certificate: Nursery Production

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

#### I. Agriculture Career Core - Complete 5 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>AG 115</td>
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<td>Introduction to Agricultural Education and Careers</td>
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<td>AG 349A-D</td>
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<td>Work Experience</td>
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<tr>
<td>AG 249</td>
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<td>Agriculture Internship</td>
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#### II. Agriculture Science Breadth Core - Complete 9 units

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td>PLSC 200</td>
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<td>Introduction to Plant Science</td>
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<tr>
<td>ANSC 200</td>
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<td>Introduction to Animal Science</td>
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<tr>
<td>NR 200</td>
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<td>Soils</td>
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<tr>
<td>AGM 200</td>
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<td>Introduction to Mechanical Technology</td>
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<td>AGEC 225</td>
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<td>Agriculture Computer Applications</td>
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<td>Elements of Agriculture Economics</td>
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<td>AGEC 200</td>
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<td>Agriculture Accounting and Analysis</td>
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#### III. Agriculture Major Courses - Complete 21 units

<table>
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<th>Credits</th>
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<tbody>
<tr>
<td>AG 280</td>
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<td>Agricultural Computations</td>
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<td>AG 285</td>
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<td>Communications in Agriculture</td>
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<tr>
<td>AGM 222</td>
<td>3</td>
<td>Ornamental Horticulture Machinery</td>
</tr>
<tr>
<td>EHS 210</td>
<td></td>
<td>Introduction to Environmental Horticulture</td>
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<tr>
<td>EHS 201</td>
<td>3</td>
<td>Plant Materials and Usage 1</td>
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<tr>
<td>EHS 202</td>
<td>3</td>
<td>Plant Materials and Usage 2</td>
</tr>
<tr>
<td>EHS 215</td>
<td></td>
<td>Landscape Planning &amp; Design</td>
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<tr>
<td>EHS 220</td>
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<td>Turfgrass Management</td>
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<tr>
<td>EHS 235</td>
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<td>Plant Propagation and Production</td>
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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>NR 222</td>
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<td>Native Plants Identification</td>
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#### IV. Agriculture Major Electives - Complete 6 units

Any course in Plant Science, Agriculture Economics, or Agricultural Economics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>EHS 212</td>
<td>3</td>
<td>Floriculture Crop Production OR</td>
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<tr>
<td>EHS 276</td>
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<td>Landscape Maintenance OR</td>
</tr>
<tr>
<td>EHS 278</td>
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<td>Landscape Construction and Installation</td>
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<td>PLSC 250</td>
<td>3</td>
<td>Plant Nutrition and Fertilizers</td>
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<tr>
<td>PLSC 255</td>
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<td>Plant Pest Control</td>
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</table>

#### TOTAL UNITS FOR CERTIFICATE

46-47

### Environmental Horticultural Science Courses

#### EHS 50—BEGINNING ORNAMENTAL GARDENING 2 Units

Preparation for the fundamentals of indoor and outdoor gardening, planting for patios and balconies, gardening in containers and simple landscaping. Designed for anyone interested in gardening, regardless of prior experience or size of garden. A series of 30 television programs supported by coordinating textual material and by additional printed materials are optional. Field trips may be required.

#### EHS 51—ENVIRONMENTAL HORTICULTURE PREPARATION 3 Units

A preparatory course in environmental horticulture, emphasis on nursery operation including structures and layout, seeding, transplanting, plot, building, canning, fertilizing, pest control, plant diseases and abnormalities. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Saturday field laboratory may be required. Field trips required. Lecture/Laboratory.

#### EHS 52, 53, 54—ORNAMENTAL HORTICULTURE 3 Units

Each is one of a series of introductory courses that prepare students for gainful entry level employment in the nursery industry. Topics in this course include the Nursery and Landscape Industry, plant identification, the anatomy and physiology of plants and the requirements for plant growth (light, water, air, temperature, minerals, anchorage). Practical hands-on reinforcement will be augmented through practical work experience in a commercial nursery. Upon completion of the entire series of modules (EHS 50, 52, 53, 54), students will receive a Certificate of Completion. Modules are organized into six-week blocks. Field trips required. Lecture/Laboratory.

#### EHS 56—PREPARATORY PARK AND LANDSCAPE MAINTENANCE 3 Units

Preparation for training in installation of plant materials and plants and other planted areas and in skills required for students to qualify as technicians. Special interest directed to provide specific skills in such areas as forestry, highway maintenance, city, state and federal parks. Field trips required. Lecture/Laboratory.

#### EHS 58—PREPARATORY FLORAL DESIGN 3 Units

Preparation for training in commercial floristry teaching basic theory, techniques, and skills currently practiced in the floral design industry. Construction of basic floral products for resale; cut flower processing. Field trips required. Lecture/Laboratory. Materials fee required.

#### EHS 61—PREPARATORY ORNAMENTAL PLANT IDENTIFICATION 3 Units

Preparation in the identification, growth habits, culture and ornamental use of house plants, vines, ground covers, annuals, perennials and small shrubs adapted to climates of California central valleys. One Saturday laboratory required. Field trips required. Lecture/Laboratory.
EHS 62—PREPARATORY ORNAMENTAL SHRUB MANAGEMENT - A, B, C
Formerly listed as OH 62.
Preparation in the identification, growth habits, culture and use of large shrubs and trees adapted to climates of California central valleys. Field laboratories, including some on Saturdays, are required. Field trips required. Lecture/Laboratory.

EHS 65—INTRODUCTORY LANDSCAPE PLANNING AND DESIGN
Formerly listed as OH 65.
Preparation in the planning and designing of landscaped areas. Emphasis on location of lawns, trees, shrubs, walks, driveways, patios, planters and other landscape structures for home and park. Field trips required. Lecture/Laboratory.

EHS 66, 67, 68—PREPARATORY LANDSCAPE MANAGEMENT - A, B, C
One of a series of introductory courses that prepare students for gainful entry-level employment in the landscape maintenance industry. Topics in this course include: planting, care and selection of various plant materials utilized in landscapes, identifying and correcting abnormalities, and pruning and training techniques. Employee expectations of the landscape industry are also discussed. Practical hands-on reinforcement will be augmented through practical work experience in landscape settings. Upon completion of the entire series of modules (EHS 52, 53, 54, 66, 67, 68), students will receive a Certificate of Completion. Modules are organized into six-week blocks. Field trips required. Lecture/Laboratory.

EHS 100—ENVIRONMENTAL GARDENING
Formerly listed as OH 100.
Plants used in the landscape; basic landscape design principles and plant propagation techniques. Emphasis on the place of horticultural crops in the economy and the role of plants in the environment. Discussion will center on the physiology of plants and their use and care. Emphasis will be on the practical application of horticultural principles. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

EHS 200—ORNAMENTAL GARDENING
Formerly listed as OH 200.
Fundamentals of indoor and outdoor gardening, planting for patios and balconies, gardening in containers and simple landscaping. Designed for anyone interested in gardening, regardless of prior experience or size of garden. A series of 30 television programs supported by coordinating textual material and by additional printed materials that are optional. Field trips may be required. (CSU)

EHS 201—PLANT MATERIALS AND USAGE 1
Formerly listed as OH 201 - Ornamental Plant Identification.
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 Nurserymen (CAN) and California Landscape Contractors Association (CLCA) Certification Tests Plant Lists. Covers those plants best observed and studied in the spring of the year. Field trips required. May require Saturday labs. Lecture/Laboratory. (CSU, UC, GR)

EHS 202—PLANT MATERIALS AND USAGE 2
Formerly listed as OH 202 - Ornamental Shrub and Tree Identification.
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 Nurserymen (CAN) and California Landscape Contractors Association (CLCA) Certification Tests Plant Lists. Covers those plants best observed and studied in the fall of the year. Field trips required. May require Saturday labs. Lecture/Laboratory. (CSU, UC, GR)

EHS 210—INTRODUCTION TO ENVIRONMENTAL HORTICULTURE
Formerly listed as OH 210 - Introduction to Ornamental Horticulture.
A general course in environmental horticulture with emphasis on nursery operations, landscaping, turf management, and floral industries. Topics include basic botany, cultural practices, propagation, structures and layout, pest management, container gardening and house plants, floral design, plant identification, turfgrass installation and care, and survey of career opportunities. Field trips required. May require Saturday labs. Lecture/Laboratory. (CSU, GR)

EHS 212—FLORICULTURE CROP PRODUCTION
Recommended for Success: EHS 201, 202 and 210.
Formerly listed as OH 212.
Introduction to the fundamentals of theory, techniques and skills currently practiced in the floral industry. Includes applied art principles, cut flower care, handling practices, proper use of florist tools and materials, pricing of floral products and use of current floral business technology. Includes constructing corsages, floral arrangements, foliage plant items, which meet floral industry standards. Field trips required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU, GR)

EHS 215—LANDSCAPE DESIGN
Recommended for Success: EHS 201 and 202.
Formerly listed as OH 215 - Landscape Planning and Design.
The study and implementation of the art and science of landscape design, including principles of the design process, drafting, graphics, and presentation methods. Project emphasis is placed upon residential and small commercial sites. Field trips required. Lecture/Laboratory. (CSU, GR)

EHS 220—TURFGRASS MANAGEMENT
3 Units
Maintenance and management of turfgrasses that include sports athletic fields, golf courses, parks, cemeteries, commercial, and residential lawns. Discussion will focus on identification, installation, cultural requirements and maintenance practices. Field trips required. Lecture/Laboratory. (CSU, GR)

EHS 235—PLANT PROPAGATION/PRODUCTION
Also offered as PLSC 235.
Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest and disease control, structures and site layout. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Regulations pertaining to plant production. Field trips required. Lecture/Laboratory. (CSU, GR)

EHS 250—LANDSCAPE IRRIGATION
Recommended for Success: EHS 201, 202, 215 and 220.
Formerly listed as OH 250 - Urban Irrigation Practices.
Prepare students to design, install and maintain a water efficient landscape irrigation system. Topics include water supply, basic hydraulics, component identification and terminology, system layout, pipe sizing; types of heads, valves, controllers. Field trips may be required. Lecture/Laboratory. (CSU, GR)

EHS 276—LANDSCAPE MAINTENANCE
Recommended for Success: EHS 201, 202, 210, NR 220 or NR 222.
Formerly listed as OH 276 - Park and Landscape Maintenance.
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. Field trips required. Lecture/Laboratory. (CSU, GR)

EHS 280—BEGINNING FLORAL DESIGN
Recommended for Success: EHS 210, 215 and 276.
Formerly listed as OH 280.
Introduction to the fundamentals of theory, techniques and skills currently practiced in the floral industry. Includes applied art principles, cut flower care, handling practices, proper use of florist tools and materials, pricing of floral products and use of current floral business technology. Includes constructing corsages, floral arrangements, foliage plant items, which meet floral industry standards. Field trips required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU, GR)
Environmental Horticultural Science - Family and Consumer Sciences

EHS 281—ADVANCED FLORAL DESIGN 3 Units
Formerly listed as OH 281 - Commercial Floristry Advanced Floral Design
Prerequisites: EHS 280 and EHS 281.
Provides insight into the business and management skills needed to run a successful floral shop. Flower shop involvement required. Field trips required. Two maximum completions. Lecture. (CSU, UC, GR)

EHS 282—FLORAL SHOP MANAGEMENT 4 Units
Prerequisites: EHS 280 and EHS 281.
Formerly listed as OH 282.
Provides insight into the business and management skills needed to run a successful floral shop. Flower shop involvement required. Field trips required. Two maximum completions. Laboratory/Other. Materials fee required. (CSU, UC, GR)

EHS 291 - ENVIRONMENTAL HORTICULTURE SCIENCE TEACHING STRATEGIES 2 Units
Exploration of science curriculum standards as they relate to teaching strategies applied in the classroom. Field trips required. Two maximum completions. Lecture. (CSU)

EHS 292 - ENVIRONMENTAL HORTICULTURE SCIENCE TEACHING STRATEGIES - FIELD EXPERIENCE 1 Unit
Application of environmental horticulture science teaching strategies. Construction of an action plan incorporating environmental horticulture science curriculum in an applied setting. Field trips required. Two maximum completions. Laboratory. (CSU)

EHS 383—COMMERCIAL FLORISTRY PRACTICUM 4 Units
Prerequisites: EHS 280, 281, 282.
Recommended for Success: EHS 210, 212.
Involvement in all areas of, and taught in, a retail flower shop. Includes principles of small business management, including personnel, physical plant and financial management; floral design, construction, and pricing; floral orders and wire services; floral delivery; purchasing, marketing and inventory control. Two maximum completions. Laboratory/Other. Materials fee required. (CSU, UC, GR)

EHS 390—NURSERY INDUSTRY SKILLS 1 Unit
Formerly listed as OH 390.
A repeatable short course in Ornamental Horticulture that covers all skill aspects of the wholesale and retail nursery business. Also included are excerpts from plant identification, turfs, and landscape design. Six maximum completions. Field trips may be required. Lecture. (GR)

Environmental Resources
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Environmental Sciences (ENSCI)
"MENSCI" in the Schedule of Classes

ENSCI 108—ENVIRONMENTAL CONSERVATION 3 Units
Study of the world’s environment to sustain the highest quality of life. Includes study of ecology, populations, environmental pollution, conservation of natural resources including: energy, water, soils, forests, rangelands, and wildlife. Field trips required. Lecture. (CSU, UC)

ENSCI 109L—ENVIRONMENTAL CONSERVATION LABORATORY 1 Unit
Prerequisite: ENSCI 108 or concurrent enrollment in ENSCI 108.
Study of environmental conservation management concepts in an experiential format. Laboratory study will encompass environmental pollution controls, population studies; energy use and alternatives; water quality use and conservation; soil analysis and land-use planning; wildlife habitat restoration; and hazardous materials analysis and alternatives. Field trips required. Laboratory. (CSU, UC)

ENSCI 109—INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS 3 Units
Also offered as GEOG 109.
Introduction to Geographical Information Systems (GIS) focusing upon the creation, application and evaluation of computer-linked database systems. GIS centers upon mapping discrete spatial characteristics as a tool for identifying and assessing spatial relationships of human activity. Applications to business, economics, geology, agriculture and many more. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, UC, GR)

ENSCI 110—CALIFORNIA WATER 3 Units
Also offered as INDIS 110.
An interdisciplinary examination of California’s water use and management with an historical emphasis on the politics and conflicts arising from water scarcity. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, UC, GR).

Ethnic Studies
See Interdisciplinary Studies

Family and Consumer Sciences

AA Degree: Family & Consumer Sciences

REQUIRED COURSES - Complete 20 units
Student must complete at least one course in at least three departments. Courses should be selected with Family and Consumer Sciences advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Development</td>
<td>Food and Nutrition</td>
<td></td>
</tr>
<tr>
<td>Family Life</td>
<td>Food Service</td>
<td></td>
</tr>
<tr>
<td>Interior Design</td>
<td>Family and Consumer Sciences</td>
<td></td>
</tr>
<tr>
<td>Fashion Merchandising</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.A. MAJOR.............................................. 20
AS Degree: Family & Consumer Sciences

• To earn an Associate in Science Degree, student must complete the 30 Required Units and meet the MJC Graduation Requirements.

REQUIRED COURSES - Complete 30 units
Student must complete at least one course in at least three departments. Courses should be selected with Family and Consumer Sciences advisor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAML131</td>
<td>FAMILY RELATIONSHIPS 3 Units</td>
</tr>
<tr>
<td>FAML143</td>
<td>LIFE MANAGEMENT 3 Units</td>
</tr>
<tr>
<td>FAML160</td>
<td>FAMILIES IN SOUTHEAST ASIAN CULTURES 1 Unit</td>
</tr>
<tr>
<td>FAML161</td>
<td>FAMILIES IN LATIN AMERICAN CULTURES 1 Unit</td>
</tr>
<tr>
<td>FAML242</td>
<td>PARENT INVOLVEMENT 3 Units</td>
</tr>
<tr>
<td>FAML355A,B</td>
<td>THE CHILD IN THE FAMILY ½, 1 Unit</td>
</tr>
<tr>
<td>FAML390</td>
<td>THE PROCESS OF PARENTING ½ Unit</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

Family Life (FAMLF) "MFAMLF“ in the Schedule of Classes

FAML 131—FAMILY RELATIONSHIPS 3 Units
The family and its interpersonal relationships, the formation and development of the family, adjustments within the family, the family cycle, parenthood, marriage enrichment, dissolution of marriage and remarriage, exploration of resources to strengthen the family. Lecture. (CAN FCS 12, CSU, UC)

FAML 143—LIFE MANAGEMENT 3 Units
Current changes in society which influence life management skills including: changing family structures, values, conflicts, and multiple role issues. Decision making and resource management skills are required to successfully meet the challenges facing society today. Field trips may be required. Lecture. (CSU) (Spr.)

FAML 160—FAMILIES IN SOUTHEAST ASIAN CULTURES 1 Unit
Also offered as ANTHR 160.
A survey of basic value concepts of Southeast Asian cultures; their origin, and resulting impact on family structure, child rearing, marriage practices, religion, folk medicine and education. Overview of the interplay between Southeast Asian social and cultural values and their counterparts in American society. Continuity and change in the Southeast Asian family. Lecture. (CSU)

FAML 161—FAMILIES IN LATIN AMERICAN CULTURES 1 Unit
Also offered as ANTHR 161.
A survey of basic value concepts of Latin American cultures; their origin, and resulting impact on family structure, child rearing, marriage practices, religion, folk medicine, and education. Overview of the interplay between Latin American social and cultural values and their counterparts in American society. Continuity and change in the Latin American family. Lecture. (CSU)

FAML 242—PARENT INVOLVEMENT 3 Units
Recommended for Success: CLDVR 245
Experience in promoting increased parent involvement and parent education in community programs. Field trips required. Lecture/Other. (CSU, Fall)

FAML 355A,B—THE CHILD IN THE FAMILY ½, 1 Unit
Influences of the family and school on the growth and development of the child from the prenatal stage through the early childhood years. Community resources that impact children. Two maximum units. Lecture.

FAML 390—THE PROCESS OF PARENTING ½ Unit
Discussion of child growth and development related to parenting. Background for understanding parent-child relationships. Required of parents whose children are enrolled in the MJC Child Development Lab. Four maximum completions. Lecture.

TOTAL UNITS FOR A.S. MAJOR ........................................ 30

Fashion Merchandising, General

Certificate: Fashion Merchandising

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 30 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>FASMR 200</td>
<td>Textiles for Fashion and Interiors ................. 3</td>
</tr>
<tr>
<td>FASMR 202</td>
<td>Fashion Analysis ........................................... 3</td>
</tr>
<tr>
<td>FASMR 254</td>
<td>Fundamentals of Fashion Merchandising ............... 3</td>
</tr>
<tr>
<td>FASMR 256</td>
<td>Product Knowledge-Apparel ............................ 3</td>
</tr>
<tr>
<td>FASMR 258</td>
<td>Visual Merchandising 1 .................................. 3</td>
</tr>
<tr>
<td>FASMR 259</td>
<td>Visual Merchandising 2 .................................. 4 OR</td>
</tr>
<tr>
<td>FASMR 363</td>
<td>Fashion Promotion and Coordination.................. 3</td>
</tr>
<tr>
<td>FASMR 264B</td>
<td>Fashion Merchandising Internship..................... 2</td>
</tr>
<tr>
<td>FASMR 373</td>
<td>Sales in Fashion and Interiors ....................... 3</td>
</tr>
<tr>
<td>FASMR 361</td>
<td>Workshop In Visual Merchandising..................... 1</td>
</tr>
<tr>
<td>FASMR 365</td>
<td>Color in Fashion and Interiors ....................... 3</td>
</tr>
<tr>
<td>CMPSC 203</td>
<td>General Computer Literacy .............................. 3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE ........................................ 30

AA Degree: Fashion Merchandising/General

• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 24 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASMR 373</td>
<td>Fashion in Sales and Interiors ....................... 3</td>
</tr>
<tr>
<td>FASMR 202</td>
<td>Fashion Analysis ........................................... 3</td>
</tr>
<tr>
<td>FASMR 200</td>
<td>Textiles for Fashion and Interiors ..................... 3</td>
</tr>
<tr>
<td>FASMR 254</td>
<td>Fundamentals of Fashion Merchandising ............... 3</td>
</tr>
<tr>
<td>FASMR 256</td>
<td>Product Knowledge-Apparel ............................ 3</td>
</tr>
<tr>
<td>FASMR 258</td>
<td>Visual Merchandising 1 .................................. 3</td>
</tr>
<tr>
<td>FASMR 365</td>
<td>Color in Fashion and Interiors ....................... 3</td>
</tr>
<tr>
<td>FASMR 264B</td>
<td>Fashion Merchandising Internship..................... 2</td>
</tr>
<tr>
<td>FASMR 361</td>
<td>Workshop In Visual Merchandising..................... 1</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR A.A. MAJOR ........................................ 24

AS Degree: Fashion Merchandising/General

• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.
Fashion Merchandising

**Image Consultant/Personal Shopper Program**

Certificate:

**Image Consultant/Personal Shopper**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 24 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASMR 256</td>
<td>[1]</td>
<td>Product Knowledge-Appliance</td>
</tr>
<tr>
<td>FASMR 258</td>
<td>[1]</td>
<td>Visual Merchandising 1</td>
</tr>
<tr>
<td>FASMR 373</td>
<td>[2]</td>
<td>Sales in Fashion and Interiors</td>
</tr>
<tr>
<td>FASMR 374</td>
<td>[1]</td>
<td>Personal Shoppers/Wardrobe Consultants</td>
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</tbody>
</table>

**ELECTIVE COURSES** - Complete 4 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASMR 264B</td>
<td></td>
<td>Fashion Merchandising Internship</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 28

**Fashion Merchandising Courses**

**FASMR 200—TEXTILES FOR FASHION AND INTERIORS** 3 Units

An introduction to natural and manufactured textiles focusing on both the apparel and furnishings markets including the influence of textiles on product development. Field trips required. Lecture. (CAN FCS 6, CSU, UC) (Spr.)

**FASMR 202—FASHION ANALYSIS** 3 Units

Factors influencing trends of dress. Selection of color, line, and form related to various types of individuals. Analysis of the social significance of image as it relates to personal and professional relationships. Designed for fashion merchandising majors, but open to all. Field trips required. Lecture. Not offered every semester. (CSU, CAN FCS 20)

**Visual Merchandising Program**

Certificate:

**Fashion Merchandising/Visual Merchandising**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 21 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASMR 258</td>
<td>[1]</td>
<td>Visual Merchandising 1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 13

**AA Degree:**

**Fashion Merchandising/Visual Merchandising**

- To earn an Associate in Arts Degree, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 20 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
</table>

**TOTAL UNITS FOR MAJOR** ............................................... 20
FASMR 204—ORIGINS OF FASHION 3 Units
This survey of fashion of the Western World introduces historic dress as an inspiration and a design resource for students of fashion buying and merchandising. Historical trends in dress reflecting the social and cultural life of a people will be explored and application will be made of historical design as it relates to modern dress. Field trips required. Lecture. (CSU, GR)

FASMR 254—FUNDAMENTALS OF FASHION 3 Units
MERCHANDISING
History and movement of fashions; study of fashion leaders, apparel production, product knowledge, terminology and fashion merchandising activities. Personal requirements of fashion merchandising. Field trips required. Lecture. (CSU, GR, Fall)

FASMR 256—PRODUCT KNOWLEDGE — APPAREL 3 Units
A study of the textile products industry. Special attention given to coordination of merchandise, trade terms and promotion. Interpretation of information is presented so that sales personnel and consumers are considered. Field trips may be required. Lecture. (CSU)

FASMR 258—VISUAL MERCHANDISING 1 3 Units
Introduction of basic techniques needed for the visual presentation of merchandise. Study of store windows and interior displays and their coordination with sales promotion, lighting, display materials, sources and supply. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, GR)

FASMR 259—VISUAL MERCHANDISING 2 4 Units
Prerequisite: FASMR 258
Study of the ever-changing consumer; impact of visual merchandising on consumer. Display problems solved with training in speed and efficiency; fashion coordination projects. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, GR)

FASMR 264B,C,D—FASHION MERCHANDISING INTERNSHIP 2,3,4 Units
Prerequisite: FASMR 254 or concurrent enrollment. Supervised field experience in fashion merchandising. Study and research related to job training. Current developments in fashion merchandising. Maximum completions up to 8 units in any combination. Field trips required. Lecture/Field experience. (CSU)

FASMR 361—WORKSHOP IN VISUAL MERCHANDISING 1 Unit
Workshop in solving visual merchandising problems. Emphasis on developing practical skills for displaying merchandise to promote its appeal. Designed for those who have had some experience with visual merchandising but open to all. Field trips required. Two maximum completions. Lecture/Laboratory/Other. Materials fee required. (Fall)

FASMR 363—FASHION PROMOTION AND COORDINATION 3 Units
Principles of fashion promotion and coordination, including a study of the psychology of fashion, functions of the coordinator, and techniques and procedures for presenting fashion. Emphasis on function of fashion coordination and fashion show promotion. Field trips required. Lecture/Laboratory. (GR, Spr.)

FASMR 364—FASHION AND INTERIOR DESIGN TOUR 2 Units
Intensive study of the fashion and interior design industries on site in New York including design, production and merchandising. Introduction and evaluation in class sessions on campus. Two maximum completions. Lecture/Laboratory. Travel Cost (prevailing travel rates.) (Spr.)

FASMR 365—COLOR IN FASHION AND INTERIORS 3 Units
A survey of color theories, color combinations, and the use of color in the fashion and interiors industries. Students will learn basic color harmony, psychological associations, personal coloration, and current trends in color. Projects will include the application of color in promotional techniques and sales appeals. Field trips required. Lecture. (Fall)

FASMR 367—MODELING 3 Units
Study of the modeling industry and the role of models. Evaluation and analysis of individual. Diet, nutrition, and proper skin care are studied. Techniques of photographic makeup, proper fashion, and runway are covered. Performance in fashion shows as a professional model. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory.

FASMR 368—FASHION FIELD WORK 1 1 Unit
Acquaint students to the world of fashion through field trips to manufacturers, designers, San Francisco Market, shopping centers, retail stores, museums and fashion promotional activities in the San Francisco and Northern California area. Field trips are required. Three maximum completions. Fee for travel expenses. Forty hours total. Nine hours lab per day for 4 days; one hour lecture per day for 4 days.

FASMR 369—FASHION FIELD WORK 2 1 Unit
Acquaint students with the world of fashion through field trips to manufacturers, designers, California Mart, shopping centers, retail stores, museums, and fashion promotional activities in the Los Angeles area. Field trips are required. Three maximum completion units. Forty hours total. Nine hours lab per day for 4 days; one hour lecture per day for 4 days. Fee for travel expenses and accomodations.

FASMR 373—SALES IN FASHION AND INTERIORS 3 Units
Analysis of effective selling to specific fashion and interior groups. Recognition of their individual purchasing motives and considerations. Emphasis is placed on identifying specific fashion and interior expectations, personality attributes and application of appropriate sales and service techniques. Stresses fashion and interior sales contribution to the total promotional effort of wholesale and retail operations. Field trips may be required. Lecture.

FASMR 374—PERSONAL SHOPPERS/WARDROBE CONSULTANTS 4 Units
A study of the role of the Personal Shopper, Wardrobe Consultant and Image Consultant, and the function of the consultant in multiple roles: research analyst, promoter, showperson, public relations specialist and fashion expert. Focus is placed on wardrobe coordination, color, accessorizing and personal style. Field trips required. Lecture/Laboratory.

Film Program

Film (FILM)

“MFILM” in the Schedule of Classes

Film Program

• To earn a Certificate of Achievement, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

Certificate: Film

REQUIRED COURSES - Complete 12 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 142</td>
<td>[2]</td>
<td>Light, Sound, Camera &amp; Editing Workshop…………………3</td>
</tr>
<tr>
<td>RATV 150</td>
<td>[1]</td>
<td>Introduction to Mass Communications…………………3</td>
</tr>
<tr>
<td>FILM 150</td>
<td>[1]</td>
<td>Film Production……………………………3</td>
</tr>
<tr>
<td>FILM 151</td>
<td>[1]</td>
<td>Advanced Film Production 1……………………………3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - Complete 4 or more units

Complete 1-2 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILM 199A</td>
<td>[2,3]</td>
<td>Film Internship……………………………………1-2</td>
</tr>
<tr>
<td>RATV 199A</td>
<td>[NP]</td>
<td>MJC Video Productions…………………………………1-2</td>
</tr>
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</table>

Complete 3 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 109</td>
<td>[NP]</td>
<td>Scriptwriting…………………………………………..3</td>
</tr>
<tr>
<td>ENGL 161</td>
<td>[NP]</td>
<td>Film Appreciation………………………………………3</td>
</tr>
<tr>
<td>FILM 153</td>
<td>[NP]</td>
<td>Contemporary Film………………………………………3</td>
</tr>
<tr>
<td>FILM 154</td>
<td>[1,2]</td>
<td>Movies with a Message: Social Topics in Film…………3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE ………………………. 16
Film Courses

FILM 150—FILM PRODUCTION 3 Units
Techniques of motion picture production. Students write scripts; operate camera, sound, lighting, and editing equipment to produce basic film projects. This class will focus on single camera “film style” techniques utilizing video production equipment. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, UC)

FILM 151—ADVANCED FILM PRODUCTION 1 3 Units
Recommended for Success: FILM 150, RATV 142.
Practical applications in film production. Creative use of camera, sound, editing, and production planning. Students will produce, direct, and edit individual projects. This class will provide intermediate experience in group filmmaking, affording expanded areas of responsibility. Each group will produce a 20-minute feature film. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU, UC)

FILM 152—ADVANCED FILM PRODUCTION 2 3 Units
Recommended for Success: FILM 151, RATV 142.
Continuation of FILM 151. Development of leadership skills, directing techniques, and the producing process for the film industry. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU, UC)

FILM 153—CONTEMPORARY FILM 3 Units
Also offered as INDIS 153.
Introductory course examines the film industry from a creative, technical and business perspective. Samples of topics explored include the business behind today’s film industry, artistic effects of cinematic composition and film as it relates to popular culture. Attendance of first run feature films at local movie theatres is required. Two maximum completions. Cost of theatre tickets and admission fee into theatre to view 16-17 films. Lecture. Materials fee required. (CSU, UC).

FILM 154—MOVIES WITH A MESSAGE: SOCIAL TOPICS IN FILM 3 Units
Also offered as SOCSSC 154.
A thematic film course aimed at using the medium of film to broaden the awareness of current societal and global issues, focusing on different topics semester to semester. Selected sequences of feature films, documentaries, unusual foreign and domestic releases will explore how film makers depict aspects of history, culture, religion, race, gender, class, ideology and other issues in a global perspective. Course will cover related elements of film style and theory, as well as the relationship of subject to style, form and function. Field trips may be required. Lecture. (CSU, UC)

Fire Academy Program

Certificate of Completion: Fire Academy

The Fire Academy Completion Certificate verifies the successful completion of the educational standards for Fire Fighter 1. The Academy does not meet the experience requirement for State Fire Marshal certification, but it does meet the educational and training requirements. Completion Certificate will be provided by the Public Safety division.

REQUIRED PREPARATION

• Successful completion of FSCI 301 or equivalent with a grade of C or better.
• Successful completion of agility test provided by Fire Science Department
• Physician's statement of student health

REQUIRED COURSE - Complete 15 units
FSCI 362 [2] Basic Fire Academy ........................................15

Fire Science Program

Certificate: Fire Science

• To earn a Certificate of Achievement, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

REQUIRED COURSE - Complete 3 units

ELECTIVE COURSES - Complete 27 units
FSCI 322 [4] Fire Science Career Dev./Promotions .............3
FSCI 328 [4] Investigation of Fires ................................3
FSCI 346 [NP] Instructional Methods for Fire Training Officers ...2
FSCI 347 [NP] Fire Prevention 1C ..................................2
FSCI 348 [NP] Public Fire Education 1 ................................2
FSCI 350 [NP] Fire Command 1A ..................................2
FSCI 351 [NP] Fire Command 1B ..................................2
FSCI 352 [NP] Fire Instructor 1A ....................................2
FSCI 353 [NP] Fire Instructor 1B ....................................2
FSCI 354 [NP] Fire Prevention 1A ..................................2
FSCI 355 [NP] Fire Prevention 1B ..................................2
FSCI 356 [NP] Fire Management 1 ..................................2
FSCI 357 [NP] Fire Investigation 1 ..................................2
FSCI 362 [2] Basic Fire Academy ................................15
FSCI 364 [NP] Driver Operator 1 ....................................2
FSCI 365 [NP] Emergency Aid First Responder .................1
FSCI 371 [NP] Fire Command 2A .................................2
FSCI 373 [NP] Fire Instructor 2A ....................................2

Continued ➤
### Fire Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>FSCI 374</td>
<td>Fire Instructor 2B</td>
<td>2</td>
</tr>
<tr>
<td>FSCI 308</td>
<td>Fire Science Special Topics</td>
<td>½</td>
</tr>
<tr>
<td>EMT 390</td>
<td>Emergency Medical Technician 1</td>
<td>4</td>
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<tr>
<td>EMT 391</td>
<td>Emergency Medical Tech. 1 (Refresher)</td>
<td>1</td>
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<tr>
<td>NR 379</td>
<td>Wildland Fire Control</td>
<td>1</td>
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**Student may complete a maximum of 6 units from the following LENV courses**

<table>
<thead>
<tr>
<th>LENV Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>LENV 306</td>
<td>Standard First Aid and Personal Safety</td>
<td>1</td>
</tr>
<tr>
<td>LENV 309</td>
<td>PC 832 Arrest Course</td>
<td>2</td>
</tr>
<tr>
<td>LENV 310</td>
<td>PC 832 Firearms Course</td>
<td>½</td>
</tr>
<tr>
<td>LENV 312</td>
<td>Law Enforcement Reserve Level 2</td>
<td>3</td>
</tr>
<tr>
<td>LENV 313</td>
<td>Law Enforcement Reserve Level 1</td>
<td>3</td>
</tr>
<tr>
<td>LENV 344</td>
<td>Hazardous Materials/First Responder</td>
<td>1</td>
</tr>
<tr>
<td>LENV 352</td>
<td>Defensive Driving/Emer. Vehicle Operation</td>
<td>½</td>
</tr>
<tr>
<td>LENV 365</td>
<td>Emergency Medical Dispatcher Training</td>
<td>1</td>
</tr>
<tr>
<td>LENV 376</td>
<td>Basic Public Safety Dispatcher Course</td>
<td>2</td>
</tr>
<tr>
<td>LENV 377</td>
<td>Complaint Dispatch</td>
<td>1</td>
</tr>
<tr>
<td>LENV 388</td>
<td>Basic Police Orientation</td>
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</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** 30

### AS Degree: Fire Science

- To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the coursework for the Certificate.

**TOTAL UNITS FOR A.S. MAJOR** 30

### Fire Science Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>FSCI 301</td>
<td>Fire Protection Organization</td>
<td>3</td>
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<tr>
<td>FSCI 302</td>
<td>Fire Prevention Technology</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 303</td>
<td>Fire Protection Equipment and Systems</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 304</td>
<td>Building Construction for Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 305</td>
<td>Fire Behavior and Combustion</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 306</td>
<td>Fire Apparatus and Equipment</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 307</td>
<td>Fire Fighting Tactics and Strategy</td>
<td>3</td>
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<tr>
<td>FSCI 308</td>
<td>Rescue Practices</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 309</td>
<td>Wildland Fire Control</td>
<td>3</td>
</tr>
<tr>
<td>FSCI 310</td>
<td>Instructional Methods for Fire Training Officers</td>
<td>2</td>
</tr>
</tbody>
</table>

**Course Descriptions**

- **FSCI 301—Fire Protection Organization**: 3 Units
  - Introduction to the fire service and fire protection; career opportunities in fire protection and related fields; history of fire protection; fire loss analysis; public, quasi-public and private fire protection services; specific fire protection functions. Field trips may be required. Lecture. (GR) (CC FIRE 1)

- **FSCI 302—Fire Prevention Technology**: 3 Units
  - Prerequisite: FSCI 301 or concurrent enrollment.
  - Formerly listed as FSCI 359.
  - Provides fundamental information regarding the history and philosophy of fire prevention organization, operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards. Identifies the relationship of fire prevention, fire safety education, fire detection, and suppression systems. Field trips may be required. Lecture. (GR) (CC FIRE 2)

- **FSCI 303—Fire Protection Equipment and Systems**: 3 Units
  - Prerequisite: FSCI 301
  - Formerly listed as FSCI 329.
  - Portable fire extinguishing equipment; sprinkler systems; protection systems for special hazards; fire alarm and detection systems. Field trips required. Lecture. Not offered every semester. (GR) (CC FIRE 3)

- **FSCI 304—Building Construction for Fire Protection**: 3 Units
  - Prerequisite: FSCI 301
  - Formerly listed as FSCI 326.
  - Fundamentals of building construction as it relates to fire protection. Classification by occupancy and types of construction with emphasis on fire protection features including: building equipment, facilities, fire resistive materials and high rise considerations. Field trips may be required. Lecture. (GR) (CC FIRE 4)

- **FSCI 305—Fire Behavior and Combustion**: 3 Units
  - Prerequisite or concurrent enrollment: FSCI 301
  - Formerly listed as FSCI 321B.
  - 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. Field trips may be required. Lecture. (GR) (CC FIRE 5)

- **FSCI 306—Fire Apparatus and Equipment**: 3 Units
  - Recommendation for Success: FSCI 301
  - Fire apparatus design, specifications and performance capabilities; effective utilization of apparatus in fire service emergencies. Field trips may be required. Not offered every semester. Lecture. (GR)

- **FSCI 307—Fire Fighting Tactics and Strategy**: 3 Units
  - Prerequisite: FSCI 301
  - Principles of fire control through the utilization of manpower, equipment, and extinguishing agents on the fireground. Field trips may be required. Not offered every semester. Lecture. (GR)

- **FSCI 308—Rescue Practices**: 3 Units
  - Prerequisite: FSCI 301
  - Rescue problems and techniques; emergency rescue equipment; toxic gases; chemicals and diseases; radiation hazards; care of victims, including respiration and resuscitation, extrication, and other emergency conditions. Field trips may be required. Not offered every semester. Lecture. (GR)

- **FSCI 309—Wildland Fire Control**: 3 Units
  - Prerequisite: FSCI 301
  - Designed to provide a fundamental knowledge of the factors affecting wildland fire prevention, fire behavior, and control techniques. Field trips may be required. Not offered every semester. Lecture. (GR)

- **FSCI 310—Instructional Methods for Fire Training Officers**: 2 Units
  - Prerequisite: FSCI 301
  - Provides a variety of methods and techniques to assist a fire training officer in selecting, developing, and organizing materials for in-service training programs. Not offered every semester. Lecture. (GR)

- **FSCI 311—Fire Prevention 1C**: 2 Units
  - Prerequisites: FSCI 354 and 355.
  - Designed to provide fire service personnel with the third phase of State Certified Fire Prevention instruction. Includes instruction on flammable and combustible liquid hazards, storage, and extinguishment. Field trips may be required. Lecture. Materials fee will be required to pay for student’s certificate and manual. Not offered every semester. (GR)
FSCI 350—FIRE COMMAND 1A  2 Units  
**Prerequisite:** FSCI 301 or equivalent.  
Designed to provide the prospective or active fire company officer with information and experience in command techniques. Emphasizes decision making, act of commanding, authority to command, organization structure. Planning and training for effective performance of a fire company officer at the scene of an emergency. Lecture/Laboratory.  
Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 351—FIRE COMMAND 1B  2 Units  
**Prerequisites:** FSCI 301 and 350.  
Prepares fire officers for command of various emergency incidents. Emphasizes development of management and decision-making practices required for success. Topics include use of the incident command system to manage major disasters, wildland fires, multi-casualty and hazardous materials incidents. Field trips may be required. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 352—FIRE INSTRUCTOR 1A  2 Units  
**Prerequisite:** FSCI 301.  
Designed to provide the prospective or active fire company officer with a variety of methods and techniques for training fire service personnel in accordance with latest concepts in vocational education. Emphasizes teaching technical lessons, evaluating teaching and learning efficiency and the application of principles of learning through practice teaching demonstrations. Lecture/Laboratory. Materials fee required for State Fire Marshal’s Certificate and student manual. Not offered every semester. (GR)

FSCI 353—FIRE INSTRUCTOR 1B  2 Units  
**Prerequisite:** FSCI 352.  
Designed to provide the prospective or active fire company officer with knowledge of the selection, development, organization and utilization of instructional materials for teaching technical lessons. Structured to provide fire service personnel with the professional preparation leading to standard-designated subjects instructor qualification. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 354—FIRE PREVENTION 1A  2 Units  
**Prerequisite:** FSCI 301.  
Designed to provide prospective or active Fire Company Officer and Fire Prevention personnel with basic fire prevention information. Structured to prepare the student for responding to a variety of fire prevention situations in a professional and effective manner. Field trips may be required. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 355—FIRE PREVENTION 1B  2 Units  
**Prerequisites:** FSCI 301 and 354.  
Designed to provide fire service personnel with the second phase of state certified fire prevention instruction. Includes instruction on private water systems, fixed fire extinguishing, detection and alarm systems. Field trips required. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 356—FIRE MANAGEMENT 1  2 Units  
**Prerequisite:** FSCI 301.  
Designed to provide the fire service student with instruction in the elements of organizational process, demonstration of growth and development in the use of managerial skills, applications of the course content to fire service work and personal life, location and use of managerial resources, and development of an action plan. Field trips may be required. Lecture/Laboratory. Materials fee will be required to pay for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 357—FIRE INVESTIGATION 1  2 Units  
**Prerequisite:** FSCI 301.  
Examines the national arson problem, fire investigation responsibilities, conduct of the investigator, fire chemistry, heat energy sources and explosive conditions; fire investigation techniques and legal aspects of fire investigation. Field trips required. Lecture/Laboratory. Materials fee will be required to pay for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 362—BASIC FIRE ACADEMY  15 Units  
**Prerequisites:** FSCI 301. An English skills test and a physical agility test must be taken prior to enrollment. Students must also submit a letter of health to the Fire Training Center.  
Basic knowledge and skills of a fire fighter as set by the State Fire Marshal. Successful completion of the course fulfills educational requirements for Fire Fighter I. Materials fee required. Field trips required. Lecture/Laboratory. Not offered every semester. (GR)

FSCI 364—DRIVER OPERATOR 1  2 Units  
**Prerequisite:** FSCI 301.  
Fire emergency vehicle and pump operations. How to drive and maintain various types of vehicles. Pump operation and uses for various water sources and determining water flow. Field trips may be required. Lecture/Laboratory. Students must also submit a letter of health to the Fire Training Center. Not offered every semester. (GR) (CC FIRE 29A + 29B)

FSCI 365—EMERGENCY AID FIRST RESPONDER  1 Unit  
Designed to train fire and police personnel who are First Responders how to render emergency care until paramedics arrive at the scene. Lecture/Laboratory. Students must also submit a letter of health to the Fire Training Center. Not offered every semester. (GR) (CC EMS 157)

FSCI 371—FIRE COMMAND 2A  2 Units  
**Prerequisite:** FSCI 390  
Formerly listed as FSCI 371A.  
Prepares fire officers to use management techniques and incident command system when commanding multiple alarms or large combat forces. Field trips may be required. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 372B—FIRE MANAGEMENT 2B  2 Units  
**Prerequisite:** FSCI 356.  
Covers the purpose of budgeting, budget controls, types of budgets and budget systems and justifying budgets. Field trips may be required. Lecture. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 373—FIRE INSTRUCTOR 2A  2 Units  
**Prerequisites:** FSCI 352 and 353.  
Formerly listed as FSCI 373A.  
Provides fire service instructor with the techniques of evaluation. Construction of written and performance tests, as well as test planning, analysis, security and evaluation of results. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 374—FIRE INSTRUCTOR 2B  2 Units  
**Prerequisites:** FSCI 352 and 353.  
Formerly listed as FSCI 373B.  
Designed to develop leadership skills. Group dynamics, problem solving techniques and inter-personal relations development to utilize in staff meetings and brainstorming sessions. Skills for public meetings such as panel discussions and forums. Interactive team teaching is also included. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 375—FIRE INSTRUCTOR 2C  2 Units  
**Prerequisites:** FSCI 352 and 353.  
Principles of media in the instructional process; selection of audio-visual and instructional media; employment of basic and advanced forms of instructional media; use of computers in the instructional process; individualized instruction programs. Field trips may be required. Lecture/Laboratory. Materials fee required for State Fire Marshal Certificate and student manual. Not offered every semester. (GR)

FSCI 398A-D,Z—FIRE SCIENCE SPECIAL TOPICS  ½-3 Units  
**Prerequisite:** FSCI 301 or equivalent.  
These special topics consist of short courses on specific fire agency training needs. Emphasis is on updating recently available skills, information or technology that has a direct impact on specific agency or fire problems. Course content varies with the agency training needs studied. Four maximum completions. Lecture/Laboratory depending on topic. Not offered every semester. (GR)
**Floristry**
See Environmental Horticultural Science

### Food Processing (FDP)
"MFDP" in the Schedule of Classes

The student will acquire skills sufficient for technical employment in the food processing industry. The student may also prepare for transfer to a university food science major by adapting this program in consultation with an advisor. Contact the division office in the Agriculture Building for advising assistance.

## Food Processing Program

### Certificate: Food Processing

* To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

#### I. Agriculture Career Curriculum - Complete 5 units
- **AG 115** [1] Introduction to Agricultural Education and Careers
- **AG 349 A-D** Work Experience
- **AG 249** [NP] Agriculture Internship

* Work experience internship must be associated with food processing industry.

#### II. Agriculture Science Curriculum - Complete 9 units
- **PLSC 200** [1,2] Introduction to Plant Science OR
- **ANSC 200** [1,2] Introduction to Animal Science
- **NR 200** [1,2] Soils
- **AGM 200** [1,2] Introduction to Mechanical Technology
- **AGEC 225** [1,2] Agriculture Computer Applications OR
- **AGEC 210** [1,2] Elements of Agriculture Economics OR
- **AGEC 200** [1,2] Agriculture Accounting and Analysis

#### III. Agriculture Major Curriculum - Complete 15 units as specified.
- **FDP 200** [1] Basic Food Processing
- **AG 376** [2] Basic Science and Laboratory Techniques
- **AG 280** [NP] Agricultural Computations

*AND Complete a minimum of 6 units from the list below:
- **FDP 300** [NP] Certified Professional Food Manager Training
- **FDP 301** [NP] Certified HACCP Manager Training
- **FDP 376** [NP] Basic Food Plant Laboratory Procedures
- **FDP 378** [NP] Food Laboratory Instruments
- **FDP 379** [NP] Food Products Grading
- **FDP 380** [NP] Food Products Microanalysis-A
- **FDP 381** [NP] Food Products Microanalysis-B Mold Counting
- **FDP 382** [NP] Food Products Microanalysis-C
- **FDP 383** [NP] Enzymes in the Food Industry
- **FDP 386** [NP] Food Laboratory Chemistry Procedures
- **FDP 387** [NP] Food Processing Sanitation & Cleanup

* Required
** Recommended
*** or higher math strongly recommended

#### IV. Agriculture Major Electives - Complete 6 units
- **AG 285** [NP] Communications in Agriculture
- **MICRO 101** [NP] Microbiology
- **ANSC 316** [NP] Farm Processing of Meat Animals

Any courses not taken in II. and III. may be used to complete IV.

### AS Degree: Food Processing

#### I. Agriculture Career Courses - Complete 5 units
- **AG 115** [1] Introduction to Agricultural Education and Careers
- **AG 349 A-D** [NP] Work Experience
- **AG 249** [NP] Agriculture Internship

* Work experience internship must be associated with food processing industry.

#### II. Agriculture Science Breadth Courses - Complete 9 units
- **PLSC 200** [1,2] Introduction to Plant Science OR
- **ANSC 200** [1,2] Introduction to Animal Science
- **NR 200** [1,2] Soils
- **AGM 200** [1,2] Introduction to Mechanical Technology
- **AGEC 225** [1,2] Agriculture Computer Applications OR
- **AGEC 210** [1,2] Elements of Agriculture Economics OR
- **AGEC 200** [1,2] Agriculture Accounting and Analysis

#### III. Agriculture Major Courses - Complete 10 units
- **FDP 200** [1] Basic Food Processing
- **AG 376** [2,3] Basic Science and Laboratory Techniques
- **AND Complete a minimum of 4 units from the list below:
- **FDP 300** [NP] Certified Professional Food Manager Training
- **FDP 301** [NP] Certified HACCP Manager Training
- **FDP 376** [NP] Basic Food Plant Laboratory Procedures
- **FDP 378** [NP] Food Laboratory Instruments
- **FDP 379** [NP] Food Products Grading
- **FDP 380** [NP] Food Products Microanalysis-A
- **FDP 381** [NP] Food Products Microanalysis-B Mold Counting
- **FDP 382** [NP] Food Products Microanalysis-C
- **FDP 383** [NP] Enzymes in the Food Industry
- **FDP 386** [NP] Food Laboratory Chemistry Procedures
- **FDP 387** [NP] Food Processing Sanitation & Cleanup

#### IV. Agriculture Major Courses - Complete 6 units
- **AG 280** [1,2] Agricultural Computations
- **AG 285** [1,2] Communications in Agriculture
- **MICRO 101** [NP] Microbiology
- **ANSC 316** [NP] Farm Processing of Meat Animals

Any courses not taken in II. and III. may be used to complete IV.

**TOTAL UNITS FOR A.S. MAJOR**

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### Food Processing Courses

**FDP 200—BASIC FOOD PROCESSING**  
3 Units

Introductory course for work in food processing industry. Methods of food preservation, assurance of quality, laws related to food processing, skills and techniques used by the industry. Field trips required. Lecture/Laboratory. (CSU, GR)

**FDP 300 – CERTIFIED PROFESSIONAL FOOD MANAGER TRAINING**  
1½ Units

Develops a working knowledge and familiarity with technology and strategies to manage food safely from production to consumption. Field trips may be required. Two maximum completions. Lecture. Materials fee required. (GR)

**FDP 301 – CERTIFIED HACCP MANAGER TRAINING**  
1½ Units

Recommended for Success: An understanding of basic food safety program; i.e., GMP’s, SSOP’s, and fundamentals of sanitation procedures.

Elements of hazard analysis and critical control points and how they integrate into a successful food safety program for manufacturers, wholesalers, distributors and food establishment operations with the goal of HACCP certification. Field trips required. Two maximum completions. Lecture. Materials fee required. (GR)
COURSES AND ACADEMIC PROGRAMS

FDP 342—INTRODUCTORY WINE EVALUATION 1 Unit
Prerequisite: Limited to persons 21 years of age and older.
Formerly listed as PLSC 242.
The scientific study of wines, with an emphasis on using precise descriptive language for sensory evaluation: the use of the senses of sight, smell, taste and touch in a disciplined, systematic way to learn about some of the chemical and physical properties of wine. Emphasizes California varietal wines as a basis for learning about varietal wine characteristics to build a foundation for understanding the great wines of the world. Field trips may be required. Lecture/Demonstration. Two maximum completions. Materials fee required. CR/NC only.

FDP 343—COMMERCIAL WINEMAKING PRACTICUM 1 Unit
Formerly listed as PLSC 243.
Introduction to current commercial winemaking practices through lecture, observation and practical experience. Experiential component delivered at CSU, Fresno winery in cooperation with CSU, Fresno enology faculty and students. Field trips required. Lecture/Laboratory. Four maximum completions. (Fall)

FDP 344—SENSORY EVALUATION OF RED TABLE WINES 1 Unit
Prerequisite: Limited to persons 21 years of age and older.
Recommended for Success: FDP 342.
Sensory evaluation of red table wines, with an emphasis on premium California red table wines. Field trips may be required. Two maximum completions. Lecture/Demonstration. Materials fee required. Not offered every semester. (Fall)

FDP 376—BASIC FOOD PLANT LABORATORY PROCEDURES 1 Unit
Details of food plant laboratory procedures; emphasis on net weight, fill weight, syrup checking, and statistical quality control. Lecture/Laboratory. (GR)

FDP 378—FOOD LABORATORY INSTRUMENTS 1 Unit
Operation, principles, importance and care of basic food laboratory instruments. Lecture/Laboratory. (GR)

FDP 379—FOOD PRODUCTS GRADING 1 Unit
Fundamentals of food products grading. Lecture/Laboratory. (GR)

FDP 380—FOOD PRODUCTS MICROANALYSIS-A 1 Unit
Training in insect part and fly egg determination in food products. Lecture/Laboratory. (GR)

FDP 381—FOOD PRODUCTS MICROANALYSIS-B—MOLD COUNTING 2 Units
Instruction in mold count procedures as applied to fruit and tomato products and food plant sanitation. Includes Howard Mold, Geotrichum Mold, and Rot Count methods. Lecture/Laboratory/Other. (GR)

FDP 382—FOOD PRODUCTS MICROANALYSIS-C 1 Unit
Principles of food bacteriology; use of materials and equipment; tests that identify the presence and number of bacteria important in the food industry. Lecture/Laboratory. (GR)

FDP 383—ENZYMES IN THE FOOD INDUSTRY 1 Unit
Fundamentals of food enzymes and their use in the food industry; classification, production, activity, use, immobilization and inhibition, modification of food by endogenous enzymes, and the major classes of industrial enzymes. Lecture. (GR)

FDP 386—FOOD LABORATORY CHEMISTRY PROCEDURES 1 Unit
Basic chemical principles and techniques as they are applied to chemical analysis of foods. Field trips may be required. Lecture/Laboratory. (GR)

FDP 387—FOOD PROCESSING SANITATION AND CLEANUP 1 Unit
Introduction to the fundamentals of food processing equipment, cleanup and sanitation, types of cleaning agents, residue problems, cleanup methods and techniques. Two maximum completions. Field trips may be required. Lecture. (GR)

FDNTR 219—NUTRITION 3 Units
Recommended for Success: Laboratory chemistry course in high school or college, or concurrent enrollment.
Concepts of nutrient requirements of the body in relation to growth maintenance, and repair at different stages of a normal life cycle; factors influencing normal metabolism; construction of an adequate diet at different ages and food safety and hunger will be examined. Lecture. (CAN FCS 2, CSU, UC) (CC BIOL 50)

FDNTR 320—DIET IN HEALTH AND DISEASE 3 Units
Recommended for Success: FDNTR 219 or 351 or concurrently enrolled.
Collecting data for assessing nutrition status and planning modified diets to meet individual patient needs. Emphasis placed upon application in health care facilities. Field trips may be required. Lecture. Not offered every semester.

FDNTR 321—FAMILY FOODS AND NUTRITION 3 Units
Nutritional assessments, food selection, preparation and service of cost effective, nutritious meals in the home. Emphasis on the needs for the entire spectrum of the life cycle, stressing good nutrition and preparation principles. A non-technical course open to all students. Field trips may be required. Lecture/Laboratory. Lab fees required.

FDNTR 351—PRACTICAL NUTRITION 3 Units
Recommended for Success: Laboratory chemistry course in high school or college or concurrently enrolled.
Basic principles of nutrition and their application. Hunger, food safety and current nutritional controversies will be examined. Field trips may be required. Lecture.

FDNTR 350—ISSUES IN CHILDREN’S NUTRITIONAL HEALTH 2 Units
Also offered as CLDDV 370.
Overview of entry level skills in the child nutrition program including sanitation, record keeping and food production. Role and responsibilities in providing menus for children and youth which comply with budgetary parameters and meet their nutritional, social and emotional needs with sensitivity to culturally diverse foods. Field trips required. Lecture. (Fall)

Food Service (FDSER) "MFDSER" in the Schedule of Classes

FDSER 232—CATERING 2 Units
A study of catering principles and application in the production of cold and hot hors d’oeuvres, including vegetables, ham, pork, poultry, seafood, fruit, cheese, mousse and sauces for buffet service. Stresses quality and quantity control and artistic presentation. Two maximum completions. Lecture/Laboratory. (Spr.)

Foods and Nutrition (FDNTR) "MFDNTR" in the Schedule of Classes

FDNTR 329—FOOD SERVICE MANAGEMENT 2 Units
A study of food service management; planning and organizing food service in the hospitality industry. Field trips may be required. Lecture/Demonstration. Two maximum completions. Materials fee required. (Fall)

Foreign Language

See French, German, Italian, Portuguese, or Spanish for course offerings.

The division offers a complete lower-division transfer-level program in French, German, and Spanish. Non-transfer conversational courses in French, German, Italian, Portuguese, and Spanish are also offered. Students may earn an Associate degree based on completion of 20 units of foreign language study. Transfer majors in foreign language or in specific language may complete their lower division requirements. Prospective transfer majors should consult with a foreign language advisor about specific requirements of the baccalaureate institution.
Foreign Language Program

AA Degree: Foreign Language

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below.

REQUIRED - Complete 20 units
- 20 units of coursework in one or more foreign languages

TOTAL UNITS FOR A.A. MAJOR .......................................................... 20

Forensics
See Speech Communications

Forestry Program
See Natural Resources

French (FREN)
"MFREN" in the Schedule of Classes

FREN 51—INTRODUCTION TO PRACTICAL FRENCH 1 3 Units
Basic conversational French for those who need it for their work, travel, or to prepare for French 101. Field trips may be required. Lecture. Laboratory arranged. (Fall)

FREN 52—INTRODUCTION TO PRACTICAL FRENCH 2 3 Units
Prerequisite: Successful completion of FREN 51.
Continuation of FREN 51. Review and expansion of essentials of French grammar and vocabulary through oral expression. Field trips may be required. Lecture. Laboratory arranged. (Spr., Eve.)

FREN 101—FRENCH 1 4 Units
Essentials of French grammar and pronunciation; simple composition, conversation, reading. Field trips may be required. Lecture/ Laboratory. (CAN FREN 2, CAN FREN SEQ A, CSU, UC)

FREN 102—FRENCH 2 4 Units
Prerequisite: FREN 101 or two years of high school French.
Continuation of FREN 101. Review and expansion of tenses, vocabulary, and commonly used expressions. Field trips may be required. Lecture/Laboratory. (CAN FREN 4, CAN FREN SEQ A, CSU, UC)

FREN 103—FRENCH 3 4 Units
Prerequisite: FREN 103 or three years of high school French.
Review of French grammar; reading and conversational practice. Includes reading and discussion in French of selections from literary works of French writers. Field trips may be required. Lecture/ Laboratory. (CAN FREN 8, CAN FREN SEQ B, CSU, UC)

FREN 104—FRENCH 4 4 Units
Prerequisite: FREN 103 or four years of high school French.
Continuation of FREN 103. Includes reading and discussion in French of literary works of French writers. Field trips may be required. Lecture/Laboratory. (CAN FREN 10, CAN FREN SEQ B, CSU, UC)

Fruit Science Program
See Plant Science

General College Major
The general college major is an A.A. Degree designed for students who seek to broaden their general education and explore a variety of subject areas before beginning to specialize or make occupational choices. See Page 44.

General Education, Transfer
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center.

General Plant Maintenance Program
See Industrial Technology

Geography (GEOG)
"MGEOG" in the Schedule of Classes

GEOG 101—PHYSICAL GEOGRAPHY 3 Units
Physical elements of geography: emphasis on earth-sun relationships, weather, climate, landforms, native vegetation, soils and human impact. Attention to the concepts and construction of maps. Listed as a non-laboratory science course on MJC General Education Pattern. Lecture. (CAN GEOG 2, CSU, UC) (CC GEOGR 15)

GEOG 102—CULTURAL GEOGRAPHY 3 Units
Recommended for Success: ENGL 101
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. Lecture. (CAN GEOG 4, CSU, UC) (CC GEOGR 12)

GEOG 104—CALIFORNIA GEOGRAPHY 3 Units
Recommended for Success: ENGL 101, GEOG 101 or 102.
Introduction to California's unique geography; examining political, economic, cultural, physical, and historical processes and characteristics. Field trips may be required. Lecture. Not offered every semester (CSU).

GEOG 105—ECONOMIC GEOGRAPHY 3 Units

GEOG 109—INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS 3 Units
Also offered as ENSCI 109.
Introduction to Geographical Information Systems (GIS) focusing upon the creation, application and evaluation of computer-linked data base systems. GIS centers upon mapping discrete spatial characteristics as a tool for identifying and assessing spatial relationships of human activity. Applications to business, economics, geology, agriculture and many more. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, UC, GR) (CC GEOGR 60)

GEOG 110—WORLD REGIONAL GEOGRAPHY 3 Units
Survey of the world's major geographical regions and their physical, economic, political, and cultural characteristics. Emphasis is placed upon historical influences which explain current problems and conditions. Lecture. (CSU, UC) (CC GEOGR 18)
**Geology (GEOL)**

"MGEOl" in the Schedule of Classes

**GEOL 64—GEOL OGY OF NATIONAL PARKS** 3 Units
The interpretation of geologic features of the United States National Parks and Monuments and an introduction to the geologic processes responsible for their formation. Field trips may be required. Lecture.

**GEOL 160—INTRODUCTION TO GEOLOGY** 3 Units
Study of the composition of the earth, and the physical and chemical processes which shape it. Topics include plate tectonics, volcanism, earthquakes, rocks and minerals, weathering, and erosion. Credit will be granted for either GEOL 160 or 161. Field trips may be required. Lecture. Material fees may be required. Not offered every semester. (CSU, UC)

**GEOL 161—PHYSICAL GEOLOGY** 4 Units
Formerly listed as GEOL 160.
Study of the physical and chemical processes that shape the earth, including plate tectonics, volcanoes, weathering, and erosion; the composition of the earth; and geologic hazards, such as mass wasting, flooding and earthquakes. Laboratory topics include rock and mineral identification, and the use of maps and aerial photographs to understand erosional and tectonic processes. Field trips may be required. Lecture/Laboratory. (CAN GEOL 2, CSU, UC) (CC ESC 5)

**GEOL 165—GEOLOGY OF CALIFORNIA** 3 Units
The geologic setting and evolution of California’s geomorphic provinces. Emphasis is on processes that have and are still acting to shape the landscape: volcanism, earthquakes, and erosion. Field trips may be required. Lecture. (CSU, UC)

**GEOL 166—HISTORICAL GEOLOGY** 4 Units
Formerly listed as GEOL 163.
Introduction to the origin, development and evolution of the earth and its inhabitants. Topics include the study of fossils and rocks, continents and ocean basins, geologic time, plate tectonics, climate change and mass extinctions. Laboratory utilizes rocks, fossils and stratigraphic principles to decipher ancient environments. Field trips may be required. Lecture/Laboratory. CR/NC. (CAN GEOL 4, CSU, UC)

**GEOL 168—MINERALOGY AND CRYSTALLOGRAPHY** 4 Units
Prerequisite: GEOL 161
Study and classification of minerals, their physical properties, chemical composition, and optical properties. Laboratory emphasizes physical and optical properties of rock-forming minerals. Field trips required. Lecture/Laboratory. Materials fee may be required. (CSU)

**GEOL 171,A,B—GEOLOGY FIELD STUDIES** ¼,1,2, Units
Prerequisite: Concurrent enrollment or previous completion of any geology or earth science course.
Field trips to areas of geologic significance. Emphasis on the geologic phenomena, history, and evolution of the regions visited. Four maximum completions. Lecture/Laboratory. (CSU, UC)

**GEOL 174—GEOLOGY SUMMER FIELD STUDIES** 3 Units
Recommended for Success: Previous course in geology or earth science.
Application of principles of geology through extended field studies at selected sites in the western United States. Skills developed in rock, mineral, and fossil identification, and use of geological field equipment. Requires ability to work and study under rigorous conditions. Lecture/Laboratory. Field trips required. Two maximum completions. Materials and field trip fees as appropriate. (CSU)

**German (GERM)**

"MGERM" in the Schedule of Classes

**GERM 51—INTRODUCTION TO PRACTICAL GERMAN 1** 3 Units
Introduction to the essentials of spoken and written German for application in travel, occupation and daily life. Field trips may be required. Lecture/Laboratory. Not offered every semester.

**GERM 52—INTRODUCTION TO PRACTICAL GERMAN 2** 3 Units
Prerequisite: GERM 51
Continuation of GERM 51. Review and expansion of essentials of German grammar and vocabulary through oral expression. Field trips may be required. Lecture/Laboratory. Not offered every semester.

**GERM 101—GERMAN 1** 4 Units
Essentials of written and spoken German, simple composition, conversation and reading. Field trips may be required. Lecture/Laboratory/Other. (CAN GERM 2, CAN GERM SEQ A, CSU, UC)

**GERM 102—GERMAN 2** 4 Units
Prerequisite: GERM 101 or two years of high school German.
Continuation of GERM 101. Review and expansion of tenses, vocabulary, and commonly used expressions. Field trips may be required. Lecture/Laboratory. (CAN GERM 4, CAN GERM SEQ A, CSU, UC)

**GERM 103—GERMAN 3** 4 Units
Prerequisite: GERM 102 or three years of high school German.
Review of German grammar; reading, and conversational practice. Includes reading and discussion in German of selections from literary works of German writers. Field trips may be required. Lecture/Laboratory. (CAN GERM 8, CAN GERM SEQ B, CSU, UC)

**GERM 104—GERMAN 4** 4 Units
Prerequisite: GERM 103 or four years of high school German.
Continuation of GERM 103. Includes reading and discussion in German of literary works of German writers. Field trips may be required. Lecture/Laboratory. (CAN GERM 10, CAN GERM SEQ B, CSU, UC)

**GERM 190A,B,C—ADVANCED GERMAN** 1,2,3 Units
Prerequisite: GERM 104
Advanced reading of German authors; emphasis on understanding of the texts and oral-aural performance. Course may not be substituted for GERM 101, 102, 103 or 104. 190A, four maximum units allowed. 190B, six maximum units allowed. Field trips may be required. Lecture. (CSU, UC)

**Gerontology (GERON)**

"MGERON" in the Schedule of Classes

**GERON 101—AGING IN AMERICA** 3 Units
Formerly listed as HUMSR 104.
Analysis of the aging process from a multidisciplinary approach, including sociology, psychology, and physiology. Students will have an opportunity to explore their beliefs, feelings and values regarding the aged population. Field trips may be required. Lecture. (CSU)

**Graphic Design**

See Communication Graphics and Computer Graphics Applications

**Guidance (GUIDE)**

"MGUIDE" in the Schedule of Classes

The Guidance program is an integral part of the counseling services. Students who take guidance skills courses will learn to:

Acquire, organize and demonstrate problem-solving and decision-making skills; explore, evaluate and pursue career and educational options; develop social, intellectual and emotional competencies; develop needed skills and strategies to maximize the educational experience; understand themselves, others and their environment in order that they may develop individual value systems and life styles.
Guidance Courses

GUIDE 109—ORIENTATION FOR FOREIGN STUDENTS  1 Unit
Education and career planning for students whose previous education has been outside the United States. Acquaints students with the college, its curriculum, facilities, services, academic regulations, vocational and certificate programs, degree and transfer requirements. Reviews extra curricular activities, personal adjustment, American customs, culture shock, survival techniques and immigration regulations. A detailed educational plan is developed. Lecture. Students must meet with a counselor one hour per semester. (CSU, CR/NC)

GUIDE 110—EDUCATIONAL PLANNING 1/2 Unit
Acquaints students with the college, its curriculum, facilities, services, academic regulations, vocational and certificate programs, degree and transfer requirements. Students review the role and function of higher education, community college education, and the MJC curriculum. Students analyze their educational needs and goals and choose the best alternative. The students will understand the institutional and curriculum requirements that pertain to them and formulate a detailed educational plan. Lecture. Students must meet with a counselor one hour per semester. (CSU, CR/NC) (CC GUIDE 107)

GUIDE 111—CAREER AWARENESS  1 Unit
Assists students in exploring career alternatives through development of skills necessary for the research, selection and planning of a lifelong career. The role of aptitudes, interests, values, and skills will be addressed. Interests, aptitude and values tests may be used. Important aspects of occupational choice will be covered along with occupational information. An educational plan will be developed. Lecture. Test fee required. Students must meet with a counselor one hour per semester. (CSU, CR/NC) (CC GUIDE 101)

GUIDE 112—JOB DEVELOPMENT SKILLS 1/2 Unit
The realities of the job market and the techniques for conducting a successful job search will be taught and explored. Emphasis will be placed on learning job application procedures, resume writing, and interview techniques. Included in the course is educational planning and an individual conference with a counselor. Two maximum completions. Lecture. (CSU, CR/NC) (CC GUIDE/BUSAD 25)

GUIDE 116—ORIENTATION FOR RE-ENTRY ADULTS  2 Units
For the adult student who is re-entering the educational system. The conflicts and opportunities of modern society are examined as they affect the student. Personal, educational and career goals are reviewed in the context of aptitudes, interests and values. Decision making is examined as it relates to achieving personal goals. Students review the role and function of higher education, community college education and the MJC curriculum, and develop an educational plan. Conducted in an informal group setting. Includes guest speakers and audio visual presentations. Lecture. Students must meet with a counselor one hour per semester. (CSU, CR/NC)

GUIDE 120—SUCCESS STRATEGIES FOR TRANSFER STUDENTS  3 Units
Recommended for Success: Eligibility for ENGL 101 and a reading score of 10 (35th percentile or higher). Also offered as STSK 120.
Increases success in college by assisting students in obtaining skills and techniques necessary to reach their educational objectives. Topics include educational planning, motivation and learning styles, research strategies, note-taking, subject-specific study techniques, time management and textbook study methods. Lecture. (CSU) (CC GUIDE 7)

GUIDE 122—CAREER AWARENESS FOR ADULTS WITH DISABILITIES  1 Unit
Assists students with disabilities in exploring career alternatives through development of skills necessary for the research, selection and planning of a life-long career. The role of attitudes, interests, coping skills, self-concept, communication, values and skills will be addressed. Interests, aptitude and value tests may be used. Important aspects of occupational choice will be covered along with occupational information. An educational plan will be developed. Lecture. (CSU, CR/NC)

Health Education Courses

HE 100—STANDARD FIRST AID/CPR  1 Unit
A basic course for an Emergency Services professional or the citizen who wishes to maintain or acquire Cardio-Pulmonary Resuscitation (CPR) and Basic First Aid Certification, or who wishes to learn CPR and Basic First Aid techniques. Successful course completion results in National Safety Council Certification in CPR and Basic First Aid. May be repeated four times for card renewal. Lecture. (CSU, UC)

HE 101—ADVANCED FIRST AID/CPR FOR THE PROFESSIONAL  3 Units
Course designed to provide the First Responder with advanced first aid capabilities necessary in an emergency to help sustain life, reduce pain, minimize the consequences of injury or sudden illness and to provide emergency care and transportation of the sick and injured. National Safety Council certification issued upon satisfactory completion. May be repeated four times for card renewal. Lecture. (CSU, UC) (CC EMS 13)

HE 110—HEALTHFUL LIVING  3 Units
Consideration of factors in selection of a plan for healthful living. Emphasis on self-assessment through gathering and analyzing information to take charge of life while setting new goals. Focus on emotional, physical, and social wellness in achieving human potential. Lecture. (CSU, UC)

HE 111—WOMEN’S HEALTH ISSUES  3 Units
Focus on women’s issues in selection of a plan for healthful living. Exploration of the interrelationship of health concerns for African American, Chicana/Latina, American Indian, Asian American, and European American women. Lecture. (CSU, UC)

HE 118—EXERCISE AND NUTRITION FOR HEALTHY LIVING  3 Units
A consideration of factors in the selection of a plan for healthful living. Emphasis on self-assessment through gathering and analyzing information while setting new health goals. The course focuses on emotional, physical, social spiritual, intellectual and environmental wellness in achieving human potential. Lecture. (CSU, UC)

HE 198A—SPECIAL TOPICS AND PROBLEMS  1-3 Units
Participation in discussion, analysis, and evaluation of a special topic or problem in health education. Topics announced each semester in schedule of classes. Field trips may be required. Four maximum completions. Lecture. (CSU).

Health Education (HE)

"MHE" in the Schedule of Classes

The expanding field of health education through public or community agencies and the schools will require trained professionals for positions of leadership and supervision. The professionals will be dealing with such complex issues as physical and mental well-being, substance abuse, exercise, environmental and consumer health, disease control, human sexuality, family relations, death and dying, first aid and emergency care. Since careers in the Health Education field usually require a minimum of a four-year degree, health education majors at MJC are given an introduction to health through basic health and safety courses and are advised to follow general education and transfer requirements for four-year colleges and universities.

Health Occupations

See Allied Health
## COURSES AND ACADEMIC PROGRAMS

### HIST 101 — HISTORY OF THE UNITED STATES THROUGH RECONSTRUCTION

3 Units  
Recommended for Success: ENGL 101  
U.S. history from pre-colonial indigenous America to the late 19th century. Causes, variations, and impacts of colonialism on Indigenous African and European Americans. The movement toward national independence and the Revolutionary War will be examined. The constitution and resulting institutions will be analyzed. National expansion, reform and resulting regional/sectional social and political developments through the U.S. Civil War. Regional social, economic, and political analyses will emphasize the California State Constitution and local government. This course uses the early evolution of the relationships between local, State and Federal governments as a comparative framework for understanding contemporary relationships between local, State and Federal governments. Lecture. (CAN HIST 8, CAN HIST SEQ B, CSU, UC) (CC HIST 16)

### HIST 102 — HISTORY OF THE UNITED STATES POST CIVIL WAR

3 Units  
Recommended for Success: ENGL 101  
U.S. history from the late 19th century until contemporary times. Local, state and national historic development will be traced with emphasis placed on American institutions and their role in the development of American culture. Special attention to U.S. urban and industrial processes; the country's international role and resulting institutional developments. The role of class and ethnicity will be integrated with comparisons tracing Europeans, Indigenous, and African American experiences. Analysis of the role of technology in the formation of America. The evolution of contemporary local, State and Federal governments as they relate to politics, economics and social movements is addressed. The gradual movement toward full inclusion of all peoples of America under State and Federal Constitutional law is emphasized. Lecture. (CAN HIST 10, CAN HIST SEQ B, CSU, UC) (CC HIST 17)

### HIST 104 — WESTERN CIVILIZATIONS

3 Units  
Recommended for success: ENGL 50.  
Survey of the social, economic, political, religious, intellectual, and cultural development of Western Civilization from the Neolithic to the Reformation. The course will emphasize a comparative approach to the study of ancient Mesopotamia, Egypt, and classical Greece, as well as between Rome and Byzantium. The last part of the course will stress the rise of Western Europe during the Middle Ages up to 1600, with special attention on its economic and political transformations. The development and expansion of the major monotheistic religions (Judaism, Christianity, and Islam) will be central to this course. Lecture. (CSU, UC) (CAN HIST 2)

### HIST 105 — WESTERN CIVILIZATION

3 Units  
Survey of the political, economic, social and cultural changes in the history of Western civilization from 17th century Absolutism to the present. Lecture. (CAN HIST 4, CAN HIST SEQ A, CSU, UC)

### HIST 106 — WORLD CIVILIZATION TO THE 16TH CENTURY

3 Units  
Recommended for Success: ENGL 101  
A comparative and interactive investigation and analysis of World Civilization as related to the development of the modern world. Five geographic regions surveyed include: North America, South America, Asia/Pacific Rim, Europe, and Africa. Students will become acquainted with the major events and significant trends in world history from antiquity to the sixteenth century. Historical methodologies and interpretations will be addressed through analysis of political, economic, technological, social and cultural commonalities and differences between civilizations. World civilization examines issues relevant to understanding race, culture, ethnicity, class, gender, religion, disability and sexualities in human history. Field trips may be required. Lecture. (CSU, UC) (CAN HIST 14)

### HIST 107 — WORLD CIVILIZATION FROM THE 16TH CENTURY

3 Units  
Recommended for Success: ENGL 101  
A comparative and interactive investigation and analysis of World Civilization as related to the development of the modern world. Five geographic regions surveyed include: North America, South America, Asia/Pacific Rim, Europe, and Africa. Students will become acquainted with the major events and significant trends in world history from the sixteenth century to the modern time. Historical methodologies and interpretations will be addressed through analysis of political, economic, technological, social and cultural commonalities and differences between civilizations. World civilization examines issues relevant to understanding race, culture, ethnicity, class, gender, religion, disability and sexualities in human history. Field trips may be required. Lecture. (CSU, UC)

### HIST 112 — TWENTIETH CENTURY AMERICA

3 Units  
Explores the political, economic, social and cultural developments of twentieth century United States history. Lecture. (CSU, UC)

### HIST 113 — SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES PRIOR TO THE 20TH CENTURY

3 Units  
Recommended for Success: ENGL 101  
Also offered as ECON 115.  
Examines the development of American society and culture prior to the 20th century. Specifically analyzes the formation and evolution of American social institutions in response to indigenous American and immigrating European and African cultures. Compares economic, political, technological and social interpretations of cultural transformation in America. Emphasis on the evolution of State and Federal constitutional government and the principle of inclusion. Contemporary and historic local, State and Federal government developments are analyzed in relation to political and social movements as a foundation for contemporary social activism. Lecture. (CSU, UC)

### HIST 115 — ECONOMIC HISTORY OF THE UNITED STATES

3 Units  
Recommended for Success: ENGL 101  
Analysis of origins and development of business, labor and agriculture from the colonial period to the present. Emphasis on the federal government's part in the development and regulation of business, labor and agriculture; the government's role in the national economic process. Lecture. (CSU, UC)

### HIST 116 — WOMEN IN AMERICAN HISTORY

3 Units  
Review and evaluation of the role of women in the United States and their contributions from the pre-colonial period to the present viewed within the context of United States and global experiences. The diversity of experience, according to socio-economic class, ethnicity, religion, region, and sexual orientation, will be emphasized, including Native American Indian, African American, European American, Latina, and Asian American women in the United States history. Lecture. (CSU, UC)

### HIST 119 — SOCIAL AND CULTURAL HISTORY OF 20TH CENTURY AMERICA

3 Units  
Recommended for Success: ENGL 101  
Formerly listed as HIST 113.  
Examines the development of American society and culture in the 20th and 21st centuries. Specifically analyzes American political and economic institutions and their interaction with Latino/Chicano, African American, European and Asian American ethnicities. Particular attention is given to various historic and contemporary civil and human rights movements. Critical evaluation of the developing role of local, State and Federal government in the inclusion of ethnic and gender participation. The gradual movement toward full protection of all peoples of America under State and Federal constitutional law is emphasized. The effects of U.S. foreign and domestic policies on first and third world nations will be evaluated. Lecture. (CSU).
HIST 125—HISTORY OF MEXICO  3 Units
Introduction to the history of Mexico from the pre-European conquest of Mesoamerica to the present. Emphasizes the social, political, economic, and cultural repercussions of the conquest of Mexico by Spain; the development of a Mexican identity during and after the colonial period; the causes, nature, and consequences of the wars for independence; the pains of nationhood; the modernization of Mexico during the rule of Porfirio Diaz; and the Mexican revolution and its aftermath. Special attention will be given to the issues of class, race, ethnicity, gender, and religion. Lecture. Field trips may be required. (CSU, UC)

HIST 128—HISTORY OF THE AMERICAN FAR WESTERN FRONTIER  3 Units
A regional history of frontier life in the trans-Mississippi west during the 19th century, including early exploration through the fur trade, territorial expansion, and the mining and farming frontier. Special emphasis is given to the contribution of Native Americans and Asian, African, Iberian, and Mexican cultures in shaping the character of the American West. Field trips may be required. Lecture. (CSU, UC)(CC HIST 55)

HIST 129—HISTORY OF CALIFORNIA  3 Units
California from pre-Colonial times to the present. Includes social, economic, political and cultural topics. Special emphasis is given to the contribution of Native Americans and Asian, African, Iberian, and Mexican cultures in shaping the character of California. Lecture. (CSU, UC)(CC HIST 11)

HIST 145—LATIN AMERICAN HISTORY  3 Units
Latin American history from the pre-conquest to the present; emphasizes changes and continuities in the political, economic, social, and cultural life of the continent. Examines issues of development and underdevelopment, ideas of race and ethnicity, relationship to the outside world, the construction of the nation-state, gender and social movements. Lecture. (CSU, UC)

HIST 154—AFRICAN AMERICANS THROUGH THE 19TH CENTURY  3 Units
Recommended for Success: ENGL 101
A political, economic, technological and social history of African-American culture from early African forms through late 19th century America. Specific analysis of complex relationships between European, indigenous American and African-American ethnic groups. This means frank inquiry into race, gender, and class disparities. Special emphasis on contributions to American society and culture by Black peoples. Comparisons of ethnic inclusion struggles and marginalization. Emphasis on the evolution of State and Federal Constitutional government and the principle of ethnic parity, disparity, and inclusion. Contemporary and historic local, State, and Federal government developments are analyzed in relation to political and social movements as a foundation for contemporary activism for human rights, and economic justice. Field trips may be required. Lecture. (CSU, UC)

HIST 155—AFRICAN AMERICANS IN THE 20TH AND 21ST CENTURIES  3 Units
Recommended for Success: ENGL 101
A political, economic, technological, and social history of African Americans from the end of the 19th century through the early 21st century. Specific analysis of complex relationships between European Americans, Latino/Chicano Americans, and African American ethnic groups. This means frank inquiry into race, gender, and class disparities. Ongoing struggles for ethnic self determination and inclusion are contrasted against institutional resistance and social marginalization. Emphasis on the evolution of State and Federal Constitutional government and the struggle for ethnic parity, disparity, and inclusion. Contemporary and historic local, State, and Federal government developments are analyzed in relation to political and social movements as a foundation for contemporary activism for human rights, and economic justice Lecture. (CSU).

Home Building Technology
See Industrial Technology

Home Economics
See Family and Consumer Sciences
Chemical Dependency Counseling Program

AA Degree:
Human Services/
Chemical Dependency Counseling Program

• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the coursework that follows.

REQUERED COURSES - Complete 23 units

HUMSR 101 [1] Introduction to Human Services ................................. 3
HUMSR 111 [2] Counseling in Chemical Dependency ............................ 3
HUMSR 116 [1] Drugs and Alcohol in Society .................................. 3
HUMSR 117 [3] Intervention and Treatment Strategies in Chemical Dependency ................................. 3
HUMSR 120 [4] Professional Development in Chemical Dependency Counseling .................................. 3
HUMSR 145 [NP] Community Agency Service .................................... 1
HUMSR 145ABD [NP] Community Agency Service Fieldwork .............. 4

TOTAL UNITS FOR A.A. MAJOR .................................................. 23

Human Services Courses

HUMSR 40—INDEPENDENT LIVING SKILLS  ....................... 1 1/2 Units
Non-degree course.
Provides foster youth ages 16-18 knowledge and skills needed to assist them in making transition from foster care to independent living. Four maximum completions. Field trips may be required. Lecture. (CR/NC)

HUMSR 101—INTRODUCTION TO HUMAN SERVICES  ....... 3 Units
Development of human services in American society by private and governmental agencies at national, state, and local levels. Emphasis on contemporary programs and practices, needs served, and projected changes. Preparation for "new careers" in paraprofessional programs in the health, education and social services, such as eligibility workers, counselor aides, vocational rehabilitation aides, social service technicians, and pre-professional positions. Field trips may be required. Lecture. (CSU)

HUMSR 103—INTRODUCTION TO HUMAN SERVICES CAREERS ... 1/2 Unit
Discussion of academic and personal qualities for success in the human services field. Students will develop a personal plan for meeting academic requirements, acquisition of necessary skills for entry into employment or further educational options. Lecture. (CSU)

HUMSR 104—AGING IN AMERICA ........................................... 3 Unit
Also offered as GERON 101.
Analysis of the aging process from a multidisciplinary approach, including sociology, psychology, and physiology. Students will have an opportunity to explore their beliefs, feelings, and values regarding the aged population. Field trips may be required. CR/NC option. Lecture. (CSU).

HUMSR 110—INTRODUCTION TO INTERVIEWING, COUNSELING
Principles and practices of interviewing and counseling. Designed to assist in the preparation of paraprofessionals in the human services fields. Recognition and discussion of unique and common problems, and understanding of behavioral change. Lecture. (CSU)

HUMSR 111—COUNSELING IN CHEMICAL DEPENDENCY
Recommended for Success: HUMSR 110
Survey theories of therapy, personality, and counseling relevant to chemical dependency. Identification and assessment techniques. Lecture. (CSU)

HUMSR 114—DEATH AND DYING ........................................... 3 Units
Opportunity for students to explore their feelings, beliefs, and values regarding death, and to learn about death and dying from a variety of perspectives. Topics include: coping with death, cultural concepts of death, counseling the dying throughout the age span, suicide, grief and bereavement, wills, the funeral business, and medical ethics. Field trips may be required. Lecture. (CSU) (CC SOCIO 28)

HUMSR 116—DRUGS AND ALCOHOL IN SOCIETY ................. 3 Units
An introductory course focused on problems associated with chemical dependency; alcohol and drug abuse. Covers possible causes for addiction, identification of symptoms and common myths. Provides information on treatment resources. Cultural considerations in substance use/abuse and corresponding treatment and prevention aspects. Forty-five hours of BRN C.E. credit available. Field trips may be required. Lecture. (CSU)

HUMSR 117—INTERVENTION AND TREATMENT STRATEGIES IN CHEMICAL DEPENDENCY
Prerequisite: HUMSR 111 and 116.
Application of techniques relative to treatment of chemical dependency. Emphasizes the intervention process, individual and family treatment, and recovery dynamics. Field trips may be required. Lecture. (CSU)

HUMSR 118—PHARMACOLOGY OF ABUSED SUBSTANCES ... 3 Units
Also listed as PSYCH 118.
Recommended for Success: HUMSR 116 or PSYCH 101.
An introduction to psychopharmacology and the process of drug addiction. Topics include classification of abused and psychotherapeutic drugs, basic principles of pharmacology, behavioral and psychological effects of drugs, major neurotransmitter systems and how they are influenced by drugs. Lecture. (CSU)

HUMSR 120—PROFESSIONAL DEVELOPMENT IN CHEMICAL DEPENDENCY COUNSELING
Prerequisite: HUMSR 117.
Recommended for Success: HUMSR 110
Provides information and guidance for those choosing a career in chemical dependency counseling. Focuses on ethical issues and survival skills necessary for professional development in the field. Lecture. (CSU)
Human Services - Industrial Technology

HUMSR 145—COMMUNITY AGENCY SERVICE  1 Unit
Prerequisite: HUMSR 110 or 111.
Concurrent Enrollment: HUMSR 145A or 145B or 145D.
Analysis of field experiences of students concurrently enrolled in HUMSR 145A or 145B or HUMSR 145D. Class time is devoted to sharing and evaluating problems which develop and ways of resolving them will be sought by class members. Three maximum completions. Lecture. (CSU)

HUMSR 145A, 145B, 145D—COMMUNITY AGENCY SERVICE FIELDWORK  1,2,4 Units
Prerequisite: HUMSR 110 or 111.
Concurrent Enrollment: HUMSR 145
Supervised field experience in a variety of community social agencies. Three maximum completions in any combination of HUMSR 145 A, B, and D. Laboratory: supervised field experience in a community service/social agency. (CSU)

Humanities (HUMAN)
“MHUMAN” in the Schedule of Classes

HUMAN 101—INTRODUCTION TO THE HUMANITIES  3 Units
Introduction to major works of the humanities that focuses on the diversity of human experience and the relationships among arts and ideas. Field trips required. Lecture. (CSU, UC)

HUMAN 105—EARLY HUMANISTIC TRADITIONS  3 Units
Examination of early Western cultural traditions beginning with the Greek Heroic Age and extending to the Renaissance. Field trips required. Not offered every semester. Lecture. (CSU, UC)

HUMAN 106—HUMANITIES IN THE MODERN WORLD  3 Units
Study of major humanistic works from the Sixteenth to Twentieth centuries focusing on the search for values Lecture. Not offered every semester. (CSU, UC) (CC HUMAN 2)

HUMAN 110—EAST MEETS WEST  3 Units
Recommended for Success: ENGL 101
Differences between Eastern and Western world cultures are explored. Works studied are chosen from the fields of art, music, philosophy, literature and/or architecture. Field trips may be required. Lecture. (CSU, UC) (CC HUMAN 3) (Fall)

HUMAN 130—INTRODUCTION TO WESTERN RELIGIONS  3 Units
Origins and development of the three monotheistic religions of Western civilization, Judaism, Christianity, and Islam: scripture, beliefs, traditions, rituals, and celebrations; scriptures of all three faiths, along with the architecture and art. Lecture. (CSU, UC) (GR)

Industrial Technology (INTEC)
“MINTEC” in the Schedule of Classes

Courses are intended for students interested in new career opportunities in the Manufacturing, Maintenance, Electrician, Home Building, Building and Safety Code Administration, Plant and Facilities and Production fields as well as those already working in the Industry who are interested in updating or upgrading their knowledge and skills.

Building and Safety Code Administration Program

Courses are intended for students that are interested in career opportunities in the Building Inspection field as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate:
Building and Safety Code Administration

- To earn a Certificate of Achievement, the student must fulfill the required competencies, complete the 24 required units, and complete at least 6 units from the elective courses. Each course must be completed with a grade C or better.

Required Competencies for Certificate:

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<tr>
<th>Course</th>
<th>Units</th>
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<tr>
<td>INTEC</td>
<td>50</td>
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<tr>
<td>ENGL</td>
<td>50</td>
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Basic Composition and Reading
5 units, (OR)
Qualified placement in ENGL 101 through the English Placement Test

MATH 20  3 Units, OR
Pre-Algebra
Qualified placement in MATH 70 through the Math Placement Test
**Required Courses** – Complete 24 units

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<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTEC 115</td>
<td>[1,2]</td>
<td>Introduction to Technical Industries</td>
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<tr>
<td>ENTC 375</td>
<td>[1]</td>
<td>Construction Blueprint Reading</td>
</tr>
<tr>
<td>INTEC 248</td>
<td>[1]</td>
<td>Electrical Codes &amp; Ordinances</td>
</tr>
<tr>
<td>INTEC 249</td>
<td>[2]</td>
<td>Analysis of Electrical Codes</td>
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**Elective Courses** – Complete at least 6 units for A.S. Degree or Certificate

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<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTEC 202</td>
<td>[2,4]</td>
<td>Fundamentals of Industrial Technology</td>
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<tr>
<td>INTEC 205</td>
<td>[2,4]</td>
<td>Principles of Quality Control Systems</td>
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<tr>
<td>INTEC 208</td>
<td>[NP]</td>
<td>World of Electricity &amp; Electronics</td>
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<tr>
<td>INTEC 306</td>
<td>[2,4]</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>ARCH 106</td>
<td>[NP]</td>
<td>Materials of Construction</td>
</tr>
<tr>
<td>ARCH 107</td>
<td>[NP]</td>
<td>Materials of Construction - Laboratory</td>
</tr>
<tr>
<td>ARCH 131</td>
<td>[NP]</td>
<td>Architectural Drafting 1</td>
</tr>
<tr>
<td>ARCH 331</td>
<td>[NP]</td>
<td>Basic Architectural Drafting</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 30

### A.S. Degree: Building and Safety Code Administration

- To earn an A.S. Degree, the student must complete the required courses, complete at least 6 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

**TOTAL UNITS REQUIRED FOR A.S. MAJOR** ......................... 30

### General Plant Maintenance Program

Courses are intended for students who are interested in career opportunities in Plant or Facilities Mechanical Maintenance as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

**Certificate: General Plant Maintenance**

- To earn a Certificate of Achievement, the student must complete the required courses and complete at least 3 units from the elective courses. Each course must be completed with a grade C or better.

**Required Courses** – Complete 21 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115</td>
<td>[1,2]</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>[1]</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 367</td>
<td>[2]</td>
<td>Plumbing Principles and Methods</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>[4]</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>ENTC 375</td>
<td>[3]</td>
<td>Construction Blueprint Reading</td>
</tr>
<tr>
<td>MACH 301</td>
<td>[4]</td>
<td>Maintenance Machinist 1</td>
</tr>
</tbody>
</table>

**Elective Courses** – Select at least 3 units for Certificate. Select at least 9 units for A.S. Degree

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 208</td>
<td>[NP]</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>[NP]</td>
<td>Industrial Elec. Comp. &amp; Control Dev.</td>
</tr>
<tr>
<td>INTEC 225</td>
<td>[1,3]</td>
<td>Residential and Farmstead Wiring</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>[NP]</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>INTEC 262</td>
<td>[1,3]</td>
<td>Hydraulics/Pneumatics</td>
</tr>
<tr>
<td>INTEC 362</td>
<td>[1,3]</td>
<td>Industrial Refrigeration Systems</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 24

### A.S. Degree: General Plant Maintenance

- To earn an A.S. Degree, the student must complete the 21 required units and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

**TOTAL UNITS REQUIRED FOR A.S. MAJOR** ......................... 30

### Home-Building Technologies Program

Courses are intended for students who are interested in career opportunities in the Residential Construction field as well as those currently working in the field who need to update or upgrade their knowledge and skills.

**Certificate: Home Building Technologies**

- To earn a Certificate of Achievement, the student must complete the 24 required units. Each course must be completed with a grade C or better.

**Required Courses: Select 24 Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115</td>
<td>[1]</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>INTEC 225</td>
<td>[1]</td>
<td>Residential and Farmstead Wiring</td>
</tr>
<tr>
<td>INTEC 248</td>
<td>[3]</td>
<td>Electrical Codes &amp; Ordinances</td>
</tr>
<tr>
<td>INTEC 249</td>
<td>[4]</td>
<td>Analysis of Electrical Codes</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>[2]</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>INTEC 367</td>
<td>[4]</td>
<td>Plumbing Principles and Methods</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ........................................... 24

### A.S. Degree: Home Building Technologies

- To earn an A.S. Degree, the student must complete the required courses, complete at least 9 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

**Elective Courses: Select 6 or more Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 202</td>
<td>[2,4]</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 208</td>
<td>[NP]</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>ENTC 375</td>
<td>[1,3]</td>
<td>Construction Blueprint Reading</td>
</tr>
<tr>
<td>INTEC 379</td>
<td>[1,3]</td>
<td>Uniform Plumbing Code</td>
</tr>
<tr>
<td>ARCH 106</td>
<td>[NP]</td>
<td>Materials of Construction</td>
</tr>
<tr>
<td>ARCH 107</td>
<td>[NP]</td>
<td>Materials of Construction - Laboratory</td>
</tr>
</tbody>
</table>
TOTAL UNITS REQUIRED FOR A.S. MAJOR ..................... 30

Industrial Technology – Electrician Program

Courses are intended for students that are interested in career opportunities in commercial, plant, or facilities electricians as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate: Industrial Technology - Electrician

- To earn a Certificate of Achievement, the student must complete the 23 required units and at least 7 elective units. Each course must be completed with grade C or better.

**Required Courses: Complete 23 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 208</td>
<td>3</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 221</td>
<td>4</td>
<td>Instrumentation Devices &amp; Systems</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>2</td>
<td>Industrial Elec. Comp. &amp; Control Dev.</td>
</tr>
<tr>
<td>INTEC 225</td>
<td>1</td>
<td>Residential and Farmstead Wiring</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>3</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>INTEC 248</td>
<td>2</td>
<td>Electrical Codes &amp; Ordinances</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>3</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>4</td>
<td>Intro to Program. Logic Controllers</td>
</tr>
</tbody>
</table>

**Elective Courses: Complete at least 7 units**
Choose any other INTEC courses

TOTAL UNITS FOR CERTIFICATE ............................................ 30

A.S. Degree: Industrial Technology - Electrician

- To earn an A.S. Degree, the student must complete the 24 required units, complete at least 6 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

**TOTAL UNITS REQUIRED FOR A.S. MAJOR ..................... 30**

Industrial Technology – Maintenance Program

Courses are intended for students that are interested in career opportunities in the Plant or Facilities Maintenance fields as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate: Industrial Technology - Maintenance

- To earn a Certificate of Achievement, the student must complete the 24 required units. Each course must be completed with grade C or better.

**Required Courses: Complete 24 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 202</td>
<td>2.4</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 203</td>
<td>1.3</td>
<td>Industrial Mech. Components &amp; Equip.</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>1</td>
<td>Industrial Elec. Comp. &amp; Control Dev.</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>2.4</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>3</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>2.4</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>INTEC 362</td>
<td>1</td>
<td>Industrial Refrigeration Systems</td>
</tr>
<tr>
<td>INTEC 367</td>
<td>3</td>
<td>Plumbing Principles and Methods</td>
</tr>
<tr>
<td>WELD 200</td>
<td>NP</td>
<td>Arc and Gas Welding</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE .................................... 30**

A.S. Degree: Industrial Technology - Maintenance

- To earn an A.S. Degree, the student must complete the 24 required units, complete at least 6 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

**Elective Courses - Complete 6 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115</td>
<td>NP</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>INTEC 201</td>
<td>1</td>
<td>Intro to Industrial Operations</td>
</tr>
<tr>
<td>INTEC 205</td>
<td>2</td>
<td>Principles of Quality Control Systems</td>
</tr>
<tr>
<td>INTEC 208</td>
<td>NP</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 262</td>
<td>1.3</td>
<td>Hydraulics/Pneumatics</td>
</tr>
<tr>
<td>INTEC 350</td>
<td>4</td>
<td>Industrial Technology Internship</td>
</tr>
<tr>
<td>MACH 211D</td>
<td>NP</td>
<td>Machine Tool Technology 1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR A.S. MAJOR ..................... 30**

Industrial Technology - Systems Program

Courses are intended for students that are interested in career opportunities in the Plant or Facilities Instrumentation and Controls fields as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate: Industrial Technology - Systems

- To earn a Certificate of Achievement, the student must complete the 26 required units and at least 4 elective units. Each course must be completed with a grade C or better.

**Required Courses – Complete 26 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 208</td>
<td>1</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 221</td>
<td>2</td>
<td>Instrumentation Devices &amp; Systems</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>1</td>
<td>Industrial Elec. Comp. &amp; Control Dev.</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>2</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>INTEC 248</td>
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<td>Electrical Codes &amp; Ordinances</td>
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<td>INTEC 249</td>
<td>4</td>
<td>Analysis of Electrical Codes</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>3</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>4</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>3</td>
<td>Intro to Program. Logic Controllers</td>
</tr>
</tbody>
</table>

**Elective Courses – Complete at least 4 units for A.S. Degree or Certificate**
Choose any other INTEC courses

**TOTAL UNITS FOR CERTIFICATE .................................... 30**
A.S. Degree: Industrial Technology - Systems

- To earn an A.S. Degree, students must complete the required courses, complete at least 4 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

TOTAL UNITS REQUIRED FOR A.S. MAJOR ......................... 30

Industrial Technology – Technician Program

Courses are intended for students that are interested in careers as Production Technicians or Operators, as well as those currently working in the industry that need to update or upgrade their knowledge and skills.

Certificate: Industrial Technology – Technician

- To earn a Certificate of Achievement, student must complete the 17 required units and complete at least 12 units from the elective courses. Each course must be completed with a grade C or better.

Required Courses – Complete 17 units
INTEC 115 [1] Introduction to Technical Industries .......................... 1
INTEC 301 [4] Employability Skills 1 ............................................. 2

TOTAL UNITS FOR CERTIFICATE .............................................. 17

Elective Courses – Complete at least 12 units for Certificate
Choose any other INTEC courses............................................. 12

TOTAL UNITS FOR CERTIFICATE .............................................. 29

Maintenance Electrician Program

Courses are intended for students that are interested in career opportunities in the Plant or Facilities Maintenance Electrician field as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate: Maintenance Electrician

- To earn a Certificate of Achievement, a student must complete the 24 required units. Each course must be completed with a grade C or better.

Required Courses – Complete 24 units
INTEC 208 [1] World of Electricity & Electronics ...................... 3
INTEC 248 [2] Electrical Codes & Ordinances ............................ 3
INTEC 261 [3] Introduction to Plant Maintenance ......................... 3
INTEC 265 [NP] Troubleshooting Techniques ........................... 1
ELTEC 232 [4] Intro to Program. Logic Controllers ....................... 2

TOTAL UNITS FOR CERTIFICATE .............................................. 24

A.A. Degree: Maintenance Electrician:

- To earn an A.A. Degree, students must complete the 21 required units and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

Required Courses – Complete 21 units
INTEC 115 [2,3] Introduction to Technical Industries ................. 1
INTEC 223 [1] Industrial Elec. Comp. & Control Dev ......................... 3
INTEC 226 [2] Motors and Motor Controls ................................. 3
INTEC 248 [4] Electrical Codes & Ordinances ............................ 3
INTEC 261 [3] Introduction to Plant Maintenance ......................... 3
ELTEC 232 [4] Intro to Program. Logic Controllers ....................... 2

TOTAL UNITS REQUIRED FOR A.A. MAJOR ......................... 21

A.S. Degree Maintenance Electrician:

- To earn an A.S. Degree, students must complete the 25 required units, complete at least 5 elective units, and meet the MJC graduation requirements. Each course must be completed with a grade C or better.

Required Courses – Complete 25 units
INTEC 208 [1] World of Electricity & Electronics ...................... 3
INTEC 248 [3] Electrical Codes & Ordinances ............................ 3
INTEC 261 [3] Introduction to Plant Maintenance ......................... 3
ELTEC 232 [4] Intro to Program. Logic Controllers ....................... 2

Elective Courses – Complete at least 5 units
INTEC 115 [NP] Introduction to Technical Industries ................. 1
INTEC 221 [2,4] Instrumentation Devices & Systems ................... 3
INTEC 249 [4] Analysis of Electrical Codes ................................ 3
INTEC 306 [2,4] Intro to Occupational Safety & Health .................. 3

TOTAL UNITS REQUIRED FOR A.S. MAJOR ......................... 30

Industrial Technology Courses

INTEC 50—BASIC VOCATIONAL ENGLISH 2 Units
FOR INDUSTRIAL TECHNOLOGY
Formerly listed as INDED 50.
Reading, writing, speaking and vocabulary skill development specific to industrial technology. Designed for students who want to improve their basic language skills. For elective credit only, does not apply toward Industrial Technology major. Field trips may be required. Two maximum completions. Lecture/Laboratory.

INTEC 115 – INTRODUCTION TO TECHNICAL INDUSTRIES 1 Unit
Also offered as AUBDY 115 and AUTC 115.
Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Lecture/Other. (CSU,GR).
INTEC 200—INTRODUCTION TO MECHANICAL TECHNOLOGY 3 Units
Also offered as AGM 200.
Basics in woodworking, cold metal, forging, plumbing and welding as related to farm maintenance and repair. Designed for agricultural students who need development in basic mechanical skills. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN AG 4, CSU, GR)

INTEC 201—INTRODUCTION TO INDUSTRIAL OPERATIONS 3 Units
Introduction to policies, procedures, terminology, reports, federal and state law, safety, team building and quality programs of modern industrial and processing plants. Field trips may be required. Three maximum completions. Lecture. (CSU).

INTEC 202—FUNDAMENTALS OF INDUSTRIAL TECHNOLOGY 2 Units
Students will explore common industrial production, manufacturing and fabrication processes. Field trips required. Three maximum completions. Lecture/Laboratory. (CSU).

INTEC 203—INDUSTRIAL MECHANICAL COMPONENTS AND EQUIPMENT 3 Units
Recommended for Success: INTEC 202
An introduction to common mechanical components and related equipment found in the manufacturing and processing industry. Content includes basic terminology, operation, installation and maintenance of both individual mechanical components and mechanical systems. Field trips may be required. Three maximum completions. Lecture/Laboratory. (CSU).

INTEC 205—PRINCIPLES OF QUALITY CONTROL SYSTEMS 3 Units
Recommended for Success: INTEC 201, 202, 203, 261 or industry experience.
Principles of quality control, quality improvement methodology, and quality commitments of industrial corporations. Field trips may be required. Three maximum completions. Lecture. (CSU).

INTEC 208—THE WORLD OF ELECTRICITY AND ELECTRONICS 3 Units
Recommended for Success: MATH 20
Also offered as ELTEC 208.
An overview of electrical and electronic phenomena as applied to common consumer and industrial devices. The course examines the physical nature of electricity and magnetism and the application of the scientific method. The historical development and the socioeconomic aspects of the "electronic age" are examined. Lecture/Laboratory. Materials fee required. (CSU).

INTEC 221—INSTRUMENTATION DEVICES AND SYSTEMS 3 Units
Prerequisite: ELTEC 211 or 208.
Formerly listed as INDED 221.
Also offered as ELTEC 221.
An introduction to industrial instrumentation devices and systems. The principles and operation of mechanical and electrical transducers. Analysis of industrial instrumentation systems. Lecture/Laboratory. Materials fee required. (CSU, GR)

INTEC 222—INDUSTRIAL ELECTRICAL COMPONENTS AND CONTROL DEVICES 3 Units
Formerly listed as INDED 222.
Also offered as ELTEC 222.
An introduction to common components and control devices found in the manufacturing and processing industry. Content includes basic terminology, component identification, manufacturer's specifications, and maintenance procedures for the components and devices. Lecture/Laboratory. Materials fee required. (CSU, GR)

INTEC 225—RESIDENTIAL AND FARMSTEAD ELECTRICAL WIRING AND PRINCIPLES 3 Units
Formerly listed as ELECT 225.
Also offered as AGM 225.
Fundamental principles, systems, and applications of electrical energy and the equipment necessary to manually or automatically control that energy. Field trips required. Lecture/Laboratory. Materials fee required. (CSU, GR)

INTEC 226—MOTORS, CONTROLS AND CONTROLLERS 3 Units
Prerequisite: ELTEC 211 and 208.
Formerly listed as INDED 226.
Also offered as ELTEC 226.
An introduction to AC and DC motors and the circuits which control them. Use and programming of variable frequency drive motor controllers. Lecture/Laboratory. Materials fee required. (CSU, GR)

INTEC 248—ELECTRICAL CODES AND ORDINANCES 3 Units
Formerly listed as INDED 393.
Interpretation and application of national, state and local codes and ordinances which regulate the installation and maintenance of electrical circuits and equipment. Four maximum completions. Lecture. (CSU, GR)

INTEC 249—ANALYSIS OF ELECTRICAL CODES 3 Units
Prerequisite: INTEC 248.
Formerly listed as INDED 394.
Continuation of INTEC 248. Training in analysis of national, state and local codes and ordinances which regulate installation, alteration and maintenance of electrical circuits and equipment. Three maximum completions. (CSU, GR)

INTEC 261—INTRODUCTION TO PLANT MAINTENANCE 3 Units
Formerly listed as INDED 361.
Basic principles, methods of operation and maintenance procedures for equipment and systems of modern industrial and processing plants. Four maximum completions. Lecture. (CSU, GR)

INTEC 262—HYDRAULICS/PNEUMATICS 3 Units
Formerly listed as INDED 362.
Also offered as AGM 262.
Principles and practices of hydraulics/pneumatics as used in the industry. Study of the different applications and management of hydraulics for the most efficient use. Basic pneumatic principles and application systems. Field trips may be required. Two maximum completions. Lecture. (CSU)

INTEC 265—TROUBLESHOOTING TECHNIQUES 1 Unit
Also offered as ELTEC 265.
Common troubleshooting methodologies used in manufacturing today. One-solution and multiple-solution problems commonly found in everyday life through industrial processes. Prepares students to actively solve problems in personal and professional life. Lecture. (CSU)

INTEC 301—EMPLOYABILITY SKILLS 1 2 Units
Also offered as FCS 301.
Development of basic background in non-technical skills (S.C.A.N.S.) that will increase a person's employability in the Family and Consumer Sciences and Industrial Technology related occupations. Topics will include: Team Building, Safety, Time and Money Management. Field trips may be required. Lecture/Laboratory.

INTEC 302—EMPLOYABILITY SKILLS 2 2 Units
Also offered as FCS 302.
Development of basic background in non-technical skills (S.C.A.N.S.) that will increase a person's employability in the Family and Consumer Sciences and Industrial Technology related occupations. Topics will include: Leadership, Safety, Industry Expectations. Field trips may be required. Lecture/Laboratory.

INTEC 303—INTRODUCTION TO TEAMWORK DEVELOPMENT FOR INDUSTRY 1 Unit
Interdisciplinary approach to the study of team solutions to industrial problems. Introduction to team member selection criteria, development of team cohesiveness, team solutions to realistic industry problems, and use of computer software to solve and present team solutions. Modules in communications, computer application and industrial technology. Lecture.

INTEC 306—INTRODUCTION TO OCCUPATIONAL SAFETY & HEALTH 3 Units
Formerly listed as INSAF 361.
Introduction to the principles and techniques of occupational safety and health. Lecture. (GR)
INTEC 312—BEARINGS  ½ Unit
A descriptive introduction to the common industrial bearing. Content includes basic terminology, operation and maintenance of journal bearings, ball and roller bearings, bearing seals, bearing lubrication, and bearing maintenance. Lecture.

INTEC 313—LUBRICATION  ½ Unit
A descriptive introduction to the characteristics and functions of lubricants. Content includes basic terminology, function and application of lubricants. Use of oils and greases in lubrication systems. Lecture.

INTEC 314—POWER TRANSMISSION DEVICES  1 Unit
A descriptive introduction to the basic elements commonly used in power transmission systems. Content includes basic terminology, operation and maintenance of both individual power transmission components and simple power transmission systems. Lecture.

INTEC 315—POWER TRANSMISSION DEVICES AND SYSTEMS  1½ Units
Introduction to the elements of power transmission systems. Content includes the operation of basic power transmission components and the development of power transmission systems. Hands-on experience with the installation, operation, maintenance and trouble shooting of power transmission systems. Lecture/Laboratory.

INTEC 316—INDUSTRIAL HYDRAULICS  1 Unit
Descriptive introduction to industrial hydraulics components and systems. Content includes description and function of various hydraulic components and the basic aspects of hydraulic systems. Lecture/Laboratory.

INTEC 317—INDUSTRIAL HYDRAULIC COMPONENTS AND SYSTEMS  1½ Units
Introduction to industrial hydraulics components and systems. Content includes basic hydraulic principles, hydraulic pumps, control valves and cylinders. Hands-on experience with the installation, operation, maintenance and troubleshooting of hydraulic systems. Lecture/Laboratory.

INTEC 318—INDUSTRIAL PNEUMATICS  1 Unit
Descriptive introduction to industrial pneumatics components and systems. Content includes description of various pneumatic components and the basic aspects of pneumatic systems. Lecture/Laboratory.

INTEC 319—INDUSTRIAL PNEUMATIC COMPONENTS AND SYSTEMS  1½ Units
Introduction to industrial pneumatics components and systems. Content includes compressible fluid principles, metallic and organic pneumatic components and pneumatic control devices. Hands-on experience with the installation, operation, maintenance and troubleshooting of pneumatic systems. Lecture/Laboratory.

INTEC 320—ELECTRICAL SAFETY  1 Unit
Also offered as ELTEC 320.

INTEC 325—TEMPERATURE MEASUREMENT  ½ Unit

INTEC 326—FLOW MEASUREMENT  ½ Unit

INTEC 327—PRESSURE MEASUREMENT  ½ Unit
An introduction to pressure measurement in liquids and gases. Principles of elastic and electrical pressure sensing elements. Selection, installation, and maintenance of pressure sensors in industrial systems. Lecture.

INTEC 340—UNIFORM BUILDING CODE, STRUCTURAL  3 Units
Formerly listed as INDED 369.
Review of building plans for compliance with structural engineering requirements as per the Uniform Building Code. Four maximum completions. Lecture. (GR)

INTEC 341—UNIFORM BUILDING CODE, NON-STRUCTURAL  3 Units
Formerly listed as INDED 370.
Review of building plans for compliance with non-structural requirements such as occupancy types and life-safety requirements as per the Uniform Building Code. Four maximum completions. Lecture. (GR)

INTEC 344—UNIFORM MECHANICAL CODE  3 Units
Formerly listed as INDED 371.
Minimum code requirements for the installation of heating, ventilating, cooling, and refrigeration systems in residential and commercial applications. Four maximum completions. Lecture. (GR)

INTEC 346—ENFORCEMENT OF BUILDING REPAIR AND ABATEMENT REGULATIONS  3 Units
Formerly listed as INDED 374.
General review of housing regulations and their application to existing structures. Four maximum completions. Lecture. (GR)

INTEC 350—INDUSTRIAL TECHNOLOGY INTERNSHIP  2 Units
Prerequisite: Minimum of 15 units completed in Industrial Technology major. Supervised field experience in Industrial Technology. Study and research related to job training. Current technical developments in industry. Two maximum completions. Lecture. Field experience arranged. (CR/NC, Spr.)

INTEC 362—INDUSTRIAL REFRIGERATION SYSTEMS  2 Units
Recommended for Success: INTEC 50
Formerly listed as INDED 363.
Principles underlying heat transference as used in refrigeration systems. Explanation of devices and equipment used in such systems. Lecture/Laboratory. Four maximum completions. (GR)

INTEC 364—PRESSURE SYSTEMS  2 Units
Formerly listed as INDED 365.
Principles involved in generating, transferring, controlling and utilizing heat and energy. Survey of equipment used in these processes. Four maximum completions. Lecture/Laboratory. (GR)

INTEC 366—HEATING VENTILATION, AIR CONDITIONING AND REFRIGERATION  2 Units
Formerly listed as INDED 366.
Principles of installation and maintenance of heating and cooling systems in residential and industrial facilities. Four maximum completions. Lecture/Laboratory. (GR)

INTEC 367—PLUMBING PRINCIPLES AND METHODS  2 Units
Formerly listed as INDED 368.
Principles of installation and maintenance of residential pipe fitting and plumbing with discussions of standard practices of dealing with plumbing problems. Field trips may be required. Lecture/Laboratory. Four maximum completions. (GR)

INTEC 379—UNIFORM PLUMBING CODE  3 Units
Formerly listed as INDED 379.
Installation and inspection of plumbing in the construction of residential units. Content based upon current Uniform Plumbing Code. Lecture. Four maximum completions. (GR)

INTEC 380—ELEMENTARY CARPENTRY AND CONSTRUCTION  6 Units
Designed to provide entry-level skills for students wanting to explore and enter the construction trades. Experiences in developing carpentry, construction, planning and employability skills used in the residential and commercial construction industry. Field trips may be required. Lecture/Laboratory. (GR)

INTEC 390, 390A,B—ADVANCED MANUFACTURING TRAINING  ¾, 1, 2 Units
Advanced skills utilized in industry and needed by students working in the mechanical and automation areas of plant maintenance. Field trips may be required. Maximum of 10 units of INTEC 390 and INTEC 391 credit. (GR)
Interdisciplinary Studies

An Alternative Academic Experience (Formerly the Scholars Project)

The Interdisciplinary Studies Program emphasizes critical thinking, communication skills, and independent work. Students are accepted into the program not solely on the basis of past achievement but, most importantly, on their willingness to become members of an intellectually stimulating, interactive learning community.

Interdisciplinary Dyads - Interdisciplinary courses which combine two state college or university transfer classes. The curriculum for these courses is combined and the two instructors are present at all class meetings. Six units of transferable credit are earned for the completion of each dyad.

To be eligible for the Interdisciplinary Dyads, students must apply and be accepted into the Interdisciplinary Studies Program or be currently enrolled in the program.

Ethnic Studies Program

This program is an interdisciplinary approach to the study of ethnicity in our world society. Students will be exposed to a number of domestic and international issues to enhance their knowledge of other cultures, improve communication skills, enhance their ability to critically think, facilitate an understanding of what it means to live in a society that may display hostility towards others based on prejudice, and promote a community of learning.

Upon completing the ethnic studies certificate, students will possess more knowledge about the global marketplace. These skills may be applied in a broad range of careers concerned with social and cultural issues such as entry-level positions in the government, education, social services, public relations, business, as well as other careers that involve interpersonal situations with multiethnic groups.

Students who are planning to transfer to a university as an ethnic study major should consult with a counselor regarding the lower division courses in the major that are required for the college to which they plan to transfer. This varies from university to university and may be different from those needed for the certificate. Students may also find this information at www.assist.org.

Certificate: Ethnic Studies

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES – Complete 6 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 102</td>
<td>3</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>HIST 107</td>
<td>3</td>
<td>World Civilizations</td>
</tr>
<tr>
<td>SPCOM 130</td>
<td>3</td>
<td>Intercultural Communication</td>
</tr>
</tbody>
</table>

II. DOMESTIC STUDIES OPTION

Complete 9 units, 3 units from each concentration:

A. Examining Culture through the Arts and Literature – Complete 3 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 171</td>
<td>3</td>
<td>Introduction to African American Literature</td>
</tr>
<tr>
<td>ENGL 172</td>
<td>3</td>
<td>Introduction to Chicano Literature</td>
</tr>
<tr>
<td>ENGL 179</td>
<td>3</td>
<td>Introduction to Native American Literature, Mythology, and the Oral Tradition</td>
</tr>
<tr>
<td>HUMAN 120</td>
<td>3</td>
<td>Culture, Diversity, &amp; Tolerance in the Arts</td>
</tr>
<tr>
<td>SPAN 112</td>
<td>3</td>
<td>Introduction to Spanish and Chicano Literature</td>
</tr>
</tbody>
</table>

B. Examining Historical and Political Perspectives – Complete 3 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 113</td>
<td>3</td>
<td>Social &amp; Cultural History of the United States Prior to the 20th Century</td>
</tr>
<tr>
<td>HIST 119</td>
<td>3</td>
<td>Social &amp; Cultural History of 20th Century America</td>
</tr>
<tr>
<td>HIST 128</td>
<td>3</td>
<td>History of the American Far Western Frontier</td>
</tr>
<tr>
<td>HIST 154</td>
<td>3</td>
<td>African Americans through the 19th Century</td>
</tr>
<tr>
<td>HIST 155</td>
<td>3</td>
<td>African Americans through the 20th and 21st Century</td>
</tr>
</tbody>
</table>

C. Exploring Cultural and Sociological Issues – Complete 3 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJU 206</td>
<td>3</td>
<td>Multicultural Issues within Public Safety</td>
</tr>
<tr>
<td>CLDDEV 262</td>
<td>3</td>
<td>Diversity of Early Childhood Education</td>
</tr>
<tr>
<td>INDIS 104</td>
<td>3</td>
<td>American Cultures Forum</td>
</tr>
<tr>
<td>SOCIO 150</td>
<td>3</td>
<td>Ethnicity &amp; Culture in America</td>
</tr>
<tr>
<td>SOCIO 154</td>
<td>3</td>
<td>African-American Cultures and Communities</td>
</tr>
<tr>
<td>SOCIO 156</td>
<td>3</td>
<td>Mexican Culture in the United States</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE .................................................. 15
**Interdisciplinary Studies Courses**

**INDIS 55—INTRODUCTION TO WOMEN’S STUDIES** 3 Units
Interdisciplinary approach to the study of women and gender. Fundamental concepts in women’s studies. Modules in social sciences, arts, humanities and natural sciences. Field trips may be required. Lecture.

**INDIS 61—HOLLYWOOD TODAY** 2 Units
A non-technical, non-transfer course for the consumer of popular contemporary films, emphasizing the central elements of film in the development of audience response. Lecture, viewing, discussion. Four maximum completions. Lecture. Fee to cover admission.

**INDIS 105—INTRODUCTION TO WOMEN’S STUDIES** 3 Units
Recommended for Success: ENGL 50
Interdisciplinary approach to the study of women and gender. Introduction to the concepts, philosophies, and terminology of women's studies. Modules in social sciences, arts, humanities and natural sciences. Field trips may be required. Lecture. (CSU, UC)

**INDIS 110—CALIFORNIA WATER** 3 Units
Also offered as ENSCI 110.
An interdisciplinary examination of California's water use and management with an historical emphasis on the politics and conflict arising from water scarcity. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (CSU, UC, GR)

**INDIS 146 AGRICULTURE, ENVIRONMENT AND SOCIETY** 3 Units
Also offered as AGGE 146.
The sociology of agriculture presented through an examination of relationships between societies and their environments, economics, and agriculture. Emphasis on the analysis of agriculture’s use of technology and the corresponding impact on the environment, economy and society. Field trips may be required. Lecture. Materials fee may be required. (CSU, UC)

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**Interior Design (INTDS)**  
"MANAT" in the Schedule of Classes

Course content within the Interior Design program emphasizes the home and the workplace as the environment created by individuals in response to their family and work interests and needs. Focus is placed not only on the physical set-up of the structure and interior but also on the psychological and sociological effects of the environment on the people who function within it. Product knowledge is emphasized as students learn to keep up with what is in demand as lifestyles and tastes change.

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**Certificate: Interior Design**

**Certificate: Interior Design**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 27 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTDS 200</td>
<td>[1]</td>
<td>Interior Design Fundamentals</td>
</tr>
<tr>
<td>INTDS 204</td>
<td>[4]</td>
<td>Interior Environment</td>
</tr>
<tr>
<td>INTDS 206</td>
<td>[NP]</td>
<td>Computerized Interior Design</td>
</tr>
<tr>
<td>INTDS 375</td>
<td>[NP]</td>
<td>Home Merchandising and Design</td>
</tr>
<tr>
<td>FASMR 259</td>
<td>[NP]</td>
<td>Visual Merchandising II</td>
</tr>
<tr>
<td>FASMR 361</td>
<td>[NP]</td>
<td>Visual Workshop</td>
</tr>
<tr>
<td>FASMR 365</td>
<td>[NP]</td>
<td>Color in Fashion and Interiors</td>
</tr>
<tr>
<td>FASMR 373</td>
<td>[NP]</td>
<td>Sales in Fashion and Interiors</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** ................................................... 27

**AA Degree: Interior Design**

- To earn an Associate in Arts Degree, student must complete the coursework below and the MJC Graduation Requirements.

**REQUIRED COURSES** - Complete 24 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTDS 200</td>
<td>[1]</td>
<td>Interior Design Fundamentals</td>
</tr>
<tr>
<td>INTDS 202</td>
<td>[3]</td>
<td>Period/Contemporary Furniture</td>
</tr>
<tr>
<td>FASMR 258</td>
<td>[2]</td>
<td>Architectural Drafting</td>
</tr>
<tr>
<td>FASMR 365</td>
<td>[NP]</td>
<td>Color in Fashion and Interiors</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.A. MAJOR** ................................................. 24

**AS Degree: Interior Design**

- To earn an Associate in Science Degree, student must complete the coursework below and the MJC Graduation Requirements.

**REQUIRED COURSES** - Complete 27 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTDS 200</td>
<td>[1]</td>
<td>Interior Design Fundamentals</td>
</tr>
<tr>
<td>INTDS 202</td>
<td>[3]</td>
<td>Period/Contemporary Furniture</td>
</tr>
</tbody>
</table>

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COURSES AND ACADEMIC PROGRAMS 153
## Interior Design Courses

### INTDS 200—INTERIOR DESIGN FUNDAMENTALS  
3 Units  
Overview of interior design and furnishings. Study and application of principles of color and design, period influences, selection and arrangement of decorative materials, organized selection of furnishings and materials. Includes consumer and socioeconomic considerations. Field trips may be required. Lecture. (CSU) (CAN FCS 18)

### INTDS 201—HOUSING CONCEPTS  
3 Units  
Psychological, sociological, and physical requirements of a well designed home. The livespace needs of individual family members, the development of a house plan, and the importance of spatial design in floor composition. Building codes and systems identified. Field trips required. Lecture. (CSU)

### INTDS 202—PERIOD/CONTEMPORARY FURNITURE  
3 Units  
Foundations of architecture and furniture styles from ancient Egypt through Victorian Period and the Industrial Revolution to the present. Description of dominate influences and characteristics of historical interiors, furniture, and ornamental design. Field trips may be required. Lecture. (CSU)

### INTDS 204—INTERIOR ENVIRONMENT  
3 Units  
The theory and application of the principles and elements of design. The use of color and the importance of backgrounds. The use of accessories and decorative objects in a home. Field trips required. Lecture. (CSU)

### INTDS 205—COMMERCIAL FACILITY PLANNING  
3 Units  
Recommended for Success: ARCH 331, INTDS 201 or 200.  
An overview of the elements to be considered when planning a functional and well designed office environment. Technological focus as well as product knowledge. How to plan with systems furniture. Technological demands involved in design solutions. Field trips may be required. Lecture. (CSU)

### INTDS 206—COMPUTERIZED INTERIOR DESIGN  
2 Units  
Prerequisite: INTDS 200  
Students will prepare interior design solutions using computer-aided design software. The class is appropriate for students who are already familiar with interior design concepts and techniques. Two maximum completions. Lecture/Laboratory/Other. (CSU)

### INTDS 240—RESIDENTIAL PLANNING  
2 Units  
Recommended for Success: ARCH 131 or 331, and ARCH 112.  
A study of residential planning with special emphasis on kitchens and bathrooms. Space utilization, materials, building codes, equipment, decoration and furnishings of residences. Field trips required. Lecture/Laboratory. (CSU, Spr.)

### INTDS 260—TEXTILES FOR FASHION AND INTERIORS  
3 Units  
Also offered as FASMR 200.  
An introduction to natural and manufactured textiles focusing on both the apparel and furnishings markets including the history of textiles on product development. Field trips required. Lecture. (CAN H EC 6, CSU, UC, Spr.)

### INTDS 375—HOME MERCHANDISING & DESIGN  
2 Units  
Formerly offered as FASMR 375.  
Overview of the home merchandising and design profession, its related specialties, disciplines, the design process and presentation formats. Includes techniques for estimating material cost and time, furniture marketing, product knowledge, lifestyle concepts, and global trends. Field trips required. Lecture/Laboratory. Not offered every semester.

### ELECTIVE COURSES - Complete 7 units.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FASMR 365</td>
<td>Color in Fashion and Interiors</td>
<td>3</td>
</tr>
<tr>
<td>INTDS 204</td>
<td>Interior Environment</td>
<td>3</td>
</tr>
<tr>
<td>INTDS 375</td>
<td>Home Merchandising and Design</td>
<td>2</td>
</tr>
<tr>
<td>ART 124</td>
<td>Color and Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 160</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>FASMR 373</td>
<td>Sales in Fashion and Interiors</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.S. MAJOR** .......................................................... 34

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**Interior Design - Journalism**

**Italian (ITAL)  
"MITAL" in the Schedule of Classes**

**ITAL 51—INTRODUCTION TO PRACTICAL ITALIAN 1**  
3 Units  
Basic conversational Italian for those who need it for their work, travel, or to prepare for Italian 101. Field trips may be required. Lecture/Laboratory.

**ITAL 52—INTRODUCTION TO PRACTICAL ITALIAN 2**  
3 Units  
Recommended for Success: ITAL 51  
Continuation of ITAL 51. Review and expansion of essentials of Italian grammar and vocabulary through oral expression. Field trips may be required. Lecture/Laboratory.

**Journalism (JRNAL)  
"M JRNAL" in the Schedule of Classes**

**Journalism Program**

The Program in Print Journalism is designed to develop in students the skills and attributes of the professional journalist, particularly those working in print media: newspapers, magazines and online publications. Writing and reporting, research and analysis, design and technical skills relating to the visual presentation of the news, are all equally important in this program. The AA degree in Communications / Print Journalism, is oriented towards developing a broader awareness of current events and contemporary culture, the ability to write publishable articles in a range of writing styles, and both a theoretical and practical understanding of the form and function of the American news media. The Certificate in Print Journalism trains students in the writing style that is the professional standard, covering the news, preparing publications, principles of typography and in newspaper and magazine layout, preparing them for entry level jobs in the news media. Working on the Modesto Junior College newspaper, a core class in both the AA degree and certificate sequences, is a hands-on practicum in newspaper publishing in which the reality of producing fair, accurate and ethical journalism on deadline is simulated. Students often go on to internships and jobs with the local media.

**Certificate: Print Journalism**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 12 units**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 150</td>
<td>Introduction to Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>JRNAL 100</td>
<td>Reporting and Writing for the Media</td>
<td>3</td>
</tr>
<tr>
<td>JRNAL 120</td>
<td>Newspaper Production Staff</td>
<td>3</td>
</tr>
<tr>
<td>CGR 211</td>
<td>Typography 1 (PageMaker and QuarkXpress)</td>
<td>2</td>
</tr>
<tr>
<td>LR 120</td>
<td>Library Research on the World Wide Web</td>
<td>1</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES - Complete 3 units**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 138</td>
<td>Writing for Radio and Television</td>
<td>3</td>
</tr>
<tr>
<td>CMPGR 264</td>
<td>Publishing on the World Wide Web</td>
<td>3</td>
</tr>
<tr>
<td>FILM 154</td>
<td>Movies with a Message: Social Topics in Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 105</td>
<td>Creative Writing: Poetry</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 106</td>
<td>Creative Writing: Short Fiction</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 108</td>
<td>Creative Writing: Autobiography</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 178</td>
<td>Mass Media and the Public</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .......................................................... 15
AA Degree: Journalism

To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the coursework below.

REQUIRED COURSES - Complete 19 units
- JRNAL 100 Reporting and Writing for the Media ........................................... 3
- JRNAL 120C Student Newspaper Production Staff ............................................. 3
- RATV 150 Introduction to Mass Communications ............................................. 3
- RATV 138 Writing for Radio and Television ..................................................... 3
- ENGL 178 Mass Media and the Public ............................................................. 3
- CMPGR 262 Exploring The World Wide Web .................................................. 1
- CMPGR 264 Publishing on the World Wide Web .............................................. 3

ELECTIVE COURSES - Complete 3 units
- CGR 331 Typography 2 (PageMaker and QuarkXpress) ................................. 3
- CMPGR 252 Desktop Publishing in Business .................................................. 3

TOTAL UNITS FOR AA MAJOR ........................................................................ 22

Journalism Courses

JRNAL 100—REPORTING AND WRITING FOR THE MEDIA 3 Units
Prerequisite: ENGL 101
Recommended for Success: Ability to type.
Fundamentals of reporting ideas and information for the print, broadcast and “new” media, applied studies in researching and writing news, opinion and feature stories; interview techniques; developing news judgment; accuracy of information and expression, and legal and ethical aspects of the journalism profession. Prepares students to work on campus newspaper, radio and/or television stations and for higher education in these fields. Recommended for students interested in any branch of the media, including web site and Internet publications. Field trips may be required. Lecture/Laboratory. (CAN JOUR 2, CSU, UC) (CC JRNAL 1)

JRNAL 120B,C—STUDENT NEWSPAPER STAFF 3 Units
Recommended for Success: JRNAL 100, ENGL 101 eligibility.
Production of the campus newspaper, including writing, editing, advertising sales and layout, page design, and paste-up preparation for printing. Students desiring a limited participation in newspaper production, such as graphics or layout only, or limited writing only should sign up for this section. Field trips may be required. Four maximum completions but not to exceed 12 units. Laboratory. (CSU) (CC JRNAL 10)

JRNAL 146B,C—NEWSPAPER PHOTO STAFF
Prerequisite: ART 170
Photo production for the college newspaper offering experience in taking photographs, printing, sizing, and designing photo essays. Student work is published regularly and can be used to build a portfolio. Some exposure to Photoshop. Field trips may be required. Three maximum completions not to exceed 6 units. Laboratory. (CSU)

Law Enforcement (LENF)

“MLENF” in the Schedule of Classes

Ray Simon Criminal Justice Training Center is not located on either the East or West Campus. It is a “third campus” located off Crows Landing Road near Hackett Road. All LENF prefix classes are taught at the Center. The address is 3805 Cornucopia Way, Modesto, California 95358. A map of the Center is depicted below:

PENAL CODE (P.C.)

Penal Code (P.C.) Courses involve the handling of firearms, tear gas, or baton. They are not open to individuals who have been convicted of a felony or who have weapon restriction imposed by law.

Prior to use of a firearm in any course, each student must sign a declaration to the effect that he/she is not prohibited from such use by Penal Code Section 12021, Federal domestic violence laws, or other statutes.

Law Enforcement Academy

By completing the Law Enforcement Academy, student will earn a Modesto Junior College Certificate of Achievement which verifies the successful completion of the educational standards for the POST Basic Certificate.

REQUIRED PREPARATION

- Meet educational and training requirements mandated by POST for entry-level law enforcement officers
- Successful completion of written test
- Successful completion of agility test
- Physician’s statement of student health submitted to the Criminal Justice Center.
- Submission of fingerprints (as required by California law) to the Department of Justice prior to admission.

Landscape Architecture
See Architecture

Landscape Design
See Environmental Horticultural Science

Landscape and Park Maintenance
See Environmental Horticultural Science
RESTRICTIONS

- The Academy is not open to individuals who have been convicted of a felony, certain misdemeanor violations, or who are mental patients.

Certificate: Law Enforcement Academy

REQUIRED COURSE - Complete 15 units
LENF 388 [NP] Basic Police Orientation .................................................. 15

TOTAL UNITS FOR CERTIFICATE .................................................... 15

Law Enforcement Reserve Officer Program

- Meets the educational and training standards mandated by the California Penal Code for law enforcement reserve officers.

RESTRICTIONS

- Program is not open to individuals who have been convicted of a felony, certain misdemeanor violations, or who are mental patients.

Certificate of Completion: Basic Academy

REQUIRED COURSES - Complete 20½ units
LENF 309 [NP] P.C. 832: Arrest Course .................................................... 2
LENF 310 [NP] P.C. 832: Firearms Course ................................................ ¼
LENF 316 [NP] Law Enforcement Reserve Module Level III .................... 3
LENF 317 [NP] Law Enforcement Reserve Module Level II ....................... 4
LENF 318 [NP] Law Enforcement Reserve Module Level I ....................... 11

TOTAL UNITS FOR CERTIFICATE OF COMPLETION ...................... 20½

Law Enforcement Courses

LENF 306—STRAIGHT STICK BATON ½ Unit
Prerequisites: Student must be capable of strenuous physical activity including sufficient strength, endurance and body flexibility to accomplish class requirements. No felony convictions, or weapon restrictions. Basic skills and principles of the legal, tactical and ethical use of the straight stick baton in self defense. Possession of a baton is prohibited by California Penal Code Section 12020 except as exempted by California Penal Code Section 12002. Four maximum completions. Lecture/Laboratory. Not offered every semester. (GR)

LENF 309—P.C. 832: ARREST COURSE 2 Units
Prerequisites: No felony convictions.
Laws of arrest, search and seizure; methods of arrest; discretionary decision making. The Criminal Justice system, constitutional rights, communication, investigation and defensive tactics. Satisfies curriculum standards required by Penal Code Section 832. Four maximum completions. Lecture/Laboratory. Materials fee may be required for binder and handout materials. (GR)

LENF 310—P.C. 832: FIREARMS COURSE ½ Unit
Prerequisites: No felony convictions or firearm restrictions.
Moral and safety aspects of firearms and range experience. Satisfies curriculum standards required by Penal Code Section 832. Four maximum completions. Lecture/Laboratory. Materials fee required. Students must provide handgun ammunition and hearing and eye protection. (CRNR)

LENF 311—INTERMEDIATE DEFENSIVE TACTICS 1 Unit
Prerequisite: LENF 308. Student must be capable of strenuous physical activity including sufficient strength, endurance and body flexibility to accomplish class requirements. Intermediate skills in the legal, ethical and tactical use of unarmed defensive tactics, includes safety precautions, legal use of force, use of personal counter measures, control of resisting subjects and search techniques. Four maximum completions. Lecture/Laboratory. Not offered every semester.

LENF 315—USE OF CHEMICAL AGENTS ¼ Unit
Prerequisites: No felony convictions or weapon restrictions.
Meets Commission on Peace Officer Standards and Training mandates for the possession and use of chemical agents. Course includes: legal aspects, civil liability, types and use of chemical agents. The tactical utilization of chemical agents; barricaded suspects; factors affecting the use and the ethical and procedural consideration. Participation in exposure to chemical agents - medical waiver required. Four maximum completions. Lecture/Laboratory. (CRNC)

LENF 316 – POLICE RESERVE MODULE LEVEL III 2 Units
Prerequisite: Successful completion of a POST English skills test and physical agility. Completion of POST PC 832 Arrest Control and Firearms (MUC LENF 309/310), Fingerprint clearance required by PC 13111.5. No felony convictions. No firearms restrictions. A valid permit to operate a motor vehicle is required (the equivalent of a State of California Class “C” license or higher)
Satisfies the POST requirements for Police Reserve Officer Level III. Taught in the modular format so that the student can work as a Police Reserve Officer Level III and continue taking the Reserve Officer Levels II and I to complete the Module Reserve Academy. Level III covers a wide range of classes including: professionalism, criminal law, search and seizure, investigative report writing, vehicle operations, crimes in progress, traffic enforcement, baton training, first aid/CPR and cultural diversity. Field trips may be required. Materials fee for POST workbooks, uniform and leather equipment. Laboratory. (GR, Spr.)

LENF 317 – POLICE RESERVE MODULE LEVEL II 4 Units
Prerequisite: Successful completion of LENF 309, 310 and 316. Police reserve modular Level II is a P.O.S.T certified course which prepares the student to be a Level II Police Reserve Officer in the State of California. Reserve Level II Officers can perform general law enforcement duties while under the supervision of either a Police Reserve Level I Officer or a Regular Sworn Police Officer. No felony convictions or restrictions. A valid California drivers license “Class C” or equivalent. Materials fee may be required for cardiopulmonary supplies for C.P.R. skills. Laboratory. (GR, Spr.)

LENF 318 – POLICE RESERVE MODULE LEVEL I 11 Units
Prerequisite: LENF 309, 310, 316 and 317. Successful completion of a POST English skills test and physical agility test. No felony convictions. No firearms restrictions. A valid permit to operate a motor vehicle is required. Successfully complete the POST mid-term exam for entry into Police Reserve Modular Level I.
The terminal module to complete the requisite hours of instruction to receive the Module Reserve Certificate to be qualified for employment as a Regular Sworn Police Officer or a Police Reserve Officer Level I in the State of California. Topics covered in this course are a continuation of the POST Learning Domains from Levels III and II. The following domains will be covered: community relations, firearms, arrest and control/baton, victimology/crisis intervention, investigative report writing, handling disputes, unusual occurrences, physical training, crimes in progress, use of force, vehicle pullovers, cultural diversity, hazardous materials, domestic violence, defensive tactics, introduction to traffic, vehicle operations, scenario-role playing exercises, courtroom demeanor and gangs. Field trips may be required. Materials fee for POST student workbooks, EVOC training, uniform. Laboratory. (GR, Fall)
LENF 330 — GANG AWARENESS UPDATE  
Prerequisite: LENF 388 or equivalent.
Designed to aid uniformed personnel and investigators in identifying gang members by manner of dress, hand signals, graffiti and activities. Course covers California gangs, criminal street gangs and prison gangs. Students will also learn investigation and prosecution techniques pertaining to PC 186.22 cases as well as techniques to investigate graffiti "tagging" cases. Field trips may be required. Three maximum completions. Lecture. Materials fee required. Not offered every semester.

LENF 332—TRAFFIC ACCIDENT INVESTIGATION  
2 Units
Study of Vehicle Code, primary collision-causing violations, standardized accident reporting, accident investigation scene procedures. Field trips may be required. Lecture. Not offered every semester. (GR)

LENF 334—LAW ENFORCEMENT SUPERVISION  
3 Units
Prerequisite: LENF 388
Examination of organizational, managerial and supervisory responsibilities of first-line law enforcement supervisors. Supervisor’s responsibilities in relation to his/her agency’s objectives; interpreting agency’s organizational policies Supervisor’s role in relation to understanding human behavior and decision making Meets requirements established by Commission on Peace Officer Standards and Training. Lecture/Laboratory. Materials fee may be required for binder and students’ handout materials. Field trips may be required. Not offered every semester. (GR)

LENF 335 — DRUG INFLUENCE  
1/2 Unit
Prerequisite: LENF 388 or equivalent.
Introduction to controlled substances and how they affect the human body both psychologically and physiologically. Course will enable students to recognize, photograph and document Health and Safety Code 11550 suspects and prepare the officer for court. Field trips may be required. Three maximum completions. Lecture/Laboratory. Materials fee required. Not offered every semester.

LENF 337 — BICYCLE PATROL  
1/2 Unit
Prerequisite: LENF 388 or equivalent.
Designed to provide the working peace officer with the skills necessary to be an effective bicycle patrol officer. Skills learned are: basic law enforcement bicycle patrol techniques, mounting and dismounting, riding in confined spaces, safety and understanding the mechanical operation of bicycles. Field trips may be required. Lecture/Laboratory. Not offered every semester.

LENF 340—FIELD TRAINING OFFICER ORIENTATION  
2 Units
Prerequisite: LENF 388
Discussion of the function of police field training officers. Methods of personnel evaluation and counseling. Dynamics of field training techniques and use of instructional methodology to facilitate learning. Field trips may be required. Lecture. Materials fee may be required. Not offered every semester. (GR)

LENF 352—DEFENSIVE DRIVING AND EMERGENCY VEHICLE DRIVING  
1/2 Unit
Prerequisite: LENF 388. Valid permit to operate a motor vehicle is required (the equivalent of a California Class “C” license or higher).
Safe and effective operation of vehicles under emergency conditions; principles and practices of defensive driving. Lecture/Laboratory. Fees required. Not offered every semester. (GR)

LENF 360—OFFICER SAFETY/FIELD TACTICS  
1 Unit
Prerequisite: LENF 388
Information and experience necessary for the development of self-confidence and skill to enhance chances of survival in any law enforcement situation. Weapons, self-defense and baton techniques, crowd control, personal confrontations, car stops and road blocks. Lecture/Laboratory. Not offered every semester. (GR)

LENF 367—BASIC S.W.A.T. TRAINING  
1 1/2 Units
Prerequisite: LENF 388
Introduction to S.W.A.T. special units including team composition, order of movement, operations orders, scouting reports, team movement, searches, and unusual incident management. Laboratory. Field trips may be required. Not offered every semester. (GR)

LENF 368—ADVANCED S.W.A.T. TRAINING  
1 Unit
Prerequisite: LENF 367
Evolving technology and procedural problems as they arise in the field. Emphasis on training whole S.W.A.T. teams in new approaches. Four maximum completions. Field trips may be required. Lecture/Laboratory. Materials fee required. Not offered every semester. (GR)

LENF 370—HIGH RISK WARRANT SERVICE  
1/2 Unit
Prerequisite: LENF 388
Designed to teach the skills and tactics necessary for serving high risk arrest and search warrants. Lecture/Laboratory. Field trips may be required. Not offered every semester. (GR)

LENF 374 — TACTICAL RIFLE INSTRUCTOR  
1 Unit
Prerequisite: LENF 388 or equivalent.
A basic course for officers assigned to carry rifles in the patrol function and/or those assigned to train riflemen. Includes liability issues, mechanical function of typical patrol rifles (AR-15, M-16, Mini-14) and qualification standards. Emphasis is on rifle deployment and use in the patrol function; manipulation, malfunctions, close quarters shooting and range considerations. Also covered will be long distance marksmanship, considerations of optics, support equipment and role of the rifle in law enforcement. Field trips may be required. Lecture/Laboratory. Materials fee required. (CR/NC)

LENF 376—BASIC PUBLIC SAFETY DISPATCHER COURSE  
2 1/2 Units
Prerequisite: LENF 388 or equivalent.
Designed for training emergency dispatch personnel employed by public safety agencies or by those desiring a career in emergency dispatch services. Field trips may be required. Lecture/Laboratory. Not offered every semester. (GR)

LENF 379 — FIREARMS INSTRUCTOR  
1/2 Unit
Prerequisite: LENF 388 or equivalent.
Designed to teach the different elements of firearms instruction, i.e., firearms and the use of force guidelines; applicable case law review; types of ranges; firearms instructional methods; lesson plan development; shoot/don't shoot scenarios; operation techniques for reduce/ambient light; shotgun and rifle training. Field trips may be required. Lecture/ Laboratory. Not offered every semester.

LENF 380—SURVIVAL SHOOTING (INSTRUCTOR)  
1 Unit
Prerequisite: LENF 388
Advanced firearms training for basic firearms instructor. Field trips may be required. Lecture/ Laboratory. Not offered every semester. (GR)

LENF 381—DEFENSIVE TACTICS (POLICE INSTRUCTOR)  
2 Units
Prerequisite: LENF 388
A comprehensive course designed to train prospective defensive tactics to instructors in current techniques. Includes principles of weaponless defense, defensive tactics techniques, compliance, restraint, escort holds, weapons retention, weapon take away, active counter measures, edged weapon defense, instructor development techniques (how to teach and conduct a class), case law use of force, liability case law and safety guidelines. Lecture/Laboratory. (GR)
Learning Resources (LR)
“MLR” in the Schedule of Classes

Learning Resources offers a variety of courses that support the information competencies applicable to college-level research and lifelong learning. These courses are designed to benefit transfer students who want to develop research skills using the information resources and services found in college libraries, as well as lifelong learners seeking to acquire skills necessary to thrive in an information society. Learning Resources courses are transferrable to four-year colleges and universities.

Learning Resources Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR 100</td>
<td>LIBRARY RESEARCH STRATEGIES</td>
<td>1 Unit</td>
</tr>
<tr>
<td>LR 120</td>
<td>LIBRARY RESEARCH ON THE WORLD WIDE WEB</td>
<td>1 Unit</td>
</tr>
</tbody>
</table>

**Law**

This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

**Machine Tool Technology Program**

**Certificate: Machine Tool Technology 1**

- To earn a Certificate of Achievement, student must complete the 16 REQUIRED units

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 211D</td>
<td>Machine Tool Technology</td>
<td>4</td>
</tr>
<tr>
<td>MACH 212D</td>
<td>Machine Tool Technology</td>
<td>4</td>
</tr>
<tr>
<td>MACH 213C</td>
<td>Machine Tool Technology</td>
<td>3</td>
</tr>
<tr>
<td>MACH 399</td>
<td>Independent Study</td>
<td>2</td>
</tr>
<tr>
<td>WELD 200</td>
<td>Arc &amp; Gas Welding</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL REQUIRED UNITS FOR CERTIFICATE**

**Certificate: Machine Tool Technology 2**

- To earn a Certificate of Achievement, student must complete the 27 required units and one course from the elective

**REQUIRED COMPETENCIES FOR CERTIFICATE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ 184</td>
<td>Critical Reading</td>
<td>3 OR</td>
</tr>
<tr>
<td>MATH 70</td>
<td>Elementary Algebra</td>
<td>3 OR</td>
</tr>
</tbody>
</table>
Machine Tool Technology

Math 90 eligibility through assessment process

**REQUIRED COURSES** - Complete 27 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 213</td>
<td>[3or4]</td>
<td>Machine Tool Technology</td>
</tr>
<tr>
<td>WELD 200</td>
<td>[NP]</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>MACH 399</td>
<td>[3or4]</td>
<td>Independent Study</td>
</tr>
<tr>
<td>ENGR 220</td>
<td>[1or2]</td>
<td>Basic Drafting 1</td>
</tr>
</tbody>
</table>

Complete 4 units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 221</td>
<td>[3]</td>
<td>CNC Programming Techniques</td>
</tr>
<tr>
<td>MACH 219</td>
<td>[3]</td>
<td>Introduction to CNC Machine Tool Programming, 2 AND</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES** - Complete 3 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 204</td>
<td>[NP]</td>
<td>Gas Metal Arc &amp; Flux REQUIRED Arc Welding</td>
</tr>
<tr>
<td>WELD 206</td>
<td>[NP]</td>
<td>Gas Tungsten Arc Welding</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .................................................. 30

**A.S. Degree: Machine Tool Technology**

To earn an Associate in Science Degree, student must complete the 27 required units, 3 elective units, and meet the MJC graduation requirements.

**TOTAL UNITS FOR A.S. MAJOR** .................................................. 30

**Maintenance Machinist Program**

**Certificate: Maintenance Machinist 1**

- To earn a Certificate of Achievement, student must complete the 9 units

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 301</td>
<td>[1]</td>
<td>Maintenance Shop 1</td>
</tr>
<tr>
<td>WELD 200</td>
<td>[NP]</td>
<td>Arc &amp; Gas Welding</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .................................................. 9

**Certificate: Maintenance Machinist 2**

- To earn a Certificate of Achievement, student must complete the 21 required units

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTG 261</td>
<td>[NP]</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTG 306</td>
<td>[NP]</td>
<td>Intro. to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>MACH 301</td>
<td>[1]</td>
<td>Maintenance Shop 1</td>
</tr>
<tr>
<td>WELD 200</td>
<td>[NP]</td>
<td>Arc &amp; Gas Welding</td>
</tr>
<tr>
<td>WELD 313</td>
<td>[NP]</td>
<td>Layout &amp; Blueprint</td>
</tr>
<tr>
<td>WELD 210</td>
<td>[NP]</td>
<td>Sheet Metal</td>
</tr>
<tr>
<td>WELD 204</td>
<td>[NP]</td>
<td>Gas Metal Arc &amp; Flux REQUIRED Arc Welding</td>
</tr>
<tr>
<td>MACH 399</td>
<td>[3or4]</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .................................................. 21

**Computer Numeric Machine Control (CNC) Program**

**Certificate: CNC Operator**

- To earn a Certificate of Achievement, student must complete the 6 required units

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 221</td>
<td>[3]</td>
<td>CNC Programming Techniques</td>
</tr>
<tr>
<td>MACH 219</td>
<td>[1.2]</td>
<td>Introduction to CNC Machine Tool Programming, 2 AND</td>
</tr>
<tr>
<td>MACH 220</td>
<td>[3.4]</td>
<td>CNC Machine Tool Programming</td>
</tr>
<tr>
<td>MACH 222</td>
<td>[NP]</td>
<td>CNC Machine Operations (taken twice)</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .................................................. 6

**Certificate: CNC Programmer**

- To earn a Certificate of Achievement, student must complete the 10 required units

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 221</td>
<td>[1.2]</td>
<td>CNC Programming Techniques (taken twice)</td>
</tr>
<tr>
<td>MACH 219</td>
<td>[1.2]</td>
<td>Introduction to CNC Machine Tool Programming, 4 AND</td>
</tr>
<tr>
<td>MACH 220</td>
<td>[3.4]</td>
<td>CNC Machine Tool Programming</td>
</tr>
<tr>
<td>MACH 222</td>
<td>[NP]</td>
<td>CNC Machine Operations (taken twice)</td>
</tr>
<tr>
<td>MACH 399</td>
<td>[3.4]</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** .................................................. 10

**Machine Tool Technology Courses**

**MACH 211D,E,F—MACHINE TOOL TECHNOLOGY 1**  4,5,6 Units

Study and application of basic measuring tools, (steel rules, vernier calipers and micrometers), layout tools and hand tools. Theory and practice in the use of drilling machines, bandsaws and lathes. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (CSU, GR)

**MACH 212D,E,F—MACHINE TOOL TECHNOLOGY 2**  4,5,6 Units

Prerequisite: MACH 211D, E or F. Principles and fundamental use of milling machines and precision grinders with emphasis on milling operations. Advanced levels of measuring systems, metallurgy, and techniques of heat treating. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (CSU, GR)

**MACH 213C,D—MACHINE TOOL TECHNOLOGY 3 - MANUFACTURING PROCESSES**

Prerequisite: MACH 212D, E or F. Theory and practice in the use of the dividing head, metric system, and classes of fit. Experiences in tool and cutter grinding, gear cutting, and dovetails. Carbide tooling emphasized. The exploration and study of manufacturing processes found in use in local industries. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (CSU, GR, Fall)
MACH 219—INTRODUCTION TO CNC MACHINE TOOL PROGRAMMING
2 Units
Recommended for Success: Previous experience in the use of manual or CNC lathes and milling machines.
The use of manual programming techniques to develop tool path codes required to produce products using CNC milling and turning equipment. Effective cutting speeds, feeds, and depth of cut for various machining operations using “canned cycles” and word address programming format will be addressed. Lecture / Laboratory.

MACH 220—CNC MACHINE TOOL PROGRAMMING
2 Units
The use of manual and CAM (computer-aided manufacturing) programming techniques to develop tool path codes required to machine products using CNC milling and turning equipment. Four maximum completions. (CR/NC)

MACH 221—CNC PROGRAMMING TECHNIQUES
4 Units
Recommended for Success: Concurrent enrollment in MACH 222 and previous machining experience.
The use of CAM (Computer Aided Manufacturing) programming techniques to develop the tool path codes needed to machine complex work pieces will be emphasized. DNC (Direct Numeric Control) techniques will be addressed. Field trips may be required. Three maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

MACH 222—CNC MACHINE OPERATIONS
1 Unit
Recommended for Success: Concurrent enrollment in MACH 221 and previous machining experience.
The setup and operation of computer-controlled machine tools with emphasis on vertical machining centers and two axis turning centers. Primary controller operation, machine setup, tooling application, installation and adjustment and basic codes needed for editing will be addressed. Field trips may be required. Two maximum completions. Lecture/Laboratory/Other. Materials fee required. (CSU)

MACH 301—MAINTENANCE SHOP 1
2 Units
Study and application of basic measuring tools. (steel rules, vernier calipers and micrometers), layout tools and hand tools. Theory and practice in the use of drilling machines and manual lathes. Two maximum completions. Field trips may be required. Lecture/Laboratory. Materials fee required.

MACH 302—MAINTENANCE SHOP 2
2 Units
Prerequisites: MACH 211D, E or F or MACH 301.
Principles and fundamental use of the milling machine, band saw and surface grinder, with emphasis on milling operations. The principles of metallurgy, heat treating, and the application of more advanced measuring techniques will be explored. Field trips may be required. Lecture/Laboratory. Three maximum completions. Materials fee required.

MACH 303—MAINTENANCE SHOP 3
2 Units
Prerequisites: Completion of MACH 212D, E or F or MACH 302.
Theory and practice in the use of the dividing head, gearing systems, carbide tooling, and non-traditional machining systems. Field trips may be required. Lecture/Laboratory. Three maximum completions. Materials fee required.

MACH 310—ADVANCED TOPICS IN MACHINING
1 Unit
Prerequisite: Previous machining experience or completion of MACH 211E OR MACH 301 OR MACH 221 OR MACH 222.
Overview of advanced tooling and machining practices. Topics may include electrical discharge machining, rapid prototyping, fixturing, cutting tool materials and geometry, die casting and plastic injection molding. Field trips may be required. Three maximum completions. Lecture/Laboratory. Materials fee required. (Sum., CR/NC)

MACH 313—MANUFACTURING PROCESSES
2 Units
The exploration and study of manufacturing techniques and common industrial processes found in local industries. Field trips may be required. Two maximum completions. Lecture.

Maintenance Electrician
See Industrial Technology

Marketing
See Business Operations

Mass Communications
See Film, Journalism, Radio, and/or Television
MATH 37—MATH STUDY LAB 1 Unit
Co-requisite: Concurrent enrollment in a specified section of MATH 70.
Designed to provide academic skills for success in mathematics courses, including time
management, class preparation, test preparation, and problem solving. Lecture.

MATH 47 — SKILLS FOR SUCCESS IN ELEMENTARY ALGEBRA 2 Units
Prerequisite: Successful completion of MATH 20 or placement for MATH 70 by the
MJC assessment process.
Non-degree course.
Designed to provide further practice on basic skills needed for success in elementary
algebra, in particular, for students who are weak in prerequisite skills and/or who have
failed MATH 70. Lecture. Note: MATH 47 DOES NOT serve as a prerequisite to MATH
90. (CR/NC)

MATH 49 — SKILLS FOR SUCCESS IN INTERMEDIATE ALGEBRA 2 Units
Prerequisite: Successful completion of MATH 70 or MATH 71 and MATH 72 or
placement for MATH 90 by the MJC assessment process.
Non-degree course.
Designed to provide further practice on basic skills needed for success in intermediate
algebra, in particular, for students who are weak in prerequisite skills and/or who
have failed MATH 90. Lecture. Note: MATH 49 DOES NOT serve as a prerequisite to
transferable mathematics courses. (CR/NC)

MATH 50—BUSINESS MATHEMATICS 3 Units
Prerequisite: Satisfactory completion of MATH 20 or qualification by MJC
assessment process.
Mathematical background for business students. Problems of buying and selling, simple
and compound interest, bank discounts, trade and cash discounts, installment payments,
inventory markups, annuities, present value, commissions, taxes, payrolls, depreciation,
and financial statements. Lecture.

MATH 62 — MATHEMATICAL SKILLS FOR THE SCIENCES ½ Unit
Prerequisite: Eligibility for MATH 90.
Also offered as PHSCI 62.
An overview of the essential mathematical skills for success in the sciences. Topics include
units conversion, percentages, scientific notation, graphing data, and an introduction to
the use of logarithms. Lecture.

MATH 67—INTRODUCTORY STATISTICS 3 Units
Prerequisite: Satisfactory completion of MATH 20 or equivalent or qualification by
MJC assessment process
Introduction to elements of descriptive statistics with focus on vocational applications and
statistics literacy. Lecture. Materials fee may be required.

MATH 70—ELEMENTARY ALGEBRA 5 Units
Prerequisite: Satisfactory completion of MATH 20 or qualification by MJC math
assessment process.
Recommended for Success: Eligibility for READ 82 or higher.
Equivalent to a first-year high school algebra course. Topics include: simplifying
algebraic expressions, solving linear and quadratic equations, factoring, graphing lines
and parabolas, solving systems of equations, rational expressions, and radicals, with
application problems incorporated into each topic. Lecture. (CC MATH 100A)

Non-Transferable Courses (to CSU or UC)

MATH 10—INTRODUCTION TO MATHEMATICS 3 Units
Recommended for success: Qualification by MJC assessment process.
Non-degree course.
Module 1: A review of the four arithmetic operations as they apply to whole numbers,
common fractions, and decimal fractions. Module 2: A variety of problems involving
arithmetic operations and applications. Lecture.

MATH 20—PRE-ALGEBRA 3 Units
Prerequisite: Qualification by MJC math assessment process or satisfactory
completion of MATH 10.
Recommended for success: Eligibility for READ 82 or higher.
Non-degree course.
Designed to help students prepare for algebra and applied math courses by reviewing
fundamental operations of arithmetic and common geometric formulas, and introducing
the algebraic concepts of simplifying expressions, polynomial arithmetic, and solving
linear equations. Arithmetic reviewed includes integers, decimals, ratios, and percents.
Lecture.
COURSES AND ACADEMIC PROGRAMS

MATH 72—ELEMENTARY ALGEBRA 2 3 Units
Prerequisite: Satisfactory completion of MATH 71.
Recommended for Success: Eligibility for READ 82 or higher.
Second half of MATH 70 - Elementary Algebra. Topics include: simplifying algebraic expressions, factoring, solving quadratic equations, graphing parabolas, rational expressions, and radicals, with application problems incorporated into each topic. Lecture. (CC MATH 100B)

MATH 80—PLANE GEOMETRY 3 Units
Prerequisite: Satisfactory completion of MATH 70 or equivalent or qualification by MJC assessment process.
Theorems of plane geometry, proofs and the nature of a mathematical proof, numerical solution of geometric problems, and constructions using compass and straightedge. Lecture.

MATH 90—INTERMEDIATE ALGEBRA 5 Units
Prerequisite: Satisfactory completion of MATH 70 or qualification by MJC math assessment process.
Recommended for Success: Eligibility for READ 184.
Equivalent to a second-year high school algebra course. Topics include: linear, quadratic, exponential, and logarithmic functions and equations; complex numbers; solving systems of linear equations in two and three variables using substitution, matrices, and determinants; conic sections; sequences, series, combinatorics, and probability. Lecture. (CC MATH104)

MATH 97—PRE-CALCULUS PRIMER 2 Units
Prerequisite: Eligibility for MATH 121.
Designed to prepare the student to succeed in MATH 121 (College Algebra) and MATH 122 (Functions and Analytic Geometry). A review of fundamental algebra concepts including graphing, modeling, systems of equations, sequences and series, and complex numbers. Lecture/Laboratory.

MATH 99—CALCULUS PRIMER 2 Units
Prerequisite: Eligibility for MATH 171.
Designed to prepare the student to succeed in Calculus, MATH 171 and 172. A review of precalculus concepts including graphing, modeling, series, and other essential background skills. Also includes a preview of the concepts of limits and continuity. Lecture/Laboratory.

MATH 101—MATHEMATICAL IDEAS AND APPLICATIONS 3 Units
Prerequisite: Satisfactory completion of MATH 90 or equivalent or qualification by MJC assessment process.
A general education course emphasizing the role of mathematics in civilization, the nature of mathematical thought, and applications of mathematics. Lecture. (CSU, UC, CAN MATH 2) (CC MATH 6)

MATH 105—STRUCTURE OF MATHEMATICS 1 3 Units
Prerequisite: Satisfactory completion of MATH 90 or equivalent or qualification by MJC assessment process.
Structure of arithmetic for prospective elementary school teachers. The definitions, operations, and properties of sets, counting numbers, integers, rational and irrational numbers; numeration systems; number theory, logic. Field trips may be required. Lecture. (CAN MATH 4, CSU, UC) (CC MATH 4A)

MATH 106—STRUCTURE OF MATHEMATICS 2 3 Units
Prerequisite: Satisfactory completion of MATH 105.
Recommended for Success: High school geometry or MATH 80.
Elementary probability, statistics and geometry for prospective elementary school teachers. Includes Euclidean geometry, measurement, and analytic geometry. Field trips may be required. Lecture/Laboratory. (CSU, UC) (CC MATH 4B)

MATH 111—APPLIED COLLEGE ALGEBRA 3 Units
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A College Algebra course that presents each topic to answer the question, “What is this used for?” Instruction begins with a real-world problem and develops the mathematical models and methods to solve it. Topics include: polynomial, rational, exponential, and logarithmic functions; theory of equations; systems of equations; matrix algebra; analytic geometry; and mathematical induction. Designed specifically for students needing only one semester, non-precalculus College Algebra course for transfer to a university. Not open to students who have received credit in MATH 121. Will not serve as a prerequisite to MATH 122 or MATH 171. STUDENTS PREPARING TO TAKE CALCULUS MUST TAKE MATH 121 AND MATH 122. Lecture. (CSU, UC)

Pre-Calculus

MATH 121—PRE-CALCULUS 1 4 Units
Formerly listed as: MATH 121-College Algebra
Prerequisites: Satisfactory completion of MATH 90 or qualification by MJC assessment process.
A one-semester College Algebra course or, together with Math 122, a two-semester Precalculus course sequence. Emphasis on algebra skills essential for success in calculus. Topics include: review of linear, quadratic, rational, radical, exponential and logarithmic equations; functions and graphs; synthetic division; complex roots of polynomials; the Fundamental Theorem of Algebra; applications of exponential and logarithmic equations; sequences and series; mathematical induction; combinatorics and probability. Lecture. (CSU, UC, CAN MATH 10)

MATH 122—PRE-CALCULUS 2 4 Units
Formerly listed as MATH 122 Functions and Analytic Geometry
Prerequisites: Satisfactory completion of MATH 121.
Recommended for Success: MATH 80
Together with Math 121, a two-semester Precalculus course sequence. A comprehensive course in analytic geometry and trigonometry. Topics include: vectors, rotation of axes, conic sections, polar and parametric functions, trigonometric functions, analytic trigonometry, linear and nonlinear systems, and matrix algebra. Lecture. (CSU, UC, CAN MATH 16)

Statistics, Computers, and Applications

MATH 130—FINITE MATHEMATICS 3 Units
Prerequisite: Satisfactory completion of MATH 90 or equivalent or qualification by MJC assessment process.
Set theory, probability and counting techniques. Markov chains, matrices and linear systems, linear programming, applications to business and behavioral and social sciences. Lecture. (CAN MATH 12, CSU, UC) (CC MATH 12)

MATH 134—ELEMENTARY STATISTICS 4 Units
Prerequisite: Satisfactory completion of MATH 90 or equivalent or qualification by MJC assessment process.
Elements of descriptive and inferential statistics, including probability, discrete and continuous probability distributions, hypothesis testing, and regression analysis. Lecture/ Laboratory. Materials fee may be required. (CAN STAT 2, CSU, UC) (CC MATH 2)

MATH 138—CALCULUS FOR BUSINESS AND SOCIAL SCIENCES 3 Units
Prerequisite: Satisfactory completion of MATH 90 or equivalent or qualification by MJC assessment process.
Concepts of function and limit; applied calculus emphasizing techniques of differentiation and integration for business economics applications; partial derivatives. Lecture. (CAN MATH 34, CSU, UC)

MATH 144—APPLIED FORTRAN 3 Units
Corequisite: Successful completion of MATH 122 or qualification by MJC assessment process.
Integrated use of Fortran computing within applied math problems in science and engineering. Field trips may be required. Lecture/Laboratory. (CAN CSCI 4, CSU, UC)
**Mechanized Agriculture**

**See Agricultural Mechanics**

**COURSES AND ACADEMIC PROGRAMS**

**Calculus**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 171</td>
<td>CALCULUS: FIRST COURSE</td>
<td>4</td>
</tr>
<tr>
<td>MATH 172</td>
<td>CALCULUS: SECOND COURSE</td>
<td>4</td>
</tr>
<tr>
<td>MATH 173</td>
<td>CALCULUS: THIRD COURSE</td>
<td>4</td>
</tr>
<tr>
<td>MATH 174</td>
<td>INTRODUCTION TO LINEAR ALGEBRA AND ORDINARY DIFFERENTIAL EQUATIONS</td>
<td>4</td>
</tr>
</tbody>
</table>

**Medical Assisting (MDAST)**

"MMDAST" in the Schedule of Classes

The Modesto Junior College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants’ Endowment (AAMAE). Medical assisting students at MJC receive transferable college credit for coursework. Many of the program graduates further their education by obtaining an Associate of Science degree in medical assisting or nursing.

The Medical Assisting Program begins in the fall semester of each year. It is a full-time, two-semester, certificate program offering training in administrative (front) and clinical (back) office procedures. The estimated program cost of $1400 includes an $18.00/unit enrollment fee, as well as materials, health clearance, uniform, books and certification exam expenses. Program cost at Modesto Junior College is very competitive with the cost of medical assisting programs offered by local trade schools. Financial Aid is available. For information on financial aid, contact the financial aid office at (209) 575-7715. In addition to the reasonable cost of this program, students at Modesto Junior College have the added benefit of comprehensive student services.

For additional Program information, contact Shirley Buzbee, Director of the Medical Assisting Program, at (209) 575-6377, or Allied Health at (209) 575-6362.

**Eligibility for the Medical Assisting Program**

**PROGRAM PREPARATION AND ELIGIBILITY**

Before enrolling in the Medical Assisting Program at MJC, the student must complete the following:

**MEDICAL ASSISTING CANDIDATES**

1. Must have a High School Graduate or have proof of equivalent.
2. Must provide official stamped and sealed transcripts (from high school or equivalent and other colleges) for Records Office prior to the Program application deadline.

**RECOMMENDED COMPETENCIES**

Student may complete these competencies in two ways; by completing courses indicated, or by showing competencies listed by completing the MJC Assessment Process. Contact the Testing Center for more information.

- ENGL 50 [NP] Basic Composition and Reading (C or better) ............ 5 or English 50 or 101 Eligibility on placement exam .......... or
- ENGL 101 [NP] Composition and Reading ........................................ 3
- MATH 20 [NP] Introduction to Mathematics (C or better) ................. 3 or MATH 70 Eligibility through placement exam (within .... one year of participation in program)
- READ 184 [NP] Critical Reading (C or better) .................................... 3 or Reading competency (12) on placement exam (Basic Life Support) that meets the standards of the American Heart Association or the American Red Cross. CPR certification must be valid throughout the program.

**PROGRAM APPLICATION**

Medical Assisting Program Applications are available from the Allied Health Division office, John Muir 258V, from the beginning of the Spring Semester through April 15. If there are still vacancies following that date, Program Applications will still be accepted through August 15th.

**PROOF OF HEALTH AND IMMUNIZATIONS**

Upon notification of admission to the program, students must submit proof of the following.

A. A medical history and physical examination completed by a Physician, Physician’s Assistant or Nurse Practitioner within 3 months prior to program start date. The physician must state that the applicant is free from communicable diseases and does not have any health conditions that would create a hazard to self, employees or patients.

B. Documentation of required immunizations.

C. A negative PPD skin test. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

**RECOMMENDED PREPARATION** - Complete 9 units with a C or better

Though no prerequisites are required, students are strongly advised to complete the following required courses PRIOR to entering the program.

**Anatomy and Physiology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP 50</td>
<td>Elementary Human Anatomy-Physiology .......... 3</td>
<td></td>
</tr>
<tr>
<td>PSYCH 51</td>
<td>Psychology in Everyday Life .................. 3 OR</td>
<td></td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>General Psychology ................................ 3</td>
<td></td>
</tr>
</tbody>
</table>

Continued ➤
Communication
SPCOM 100  [NP] Fundamentals of Public Speaking ..................... 3 OR
SPCOM 102  [NP] Introduction to Human Communication ............... 3 OR
SPCOM 130  [NP] Intercultural Communication .......................... 3

POLICY FOR DENIAL OF CERTIFICATION

Beginning with the January 2001 administration of the Certification Examination, felons will not be eligible for the Certification Examination unless the American Association of Medical Assistants (AAMA) Certifying Board grants a waiver based on one or more of the mitigating circumstances listed in the Disciplinary Standards. Any student considering a career in medical assisting, who has a criminal record, is advised to contact the AAMA for advisement prior to entering the Medical Assisting Program.

American Association of Medical Assistants
20 N. Wacker Drive, Suite 1575, Chicago, IL 60606-2903  (312) 899-1500

PROGRAM REQUIREMENTS

Certificate: Medical Assisting

• To earn a Certificate of Achievement, the student must meet/complete the competencies and program prerequisites, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 35½ units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDAST 320</td>
<td>Introduction to Medical Assisting</td>
<td>3</td>
</tr>
<tr>
<td>MDAST 321</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>MDAST 322</td>
<td>Medical Assisting Procedures</td>
<td>3½</td>
</tr>
<tr>
<td>MDAST 323</td>
<td>Clinical Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MDAST 324</td>
<td>Introduction to Diseases and Pharmacology</td>
<td>4</td>
</tr>
<tr>
<td>MDAST 325</td>
<td>Laboratory Procedures</td>
<td>3</td>
</tr>
<tr>
<td>MDAST 326</td>
<td>Clinical Techniques and Practice</td>
<td>7</td>
</tr>
<tr>
<td>AP 50</td>
<td>Elementary Human Anatomy/Physiology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 51</td>
<td>Psychology in Everyday Life</td>
<td>3 OR</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>Fundamentals of Public Speaking</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>Introduction to Human Communication</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 130</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE ........................................... 35½

AS Degree: Medical Assisting

• To earn an Associate in Science Degree, the student must meet/complete the competencies and program prerequisites, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

RECOMMENDED COURSES - Complete 9 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDAST 350</td>
<td>Medical Transcription</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended for Success: MDAST 321, OFADM 203 or equivalent, OFADM 311 or equivalent.

Entry-level course to prepare students to take the Medical Transcriptionist Certification Exam offered by the American Association for Medical Transcription (AAMT) to qualify as a Certified Medical Transcriptionist (CMT). Covers use of computers to transcribe physician dictation including progress notes, letters, consultations, procedures and radiology reports heard through the earphones of a transcribing machine. Two maximum completions. Lecture. Transcribing machine, earphones and supplies required.

MDAST 352—MEDICAL CODING/CPT 3 Units

Recommended for Success: MDAST 321 or equivalent.

Formerly listed as Medical Coding Specialist.

Entry-level course that covers the use of Current Procedural Terminology (CPT), a coding system developed by the American Medical Association (AMA) to convert widely accepted, uniform descriptions of medical, surgical, and diagnostic services rendered by health care providers into five-digit numeric codes. This course along with Medical Assisting 353 prepares students to take the Certified Coding Specialist Examination offered by the American Health Information Management Association (AHIMA). Two maximum completions. Lecture.
**MDAST 353—MEDICAL CODING/ICD**

**3 Units**

Recommended for Success: MDAST 321 or equivalent.

Formerly listed as MDAST 352: Medical Coding Specialist.

Entry-level course that covers the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) which is designed for the classification of patient morbidity (sickness) and mortality (death) information for statistical purposes and for the indexing of hospital records by disease and operation for data storage and retrieval. This course along with Medical Assisting 352 prepares students to take the Certified Coding Specialist Examination offered by the American Health Information Management Association (AHIMA). Two maximum completions. Lecture.

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**Microbiology (MICRO)**

**MICRO 101—MICROBIOLOGY**

**4 Units**

Prerequisite: Satisfactory completion of CHEM 143 or high school chemistry with a grade of A or B.

Characteristics of microbial life and microbial interactions with humans in disease, environment, and industry. Field trips may be required. Lecture/Laboratory. Materials fee required. (CAN BIOL 14, CSU, UC) (CC BIOL 65)

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**Music (MUSIC)**

"MMUSIC" in the Schedule of Classes

The MJC Music Program is designed to promote excellence in all aspects of musical performance, to provide basic preparation for careers in music, and to promote interest in all musical endeavors. Students can study voice, piano, guitar, strings, brass, woodwinds, percussion, and organ. Students may perform in a variety of ensembles which include: Choir, small group ensembles, Jazz Singers, Masterworks Chorus, College Singers, Symphonic Band, Chamber Orchestra, and Jazz Band. The absence of junior and senior classmates ensures freshmen and sophomores that they will have extensive opportunities to fill major roles in all performing groups.

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**Repeat Limitations on Applied and Ensemble Music Courses**

The following limitations apply to all activities listed under Applied Instruction, Instrumental Ensembles, Vocal Ensembles, Orchestra, and Band:

Each activity is limited to a maximum of four enrollments, regardless of the skill level of the individual courses. For example, a student may enroll, a) in beginning piano four times or b) twice in beginning piano and twice in intermediate piano. In either of these cases, the student cannot enroll in any additional piano courses because the maximum of four piano courses has been met. Students who have met the limit of repetition may continue to enroll as a Community Participant, registering in the Community Services Office.

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**Music Program**

**AA Degree: Music**

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements, in addition to the following coursework. Students who plan to transfer to a four-year school are strongly advised to meet with a member of the music faculty.

PROGRAM PREREQUISITES

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 100</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 101</td>
<td>3</td>
</tr>
</tbody>
</table>

Satisfactory Score on theory placement examination offered during the first week of Music 102. Students who do not meet entrance proficiencies will be encouraged to enroll in Music 100 and/or Music 101. See the music theory instructor for additional information.

REQUIRED COURSES - Complete 16 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 102</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 103</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 104</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 105</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 106</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 107</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 108</td>
<td>1</td>
</tr>
<tr>
<td>MUSIC 109</td>
<td>1</td>
</tr>
</tbody>
</table>

Any of the following ensembles (repeated 4 times at 1 unit)

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**Museum Studies**

See Art
### COURSES AND ACADEMIC PROGRAMS

#### Music

**Music Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 100—MUSIC FUNDAMENTALS 1</td>
<td>3 Units</td>
<td></td>
<td></td>
<td>Structured to teach skills and understanding of music fundamentals. Designed to meet the needs of the non-music major, the music major preceding elementary harmony, and the prospective elementary school teacher. Lecture/Laboratory. (CSU, UC) (CC MUSIC 1)</td>
</tr>
<tr>
<td>MUSIC 101—MUSIC FUNDAMENTALS 2</td>
<td>3 Units</td>
<td>Prerequisite: MUSIC 100</td>
<td></td>
<td>Recommended for Success: MUSIC 120 and 197. A continuation of MUSIC 100. Further study of intervals, rhythm, chord construction with application to the keyboard, ear training, sight singing, and simple dictation. Lecture/Laboratory. (CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 102—MUSIC THEORY 1</td>
<td>3 Units</td>
<td>Prerequisite: MUSIC 100 or satisfactory score on theory placement examination. Concurrent Enrollment: MUSIC 104 and 197.</td>
<td></td>
<td>A general survey of the musical styles by master composers dating from the medieval period through to the end of the classical period (1825). Emphasis will be placed on identifying the various historical periods, the stylistic practices in composition and performance, utilizing the musical compositions of the most prominent composers from each historical period. Field trips may be required. Lecture/Laboratory. Not offered every semester. (CSU, UC, Fall)</td>
</tr>
<tr>
<td>MUSIC 103—MUSIC THEORY 2</td>
<td>3 Units</td>
<td>Prerequisites: MUSIC 102 Concurrent Enrollment: MUSIC 105 and 197.</td>
<td></td>
<td>Continuing development of technique in common harmonic practice through analysis, part writing and figured bass; exercises and original composition. Introduction to modulation and secondary dominants; introduction to phrase and period structure, introduction to all seventh chord types. Lecture/Other. (CAN MUS 4, CAN MUS SEQ A, CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 104—AURAL SKILLS 1</td>
<td>1 Unit</td>
<td>Concurrent Enrollment: MUSIC 102</td>
<td></td>
<td>Supplement the study of music theory by practical application in performance; integration of fundamentals of pitch, rhythm, scale and mode through singing, rhythmic reading, analysis, and the dictation; computer assisted instruction. Lecture/Laboratory. (Fall, CAN MUS 2, CAN MUS SEQ A, CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 105—AURAL SKILLS 2</td>
<td>1 Unit</td>
<td>Prerequisite: MUSIC 104 Concurrent Enrollment: MUSIC 103</td>
<td></td>
<td>Continuation of MUSIC 104 further developing skills in sight-singing, melodic and rhythmic dictation, and in aural analysis of harmonic materials. Use of computer assisted instruction. Lecture/Laboratory. (CAN MUS 4, CAN MUS SEQ A, CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 106—MUSIC THEORY 3</td>
<td>3 Units</td>
<td>Prerequisites: MUSIC 103 Concurrent Enrollment: MUSIC 197 Recommended for Success: Concurrent enrollment in MUSIC 108.</td>
<td></td>
<td>Continuation of the study of structural elements of music such as melody, rhythm, harmony and form with emphasis on the organization of these elements; study of chromatic alteration, expansion of harmonic resources through chromaticism; study of binary and sonata form. Lecture. Not offered every semester. (CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 107—MUSIC THEORY 4</td>
<td>3 Units</td>
<td>Prerequisite: MUSIC 106 Concurrent Enrollment: MUSIC 197 Recommended for Success: Concurrent enrollment in MUSIC 109.</td>
<td></td>
<td>Continued development of analytical techniques; study of fugue and basic tonal counterpoint; introduction to impressionism and to twentieth century structural techniques; study of ternary structures and rondo form. Lecture. Not offered every semester. (CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 108—AURAL SKILLS 3</td>
<td>1 Unit</td>
<td>Prerequisite: MUSIC 105 Recommended for Success: Concurrent enrollment in MUSIC 106.</td>
<td></td>
<td>Continuation of materials presented in preceding applied music theory courses. Development of individual proficiency in sight-singing, dictation, aural, rhythmic and keyboard skills. Field trips may be required. Lecture/Laboratory. (CSU, UC, Fall)</td>
</tr>
<tr>
<td>MUSIC 109—AURAL SKILLS 4</td>
<td>1 Unit</td>
<td>Prerequisite: MUSIC 108 Recommended for Success: Concurrent enrollment in MUSIC 107.</td>
<td></td>
<td>Continuation of materials presented in preceding applied music theory courses. Development of individual proficiency in sight-singing, dictation, aural, rhythmic and keyboard skills. Field trips may be required. Lecture/Laboratory. (CSU, UC, Spr.)</td>
</tr>
<tr>
<td>MUSIC 110—MUSIC APPRECIATION</td>
<td>3 Units</td>
<td></td>
<td></td>
<td>Survey course emphasizing the development of the listener’s perception of the basic elements of music. Illustrations encompass various types of folk music, traditional repertoire, and musical material of a contemporary nature. Field trips may be required. Lecture. (CSU, UC)</td>
</tr>
<tr>
<td>MUSIC 112—HISTORY OF MUSIC 1</td>
<td>3 Units</td>
<td></td>
<td></td>
<td>A general survey of the musical styles by master composers dating from the medieval through to the end of the classical period (1825). Emphasis will be placed on identifying the various historical periods, the stylistic practices in composition and performance, utilizing the musical compositions of the most prominent composers from each historical period. Field trips may be required. Lecture/Laboratory. Not offered every semester. (CSU, UC, Fall) (CC MUSIC 10) (CAN MUSIC 8)</td>
</tr>
<tr>
<td>MUSIC 113—HISTORY OF MUSIC 2</td>
<td>3 Units</td>
<td></td>
<td></td>
<td>A general survey of the musical styles by master composers dating from the romantic period (1825) to the present. Emphasis will be placed on identifying the various historical periods, the stylistic practices in composition and performance, utilizing the musical compositions of the most prominent composers from each historical period. Field trips may be required. Lecture/Laboratory. Not offered every semester. (CSU, UC, Spr.) (CC MUSIC 11)</td>
</tr>
<tr>
<td>MUSIC 114—CONDUCTING I</td>
<td>1 Unit</td>
<td>Prerequisites: MUSIC 100, MUSIC 101 or eligibility for MUSIC 102 via Music placement test.</td>
<td></td>
<td>The study of style and technique of conducting. Emphasis on gestures and score analysis. Field trips may be required. Lecture. (CSU, UC, Spr.)</td>
</tr>
</tbody>
</table>

**RECOMMENDED MUSIC ELECTIVES**

Students who plan to transfer as music majors are strongly encouraged to complete the following courses in preparation for upper-division study at a four-year college or university. Please speak to a music faculty member when planning your coursework.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 110</td>
<td>Music Appreciation</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 119</td>
<td>Rhythmic Skills</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 120</td>
<td>Elementary Piano</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 121</td>
<td>Piano Enrichment</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 122</td>
<td>Intermediate Piano</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 197</td>
<td>Practica Musica</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Music</td>
<td>(1 unit)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 114</td>
<td>Conducting 1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUSIC 115</td>
<td>Conducting 2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.A. MAJOR.................................................... 20**
MUSIC 115—CONDUCTING II 1 Unit
Prerequisite: MUSIC 114
Continuation of MUSIC 114 with special emphasis on applied aspects of conducting. Field trips may be required. Lecture. (CSU, UC, Spr.)

MUSIC 116—INTRODUCTION TO AMERICAN POPULAR MUSIC 3 Units
Survey course emphasizing the listeners perception and understanding of the elements of American Popular music. Illustrations will cover folk, jazz, musical theatre, and rock styles of popular art music. Field trips may be required. Lecture. (CSU, UC)

MUSIC 119—RHYTHMIC SKILLS 1 Unit
Introduction to terminology and symbols used in the rhythmic notation of music, and to facilitate the development of the ability to read, write and accurately perform rhythmic figures with proper inflexion and artistic phrasing. Four maximum completions. Lecture/Laboratory. Not offered every semester. (CSU)

Applied Music
See “Repeat Limitations on Music Courses.” Students must meet performance and repertoire standards before proceeding to successive levels in the following classes.

MUSIC 120—ELEMENTARY PIANO 1 Unit
Essentials of music reading; fundamentals of rhythm, tone production and phrasing; introduction of scales and chords; methods of practice and memorization. Completion of MUSIC 120 is recommended for all general elementary teaching candidates. Electronic piano lab and practice rooms available. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 121—PIANO ENRICHMENT 1 Unit
Recommended for Success: MUSIC 120 or equivalent.
Designed for the continuation of development of coordination, understanding of rhythmic skills, technique and theory. Emphasis upon sight reading and ensemble playing. Electronic piano lab and practice rooms available. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 122—INTERMEDIATE PIANO 1 Unit
Recommended for Success: MUSIC 121 or equivalent.
Fundamental techniques of piano playing; review of scales and basic keyboard harmony; means of increasing skill in sight reading, musical interpretation of the score, memorization and playing by ear; introduction to repertoire from various stylistic periods; emphasis on the essentials of advanced piano study; analysis of the pianistic problems involved in selected repertoire from various stylistic periods; participation in student recitals. Four maximum completions. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 123—ADVANCED PIANO 1 Unit
Recommended for Success: MUSIC 122 or equivalent.
Study of advanced techniques of piano playing; review of scales and arpeggios; study of repertoire from various stylistic periods. Emphasis on preparation of solo repertoire for recital performance. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 124—ORGAN (Elementary) 1 Unit
Recommended for Success: MUSIC 120 or equivalent.
History construction and literature for the organ; use of foot pedals, coordination of hands and feet, and comparison of popular and classical styles; development of repertoire. Four maximum completions. Lecture/Laboratory. Not offered every semester. (CSU, UC)

MUSIC 125—ORGAN (Intermediate) 1 Unit
Recommended for Success: MUSIC 124 or equivalent.
Development of skills introduced in MUSIC 124; analysis of practice methods to overcome technical problems. Discussion of service playing and music suitable for various forms of worship. Preparation for recitals. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 126—ORGAN (Advanced) 1 Unit
Recommended for Success: MUSIC 125 or equivalent.
Study and analysis of organ literature from baroque, classical, romantic and contemporary periods; function of the organ in solo and accompanimental forms; opportunity for practical experience in both areas; emphasis on cumulative repertoire. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 127—ELEMENTARY STRINGS 1 Unit
Introduction to the playing of orchestra stringed instruments (violin, viola, cello, bass). Designed for students with no previous instrumental music experience, students who wish to review fundamentals of instrumental music, and experienced instrumentalists who wish to learn a secondary instrument. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 128—APPLIED MUSIC (VIOLIN AND VIOLA) 1 Unit
Concurrent Enrollment: MUSIC 150
Study and performance of violin and viola solo literature. Recital and public performance participation required. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 129—APPLIED MUSIC (CELLO AND BASS) 1 Unit
Concurrent Enrollment: MUSIC 150 or 162.
Study and performance of cello and bass solo literature. Recital and public performance participation required. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

MUSIC 131—ELEMENTARY VOICE I 1 Unit
Formerly listed as: MUSIC 131 Elementary Voice
Further development of the singing voice through consideration and application of the basic elements of tone production, i.e., breathing, resonance, diction, posture; principles applied through group and individual vocal exercises and singing. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 6)

MUSIC 132—ELEMENTARY VOICE II 1 Unit
Formerly listed as: MUSIC 132 - Voice Enrichment
Continuation of MUSIC 131. Building repertoire; development of style; preparation for recitals. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 36, 37, or 38)

MUSIC 133—INTERMEDIATE VOICE 1 Unit
Recommended for Success: MUSIC 131 or 132 or ability to meet requirements of class.
Concert participation required. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 36, 37, or 38)

MUSIC 134—ADVANCED VOICE 1 Unit
Prerequisite: MUSIC 133
Concert participation required. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 36, 37, or 38)

MUSIC 139—VOCAL MASTER CLASS 1 Unit
Concurrent enrollment: MUSIC 131, MUSIC 132, MUSIC 133, or MUSIC 134.
Development of vocal performance through consideration and application of good vocal technique, performance practice, and dramatic character development; principles applied through solo, duet, or ensemble performances in class and public recitals. Lecture/Laboratory. (CSU)

MUSIC 140—BRASS & PERCUSSION INSTRUMENTS (Elementary) 1 Unit
Concurrent Enrollment: Students must own or have access to a band instrument.
Techniques necessary for individual and group performance. Designed for students with no previous experience in instrumental music, students who wish to review fundamentals of instrumental music, and experienced instrumentalists who wish to learn a secondary instrument. Four maximum completions. Lecture/Laboratory. (CSU, UC)
### COURSES AND ACADEMIC PROGRAMS

**MUSIC 142—APPLIED MUSIC (Brass and Percussion)** 1 Unit
*Recommended for Success: MUSIC 140 or equivalent.*
Study and performance of brass and percussion solo literature. Recital and public performance participation required. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

**MUSIC 144—APPLIED MUSIC (Woodwind)** 1 Unit
*Recommended for Success: MUSIC 180 or equivalent.*
Study and performance of woodwind solo literature. Recital and public performance participation required. Field trips may be required. Four maximum completions. Lecture / Other. (CSU, UC)(CC MUSIC 52)

**Performance Ensembles**

See “Repeat Limitations on Music Courses.” Students must meet performance and repertoire standards before proceeding to successive levels in the following classes.

### Enrichment Courses

**MUSIC 157—MUSICAL THEATRE WORKSHOP** 2 Units
*Recommended for Success: Previous vocal experience.*
Intended for those interested in singing and acting. Study and performance of musical theatre. Public performance is required. Four maximum completions. Field trips may be required. Lecture/Laboratory. (CSU, UC)

**MUSIC 161—CONCERT BAND** 1 Unit
*Recommended for Success: Previous experience in instrumental music or completion of MUSIC 140 or 180.*
Rehearsal and performance of original wind literature and transcriptions for band. Field trips may be required. Four maximum completions. Rehearsal/Laboratory. (CSU, UC)

**MUSIC 162—COMMUNITY ORCHESTRA** 1 Unit
*Recommended for Success: Previous experience in a large choral ensemble.*
A large choral ensemble for intermediate and advanced level singers. Study and performance of either one large scale work or program of shorter works. Public performances required. Four maximum completions. Lecture / Other. (CSU, UC)(CC MUSIC 66)
### COURSES AND ACADEMIC PROGRAMS

**MUSIC 163—ELEMENTARY GUITAR**  
**1 Unit**  
Recommended for Success: MUSIC 100  
Examination of the basic elements of classical guitar technique and repertoire. Technical skills will emphasize posture, correct right- and left-hand technique, as well as treble clef note-reading in first position. The course will introduce sight-reading on easy melodies as well as chord charts. Chord coverage will include: closed finger chords, open finger chords, and bar chords. The student is responsible for providing a nylon-stringed guitar, a guitar tuner, and a foot stool. All students will perform in a semi-formal performance at the end of the semester. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 49)

**MUSIC 164—GUITAR ENRICHMENT**  
**1 Unit**  
Prerequisite: MUSIC 163  
Improvement of guitarists accompaniment technique, analytical skills, and performance competence. Music education majors are strongly encouraged to enroll. Special attention will be given to chord chart sight reading, contrapuntal reading, and principles of bass clef reading (continued). Technical work will include all the major and minor diatonic scales, selected etudes emphasizing position shifts, arpeggiation and solo passages techniques. Students will be required to participate in a formal recital at the end of the term. Lecture/Laboratory. Field trips required. Four maximum completions. (CSU, UC)

**MUSIC 165—INTERMEDIATE GUITAR**  
**1 Unit**  
Prerequisite: MUSIC 164  
Continuation of MUSIC 164. Expanding on topics already covered. Emphasis given to sight-reading both on treble and bass clefs. Students are required to play all diatonic major and minor scales, as well as selected Sor Etudes. At the end of the term, students will perform a solo jury, which will consist of a technical work and contrasting works from the Renaissance, Baroque, Classical, and Contemporary eras. Interdisciplinary ensemble performance is performed for this class. Students will be required to participate in a formal recital at the end of the term. Field trips required. Lecture/Laboratory. Four maximum completions. (CSU, UC)

**MUSIC 166—APPLIED CLASSICAL GUITAR**  
**1 Unit**  
Prerequisite: MUSIC 165  
Designed for performance majors intending to transfer to four-year institutions. The curriculum will cover materials necessary to provide the appropriate skill level for upper division coursework at most universities. Students must perform a thirty-minute recital as a completion requirement for the course. A fifteen-minute jury may substitute for the recital requirement. Field trips required. Lecture/Laboratory. Four maximum completions. (CSU, UC) (CC MUSIC 50)

**MUSIC 169—INTRODUCTION TO WORLD MUSIC**  
**3 Units**  
Exploration of traditional/contemporary folk music of Africa, Asia, Latin America, Europe and the U.S. from the perspective of music as culture. Investigations of the impact/influence of migratory patterns, social-political processes, and how ethnicities are formed in relation to music. Field trips are required. Lecture. (CSU, UC).

**MUSIC 170—INTRODUCTION TO THE SYNTHESIZER AND MIDI MUSIC STUDIO COMPOSITION**  
**2 Units**  
Introduction to synthesizer-electronic keyboard sound design and operational procedures. Extensive use of MIDI (Musical Instrument Digital Interface) music studio techniques. Music composition, live performance and MIDI computer software will be explored. Four maximum completions. Lecture/Laboratory. (CSU)

**MUSIC 171—APPLIED ELECTRONIC MUSIC PERFORMANCE ENSEMBLE**  
**1 Unit**  
Recommended for Success: MUSIC 170 or previous synthesizer; tape recording and MIDI music studio experience.  
Applied topics in electronic music composition, MIDI (Musical Instrument Digital Interface) music studio procedures, sampling, tape and digital recording. Performance in an electronic music concert is expected. Field trips may be required. Four maximum completions. Laboratory. (CSU)

**MUSIC 172—BEGINNING RECORDING STUDIO TECHNIQUES**  
**1 Unit**  
Recommended for Success: MUSIC 170 and 171.  
Introduction to the basic aspects of the recording studio, the properties of sound, microphone placement, multi-track recording, mixing and mastering. Analog and digital recording will be examined. Field trips may be required. Four maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

**MUSIC 173—GUITAR ORCHESTRA**  
**2 Units**  
Prerequisite: MUSIC 163. Enrollment limited to those with some sight-reading ability.  
Concurrent Enrollment: MUSIC 164  
The Modesto Junior College Guitar Orchestra will focus on international classical and folkloric guitar ensemble repertoire. Students will be exposed to a large and multicultural repertoire for large guitar groups. This is a performance class, and students are required to perform in different venues representing the college’s guitar department. Two recitals will be required. Field trips required. Four maximum completions. Laboratory/Rehearsal,.

**MUSIC 174—GUITAR ADVANCEMENT**  
**2 Units**  
Prerequisite: MUSIC 164  
Designed to fill the gap between MUSIC 164 and MUSIC 165. Elements of intermediate level technique and repertoire in both class and one-on-one sessions. Field trips may be required. Four maximum completions. Lecture/Laboratory.

**MUSIC 175—JAZZ SOLO VOICE**  
**1 Unit**  
Recommended for Success: MUSIC 121, 131 or equivalent private vocal instruction or experience.  
Concurrent Enrollment: MUSIC 164  
Study and performance of songs in the jazz idiom. Areas covered will include musicianship, ear training, music phasing, emotional expression, typical vocal techniques, stage presence, use of microphones and introduction to vocal jazz improvisation. Four maximum completions. Lecture/Laboratory. (CSU, UC)

**MUSIC 180—WOODWIND INSTRUMENTS (ELEMENTARY)**  
**1 Unit**  
Concurrent Enrollment: Students must own or have access to a band instrument.  
Techniques necessary for individual and group performance. Designed for students with no previous experience in instrumental music, students who wish to review fundamentals of instrumental music, and experienced instrumentalists who wish to learn a secondary instrument. Four maximum completions. Not offered every semester. Lecture/Laboratory. (CSU, UC)

**MUSIC 181—ELEMENTARY HARPSCICHORD**  
**1 Unit**  
Recommended for Success: MUSIC 120  
Introduction to the basic skills of harpsichord performance. Literature from the Renaissance, Baroque and Early Classical periods. Performance techniques will include figured bass, vocal and instrumental accompanying. Field trips may be required. Four maximum completions. Lab/studio activity/individualized instruction. (CSU, UC, Fall)

**MUSIC 182—MUSIC THEORY FUNDAMENTALS AND BEYOND: FROM INTERVALS TO INVENTIONS**  
**3 Units**  
A comprehensive course exploring the inner working of Western Art, Music, and composition. Topics include music notation, scales, intervals, key signatures, triads, and seventh chords; part-writing in four voices, figured bass realization, and basic composition. Musicianship topics are also included: sight singing and ear training with Solfege system using Movable do, and identification of diatonic intervals. A few 20th Century trends in pop music will be analyzed.

**MUSIC 185—CHORUS**  
**1 Unit**  
A large choral ensemble for inexperienced or beginning level singers. Development of vocal technique, artistic interpretation and performance skills. Rehearsals and performance of choral music drawn from the world’s cultures. Public performances required. Field trips required. Four maximum completions. Lecture/Laboratory. (CSU, UC) (CC MUSIC 60)
Music - Natural Resources

**MUSIC 190—THE MUSIC OF THE BEATLES** 3 Units
A survey of the musical styles by the Beatles dating from 1958-1970. Emphasis will be placed on identifying the various musical periods, the stylistic practices in their compositions, their performances and interviews. Lecture. (CSU, UC, GR)

**MUSIC 197—PRACTICA MUSICA** 1 Unit
Concurrent Enrollment: MUSIC 102, 103, 106 or 107.
Development of aural and rhythmic skills by means of computer assisted participation. Exposure to standard Western art music repertoire by means of guided listening. Four maximum completions. Laboratory. (CSU)

**MUSIC 349A—WORK EXPERIENCE IN THE ARTS—SUPERVISED PRACTICE** 1 Unit
Designed for those minors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student's area of study. May be repeated for a total of 16 units. Also offered during May, June, and July. Lecture/Other. (GR)

**FORESTRY PROGRAM**
In this program the student will develop skills and knowledge in animal/plant science and I.D., mechanics, communications, public relations, and computations specific to become a park ranger maintenance person, or private entrepreneur in allied jobs including game farm worker. This program will also prepare the student to transfer to a state university or university program when the General Education requirements are completed. Contact the division office in the Agriculture Building for advising assistance.

**CERTIFICATE: FORESTRY**
- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**I. Agriculture Career Courses** - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers.......................... 1
AG 349 A-D [NP] Work Experience............................................................. 4 OR
AG 249 [NP] Agriculture Internship............................................................. 4

**II. Agriculture Science Breadth Courses** - Complete 9 units
PLSC 200 [1] Introduction to Plant Science................................................... 3
ANSC 200 [1,2] Introduction to Animal Science............................................. 3
NR 200 [1,2] Soils ......................................................................................... 3
AGM 200 [NP] Introduction to Mechanical Technology................................. 3
AGEC 225 [NP] Agriculture Computer Applications OR
AGEC 210 [NP] Elements of Agriculture Economics OR
AGEC 200 [NP] Agriculture Accounting and Analysis................................. 3

**III. Agriculture Major Courses** - Complete 15 units
NR 220 [1] Introductory Forestry................................................................. 3
NR 222 [2,3] Native Plants Identification...................................................... 3
NR 380 [4] Log Scaling.............................................................................. 1

**IV. Agriculture Major Electives** - Complete 6 units
Any Natural Resources, Agriculture Economics or Plant Science courses not listed or used above.......................................................... 3
AG 280 [NP] Agriculture Computations...................................................... 3
AGM 230 [NP] Field Surveying................................................................. 3
AG 285 [NP] Communications in Agriculture.......................................... 3
AGM 215 [NP] Farm Tractors................................................................. 3
EHS 276 [NP] Park & Landscape Maintenance.......................................... 3

**TOTAL UNITS FOR CERTIFICATE.................................................. 35**

**AS DEGREE: FORESTRY**
- To obtain an Associate in Science Degree, the student must complete 5 career Required Units, 9 breadth Required Units, 12 major Required Units and 4 Elective Units for a total of 30 units and meet the MJC Graduation Requirements.

**I. Forestry Career Courses** - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers................... 1
AG 349 A-D [NP] Work Experience......................................................... 4 OR
AG 249 [NP] Agriculture Internship......................................................... 4

**II. Agriculture Science Breadth Courses** - Complete 9 units
PLSC 200 [1,2] Introduction to Plant Science............................................. 3
NR 200 [1,2] Soils..................................................................................... 4
AGM 200 [NP] Introduction to Mechanical Technology.......................... 3
AGEC 225 [NP] Agriculture Computer Applications OR
AGEC 210 [NP] Elements of Agriculture Economics OR
AGEC 200 [NP] Agricultural Accounting and Analysis.......................... 3

**III. Forestry Major Courses** - Complete 12 units
NR 220 [1] Introduction to Forestry......................................................... 3
NR 222 [2,3] Native Plants Identification............................................... 3

**IV. Forestry Major Electives** - Complete 4 units
Any Natural Resources, Agriculture Economics or Plant Science course not listed or used above.......................................................... 3
AG 280 [NP] Agriculture Computations.................................................. 3
AGM 230 [NP] Field Surveying............................................................... 2
AG 285 [NP] Communications in Agriculture........................................ 3
AGM 215 [NP] Farm Tractors............................................................... 2

**TOTAL UNITS FOR A.S. MAJOR........................................ 30**

**RECREATIONAL LAND MANAGEMENT PROGRAM**

**Certificate: Recreational Land Management**
- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

- Native Plants Identification
- Mapping & Photo Interpretation
- Environmental Conservation
- Forestry Technology
- Work Experience
- Agriculture Computations
- Field Surveying
I. Agriculture Career Core - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers..........................1
AG 349 A-D [NP] Work Experience......................................................4 OR
AG 249 [NP] Agriculture Internship.....................................................4

II. Agriculture Science Breadth Core - Complete 9 units
PLSC 200 [1,2] Introduction to Plant Science .........................................3
ANSC 200 [1,2] Introduction to Animal Science .......................................3
NR 200 [1,2] Soils ...........................................................................3
AGEC 225 [NP] Agriculture Computer Applications ..............................3 OR
AGEC 210 [NP] Elements of Agricultural Economics .............................3 OR
AGEC 200 [NP] Agricultural Accounting and Analysis ..........................3

III. Required Courses for Certificate - Complete 9 units
NR 230 [2] Recreational Land Management ........................................3
NR 222 [2,3] Native Plants Identification ................................................3
NR 220 [1] Introductory Forestry ..........................................................3
NR 379 [NP] Wildland Fire Control .........................................................1

IV. Elective Courses for Certificate - Complete 12 units
Any Natural Resources class not listed or used above
AG 280 [NP] Agricultural Computations................................................3
AGM 230 [NP] Field Surveying ..............................................................3
AG 285 [NP] Communications in Agriculture .......................................3
AGM 215 [NP] Farm Tractors ...............................................................2
EHS 276 [NP] Landscape Maintenance ..................................................3

TOTAL UNITS FOR CERTIFICATE ................................................. 35

AS Degree - Recreational Land Management

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Required - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers.............1
AG 349 A-D [NP] Work Experience.....................................................4 OR
AG 249 [NP] Agriculture Internship.....................................................4

II. Agriculture Science Breadth Required - Complete 9 units
PLSC 200 [1,2] Introduction to Plant Science .........................................3
NR 200 [1,2] Soils ...........................................................................3
AGM 230 [NP] Field Surveying ..............................................................3
AGEC 225 [NP] Agriculture Computer Applications OR ..............................3 OR
AGEC 210 [NP] Elements of Agricultural Economics OR .......................3 OR
AGEC 200 [NP] Agricultural Accounting and Analysis ..........................3

III. Agriculture Major Required - Complete 9 units
NR 230 [2] Recreational Land Management ........................................3
NR 222 [2,3] Native Plants Identification ................................................3
NR 220 [1] Introduction to Forestry ........................................................3

IV. Agriculture Major Elective - Complete 7 units
Any Natural Resources course not listed or used above..............................3
EHS 276 [2] Landscape Maintenance .....................................................3
AGM 230 [NP] Field Surveying ..............................................................3
AGM 285 [NP] Communications in Agriculture .....................................3
AGM 215 [NP] Farm Tractors ...............................................................2
HE 100 [4] Standard First Aid ...............................................................1
AGM 222 [NP] Ornamental Horticulture Machinery ................................1

TOTAL UNITS FOR MAJOR ............................................................. 30

Natural Resources Courses
NR 50—SURVEY OF NATURAL RESOURCES 3 Units
Survey of natural resources, their importance to society and ecological principles of resource conservation; identification, conservation, and use of renewable and non-renewable resources; career opportunities and industries associated with natural resources. Field laboratories, including some Saturdays, required. Lecture/Laboratory.

NR 53—INTRODUCTION TO AGRICULTURE 3 Units
RESOURCES AND RURAL RECREATION
Natural resources as industries and basic skills relate to natural resources management. Concepts in natural resources management, soil and land, water, forest, fish and wildlife, outdoor recreation, energy, mineral and metal resources, and opportunities for employment. Field trips required. Lecture/Laboratory.

NR 200—SOILS 4 Units
Study of soil derivation, classification and characteristics. Soil use and management including erosion, moisture, retention, structure, cultivation, organic matter and microbiology. Laboratory topics include soil type, classification, and soil reaction, soil fertility and physical properties of soil. Field laboratories required. Lecture/Laboratory. (CAN AG 14, CSU, UC, GR)

NR 215—WILDLIFE PRODUCTION 3 Units
Wildlife production and management and its relationship to humans; managing game for sustained yields. Production principles for common game species found in this area; habitat improvement; species compatibility and interrelationships; wildfire and fish identification. Field trips required. Lecture/Laboratory. (CSU, GR) (CC NATRC 181)

NR 220—INTRODUCTORY FORESTRY 3 Units
Forestry as an industry and basic skills in forest production and ecology, including fire protection, cruising, scaling, tree planting, nursery practices, harvesting, forest engineering, use of forest land for recreational purposes, opportunities for employment and utilization of technology available to survey and measure forest yields. Field laboratories required. Lecture/Laboratory. (CSU, UC, GR) (CC FORES 1)

NR 222—NATIVE PLANTS IDENTIFICATION 3 Units
Identification, growth habits, culture, habitat, range and uses of vines, shrubs and trees native to the Great Valley, chaparral and yellow pine, sub-alpine and alpine regions of central California. Some Saturday laboratories required. Lecture/Laboratory. (CSU, GR)

NR 224—MAPPING AND PHOTO INTERPRETATION 3 Units
Prerequisite: Completion of one of the following or equivalent: EHS 201 or 202 or NR 220 or 222 or 376. Introduction to principles and practices of interpreting aerial photographs. Emphasis on vegetation typing, mapping, road reconnaissance and inventory techniques. Use of aerial photographs to obtain location, area, vegetation types, timber volume. Explanation of Geographic Information Systems and its application to forestry and natural resources. Field trips required. Lecture/Laboratory. (CSU, GR)

NR 230—RECREATIONAL LAND MANAGEMENT 3 Units
Types of recreational activities; management and evaluation of site resources, planning, maintaining and operating recreational land management facilities. Career opportunities in recreational land management; current laws and regulations affecting recreational areas. Field laboratories required. Lecture/Laboratory. (CSU, GR)

NR 324—MAP AND PHOTO SKILLS 1 Unit
Introduction to principles and practices of interpreting aerial photographs and maps. Emphasis on scales and mapping techniques. Use of aerial photographs to obtain location, area and timber volume. Explanation of Geographic Information Systems and its application to forestry and natural resources. Field trips required. Lecture/Laboratory. (CSU, GR)

NR 376—FORESTRY TECHNOLOGY 3 Units
Recommended for success: NR 220 or NR 222 or NR 224. Additional training in silviculture, cruising, forest management, harvesting, and regulations as determined by the California Forest Practice Act. Field trips required. Lecture/Laboratory. (GR) (CC FORES 10)
NR 377—FORESTRY PRACTICUM 1.5 Units
Recommended for Success: Satisfactory completion of any of the following: NR 220, 222, 224, or equivalent.
Field studies in forestry conducted in Stanislaus National Forest with students staying in the forest for the length of the course. Development of skills and proficiency in mapping, cruising, timber stand improvement, timber site preparation and reforestation. (GR)

NR 379—WILDLAND FIRE CONTROL 1 Unit
Introduction to fundamentals of wildland fire behavior, basic fire fighting strategy, methods of attack to suppress wildland fires. Field trips required. Lecture/Laboratory. (GR)

NR 380—LOG SCALING 1 Unit
Introduction to theory, principles and practice of log scaling. Emphasis on log measurements, scaling cylinder, defect deduction methods, types of defects and general scaling requirements. Field trips required. Lecture/Laboratory. (GR)

Nursery Production
See Environmental Horticultural Science

Nurse Assistant
See Nursing

Nursing (NURSE)
"MNURSE" in the Schedule of Classes

Nurse Assistant Program (for CNA)
The Nurse Assistant Program at Modesto Junior College is a one-semester course (NURSE 40, 5.5 units) which includes 60 hours of classroom instruction and 104 hours of supervised clinical experience within the guidelines set by the State Department of Health Services. The Program is offered in the fall and spring semesters. After successful completion of the Program, students are eligible to take the certification examination to become a Certified Nurse Assistant (CNA). The exam has been developed to meet the evaluation requirements of federal and state nurse aid and competency evaluation legislation. Red Cross testing is available at MJC at the end of each class.

Program expenses vary for each individual. The estimated cost for the Nurse Assistant Program is $600 which includes books, enrollment, health clearance, fingerprinting, and certification examination and application fees. For a more detailed breakdown, contact Allied Health at 575-6362. Financial aid is available. For more information, call Financial Aid at 575-6023.

TIPS FOR SUCCESS
Although the Nurse Assistant Program does not have any prerequisites, the following academic achievements are recommended prior to entering the Program:
1. High school diploma or GED
2. Reading 184 with a grade of C or better or score of 12 on the MJC Reading Assessment Test.

For information on the Reading Assessment Test, contact the Testing Center, (209) 575-7728.

APPLICATION PROCEDURE
1. Submit an application for admission to Modesto Junior College.
2. Enroll in NURSE 40: Nurse Assistant.

Students enrolled in NURSE 40 will receive required forms and instructions on completing the Department of Health Services application process outlined below. Enrolled students must submit:
A. A Nurse Assistant Certification Application (HS-283B).
B. A Health History/Data Sheet which requires a physical examination completed by a physician, physician’s assistant or nurse practitioner, within 3 months prior to the Program start date. The physical must state that the student is free from communicable diseases and does not have any health condition that would create a hazard to self, employees or patients.
C. Proof of all required immunizations.
D. Fingerprinting and criminal background screening for approximately $57.00.

CRIMINAL CONVICTIONS THAT ARE DISQUALIFYING
Individuals who have been convicted of certain penal code violations (see application packet), will NOT be certified unless the individual submits written evidence obtained from the court of “rehabilitation” (if a felony) or a dismissal of the violation (if a misdemeanor). If you have been convicted of one of these crimes, you should be aware that you cannot be certified UNLESS you meet the specified conditions of rehabilitation or dismissal issued by the courts and have received approval from the Department of Health Services. All other convictions not listed, except minor traffic violations, are subject to department review and require that you submit additional information.

CLEARANCE PROCEDURES
To request clearance for prior conviction(s) or disciplinary action, contact:
Department of Health Services
Licensing and Certification
Aide and Tech Certification Unit
1800 Third Street, Suite 200
P.O. Box 942732
Sacramento, CA 95234-7320
(916) 327-2445

IMPAIRED NURSE ASSISTANT STUDENTS
Nurse Assistant students impaired by alcoholism, drug abuse, or emotional illness, should be aware that these conditions, if left unattended, could lead to disciplinary action and may prevent a student from being certified.

Emanuel-MJC Vocational Nurse Program (for LVN)
The CNA to Vocational Nurse Program is a partnership between Emanuel Medical Center and Modesto Junior College. The 18 month program prepares students to take the National Council Licensure Examination-PN (NCLEX-PN) leading to licensure as a Vocational Nurse (LVN). This program is approved by
the State of California.

The Vocational Nurse Program is divided into 5 levels. Each level is designed to provide theory and clinical experiences from specific areas of learning.

Students will have theory and clinical hours each week. Students must be flexible and prepared to accept their assignments. Clinical rotations will vary at local hospitals. Prior to entering the program, students must complete the prerequisite courses.

For additional information, call Emanuel Medical Center at (209) 669-2305 or the Modesto Junior College counselor (209) 575-7840.

**Program Preparation and Eligibility**

**Vocational Nurse Candidates**

1. Must be high school graduate or have proof of equivalent. If you are a graduate of a high school outside of the United States, you may have your transcripts evaluated by the International Education Research Foundation. The telephone number for the International Research is 310/258-9451.

2. Official stamped and sealed transcripts (from high school or equivalent) must be submitted in-person to the EmanuJ-MJC Vocational Nurse Program along with application.

3. Must be a Certified Nurse Assistant. An applicant working as a Nurse Assistant for a sponsoring facility that does not require a Nurse Assistant to be certified, may apply without being a CNA. Exceptions will be determined by the Program Director.

4. Current CPR card is required for admission into the program and must be current throughout the program.

**Required Competencies**

Competencies must be met by the VN Program application deadline. Student may meet the competencies by completing specified courses or achieving them through Placement Examinations.

- MATH 20 [NP] Pre-Algebra (C or better) ........................................ 3 or
- MATH 70 Eligibility through placement exam
- READ 184 [NP] Critical Reading (C or better) ......................... 3 or
- Reading competency (12) on placement exam
- ENGL 49 [NP] Basic English Skills ........................................ 5
- English 50 Eligibility or higher on placement exam

**Program Prerequisites**

- Complete with a C or higher

**Required Letters of Recommendation**

All applicants are required to submit three letters of recommendation:

- Two Professional Recommendations
  (If a sponsoring Skilled Nursing Facility or Extended Care Facility employs the applicant one of the professional letters MUST be from the Facility Administrator.)

- One Personal Recommendation
  (letters from persons related to the candidate will not be accepted)

**Application Process**

How to Apply

1) Complete and submit a Vocational Nurse program application in-person four months before program begins. Applications must be completed and submitted in-person at the EmanuJ-MJC Vocational Nursing Program located at 825 Delbon Avenue, Turlock. Mailed applications will not be accepted. For directions please telephone 209/669-2305. If you have questions regarding the financial aid, assessment testing, or prerequisites please telephone our MJC counselor at 209/575-7840.

2) Interview. You will be contacted to schedule a personal interview before classes begin.

**Selection Policy**

Nursing student selection for admission to the Emanuel-Modesto Junior College Vocational Nurse Program will be without regard to race, color, creed, sex, or national origin.

**Proof of Health and Immunizations**

Upon notification of admission to the Vocational Nurse Program, students must submit proof of the following.

A. Health History/Data Sheet (included in enrollment package) which requires a physical examination completed by a physician, physician’s assistant or nurse practitioner, within 3 months prior to the Program start date. The physical must state that the student is free from communicable diseases and does not have any health condition that would create a hazard to self, employees or patients.

B. All required immunizations:
   - Current physical examination
   - Chicken pox immunization or titer
   - Hepatitis B immunization

C. Negative PPD skin test. If a positive skin test for tuberculosis is or has been previously obtained, a chest x-ray must be taken unless medically contraindicated.

**Program Requirements**

**Certificate: Nursing: L.V.N.**

**Required Courses**

- NURSE 350 [NP] Vocational Nurse 1 ........................................ 12½
- NURSE 351 [NP] Vocational Nurse 2 ........................................ 16
- NURSE 352 [NP] Vocational Nurse 3 ........................................ 12
- NURSE 353 [NP] Vocational Nurse 4 ........................................ 6½
- NURSE 354 [NP] Vocational Nurse 5 ........................................ 6½

**Total Nursing Units for Certificate .................................... 52**

**Recommended Nursing Elective Courses**

- NURSE 385A-D [NP] Nursing Work Experience ......................... 1½
- NURSE 355 [NP] Intravenous Therapy ...................................... .84

**Associate Degree Nursing Program (for RN)**

The Associate Degree Nursing (ADN) Program at Modesto Junior College prepares students to take the National Council Licensure Examination (NCLEX-RN), leading to licensure as a Registered Nurse. This Program is approved by the State of California.

The ADN Program begins in Spring and Fall semesters each year. It is 4-semester in length. The approximate cost of the program is $750.00 per semester. Although most classes are scheduled during the day, clinical experiences may include both morning and evening hours. During the four-week Preceptorship Program in NURSE 254, students will be expected to be in the clinical area on a full-time basis. Students must be flexible and prepared to accept these assignments. Prior to entering the ADN Program, prerequisites and graduation requirements may be taken on a part-time basis.

For additional Program information, contact Allied Health, 575-6362. For academic advising, contact the Counseling Office, 575-6080.
APPLICATIONPROCEDURE

Steps 1-7 must be completed in order for you to be considered a qualified applicant.

1. Admission to Modesto Junior College
2. High school graduation or equivalent (GED or college degree)
3. All transcripts (high school or equivalent and other colleges) must be on file in the Records Office, prior to the Program application deadline. Records Office will accept hand-carried transcripts that are in an unopened and sealed envelope.
4. The following three prerequisite courses must be completed by the semester in which you apply to the program. These courses may be in progress at the time of application. A GPA of 2.67 is required for these three prerequisites. Priority will be given to applicants who have completed these three prerequisites with a grade on the transcript at time of application.

ANATOMY 125 (4 units)
Prerequisite: AP 50, Biology 101 or 111.
Note: Students who have completed AP 132 prior to or during Spring 1996 may submit a Course Equivalency/Substitution Request Form with their application packet.

MICROBIOLOGY 101 (4 units)
Prerequisite: Satisfactory completion of CHEM 143 or high school chemistry with a grade of B or better.
Note: Students who have completed Microbiology 110 prior to or during Spring 1996 may submit a Course Equivalency/Substitution Request Form with their application packet.

PHYSIOLOGY 101 (4 units)
Prerequisite: Anatomy 125, or AP 132; and Chemistry 143
The following 4 prerequisite courses must be completed by the semester in which you apply to the program. These courses may be in progress at the time of application. A GPA of 2.5 is required for these 4 prerequisites.

ENGLISH 101 (3 units)
PSYCHOLOGY 101 (3 units)

SOCIOLOGY 101, or 125, or 150, or 154, or 156, or ANTHROPOLOGY 102 (3 units)

SPEECH COMMUNICATION 100 or 102 (3 units)

5. Minimum grade of “C” is required for any course included in the point system. See specific GPA requirements listed in #4 above.
6. Assessment test requirements must be met by the program application deadline.
   MATH ASSESSMENT TEST
   With recommendation for Math 90, or completion of Math 70, or equivalent, with a grade of “C” or better.

READING ASSESSMENT TEST
Successful completion of the current Reading Assessment Test (DTLS - minimum score of 12 (50%) or completion of Reading 184 with a C or better.

Contact the Testing Center, 575-7728, for testing information.

7. Submit an ADN program application to the Allied Health Division using the application periods listed below:
   SPRING SEMESTER: August 1 through September 30
   FALL SEMESTER: Feb 1 through March 31

Applications are available from the Allied Health Division during the application periods listed above.

In addition, Accepted Applicants must submit proof of:

8. A. A medical history and physical examination completed by a Physician, Physician’s Assistant or Nurse Practitioner within 3 months prior to program start date. The physician must state that the applicant does not have any health conditions that would create a hazard to self, employees or patients.
   B. Documentation of required immunizations.
   C. Negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-rays must be taken unless medically contraindicated.
   D. Criminal background check.
9. The ADN Program will offer a Health Care Provider CPR class for all accepted applicants.

ADN PROGRAM CURRICULUM, INCLUDING GRADUATION REQUIREMENTS

PREREQUISITES: (See #4 under Application Procedure)

REQUIRED NURSING COURSES

First semester:
NURSE 251 [1] Nursing Process 1.................................8
NURSE 251P [1] Introduction to Pharmacology ..................1

Second semester:
NURSE 250 [2] Life Span Nursing.................................3
NURSE 252 [2] Nursing Process 2.................................8

Third semester:

Fourth semester:

ADDITIONAL GRADUATION REQUIREMENTS:
Selected from the approved course list in the current MJC Catalog.

Activities ........................................................................2
Guidance (One course) (NURSE 45 recommended) ..........3½
Humanities .......................................................................3
Total Units for A.S. Degree ..............................................69½

*ADN candidates are exempt from the MJC Health requirement.

POLICY FOR DENIAL OF LICENSURE

The California Board of Registered Nursing protects the public by screening applicants for licensure in order to identify potentially unsafe practitioners. Statutory authority for denial of licensure is set out in Business and Professions Code. Any student, considering a career in nursing, who has a criminal record is advised to contact the Board of Registered Nursing for advisement, prior

Continued ➢
Licensed Vocational Nurse to ADN Upgrade Program (LVN to RN)

The Licensed Vocational Nurse to Associate Degree Nursing Upgrade Program at Modesto Junior College prepares students to take the National Council Licensure Examination (NCLEX-RN), leading to licensure as a Registered Nurse. This Program is approved by the State of California.

The LVN to ADN Upgrade Program begins in Spring and Fall of each year. It is two semesters in length, the approximate cost for this program is $1350 per semester. Although most classes are scheduled during the day, clinical experiences may include both morning and evening hours. During the four-week Preceptorship Program in NURSE 254, students will be expected to be in the clinical area on a full-time basis. Students must be flexible and prepared to accept these assignments. Prior to entering the upgrade program, prerequisites may be taken on a part-time basis.

For additional Program information, contact Allied Health, 575-6362. For academic advising, contact the Counseling Office, 575-6080.

APPLICATION PROCEDURE

Steps 1-8 must be completed in order for you to be considered a qualified applicant.

1. Admission to Modesto Junior College
2. High school graduation or equivalent (GED or college degree)
3. All transcripts (high school or equivalent and other colleges) must be on file in the Records Office, prior to the Program application deadline. Records Office will accept hand-carried transcripts that are in an unopened and sealed envelope.

4. The following 3 prerequisite courses must be completed by the semester in which you apply to the program. These courses may be in progress at the time of application. A GPA of 2.67 is required for these 3 prerequisites. Priority will be given to applicants who have completed these 3 prerequisites with a grade on the transcript at time of application.

   **ANATOMY 125** (4 units)
   - Prerequisite: AP 50, Biology 101 or 111.
   - **Note:** Students who have completed AP 132 prior to or during Spring 1996 may submit a Course Equivalency/Substitution Request Form with their application packet.

   **MICROBIOLOGY 101** (4 units)
   - Prerequisite: Satisfactory completion of CHEM 143 or high school chemistry with a grade of B or better.
   - **Note:** Students who have completed Microbiology 110 prior to or during Spring 1996 may submit a Course Equivalency/Substitution Request Form with their application packet.

   **PHYSIOLOGY 101** (4 units)
   - Prerequisite: Anatomy 125, or AP 132; and Chemistry 143
   - The following 5 prerequisite courses must be completed by the semester in which you apply to the program. These courses may be in progress at the time of application. A GPA of 2.5 is required for these 5 prerequisites.

   **ENGLISH 101** (3 units)
   **NURSE 219** (½ unit) and **NURSE 220** (1½ units)
   **PSYCHOLOGY 101** (3 units)
   **SOCIOLOGY 101, or 125, or 150, or 154, or 156, or ANTHROPOLOGY 102** (3 units)
   **SPEECH COMMUNICATION 100** or **102** (3 units)

5. Minimum grade of “C” is required for any course included in the point system see specific GPA requirements listed in #4 above.

6. Reading Assessment Test requirements must be met by the program application deadline.

   **MATH ASSESSMENT TEST**
   - With recommendation for Math 90, or completion of Math 70, or equivalent, with a grade of “C” or better

   **READING ASSESSMENT TEST**
   - Successful completion of the current Reading Assessment Test (DTLS - minimum score of 12 (50%) or completion of Reading 184 with a C or better.

   **Contact the Testing Center, 575-7728** for testing information.

7. Submit a VN to ADN Upgrade Program application to Allied Health using the application periods listed below:
   - **SPRING SEMESTER:** Beginning of August 1 through September 30
   - **FALL SEMESTER:** Beginning of Feb. 1 through March 31
   - Applications are available from Allied Health during the application periods listed above.

8. Must be a licensed vocational nurse in California.

IN ADDITION, ACCEPTED APPLICANTS MUST SUBMIT PROOF OF:

9. A medical history and physical examination completed by a Physician, Physician’s Assistant or Nurse Practitioner within 3 months prior to Program start date. The physical must state that the applicant is free from communicable diseases and does not have any health conditions that would create a hazard to self, employees or patients.
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B. Documentation of required immunizations.

C. A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

10. The ADN Program will offer a Health Care Provider CPR class for all accepted applicants.

11. In selected cases, both written and skills proficiency testing may be required.

**VN TO ADN UPGRADE PROGRAM CURRICULUM, INCLUDING GRADUATION REQUIREMENTS**

**PREREQUISITES:** (See #4 under Application Procedure)

**REQUIRED NURSING COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
</table>

**ADDITIONAL GRADUATION REQUIREMENTS**

Selected from the approved course list in the current MJC Catalog. Courses listed below must be completed by 4th semester of the ADN Program.

**Activities** ....................................................... 2

**Guidance** (Once Course) (NURSE 115 recommended) ............... 1⁄2

**Humanities** .................................................................. 3

**Total Units for LVN to ADN Upgrade Program** ......................... 51⁄2

NOTE: An applicant who received LVN certification through a program that was not accredited by the Western Association of Schools and Colleges must complete 30 college units in the nursing major and have a total of 60 college units in order to receive an A.S. Degree. Contact Allied Health for advising regarding this issue. (209) 575-6362.

ADN CANDIDATES ARE EXEMPT FROM THE MJC HEALTH REQUIREMENT.

**POLICY FOR DENIAL OF LICENSURE**

The California Board of Registered Nursing protects the public by screening applicants for licensure in order to identify potentially unsafe practitioners. Statutory authority for denial of licensure is set out in Business and Professions Code. Any student, considering a career in nursing, who has a criminal record is advised to contact the Board of Registered Nursing for advisement, prior to entering the ADN Program.

BOARD OF REGISTERED NURSING

400 R STREET, SUITE 4030

P.O. BOX 944210

SACRAMENTO, CA 94244-2100

(916) 322-3350

**LVN 30-Unit Option** (for LVN to RN)

In addition to the LVN to ADN Upgrade Program, there is also a LVN 30-Unit Option which prepares students to take the NCLEX-RN examination, but does not award an A.S. Degree. Students interested in this option should contact the Director of Nursing in Allied Health for program information and advising.

**Nursing Courses**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>NURSE 40</td>
<td>NURSE ASSISTANT</td>
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<tr>
<td>NURSE 115</td>
<td>GUIDANCE FOR NURSING MAJORS</td>
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<tr>
<td>NURSE 219</td>
<td>INTRODUCTION TO NURSING PROCESS</td>
<td>1⁄2</td>
</tr>
<tr>
<td>NURSE 220</td>
<td>VN TRANSITION</td>
<td>1 1⁄2</td>
</tr>
<tr>
<td>NURSE 250</td>
<td>LIFE SPAN NURSING</td>
<td>3</td>
</tr>
<tr>
<td>NURSE 251</td>
<td>NURSING PROCESS 1</td>
<td>8</td>
</tr>
</tbody>
</table>

**NURSE 40—NURSE ASSISTANT**

Recommended for Success: High school diploma or GED AND Reading 184 with a grade of “C” or better OR score of 12 on MJC reading assessment.

Preparation for employment as a nurse assistant in a skilled nursing facility. Upon satisfactory completion of the course, the student is eligible to take the state examination for certification as a Certified Nurse Assistant (CNA). Lecture/Laboratory for 15 weeks.

Students entering the course must show proof of a physical examination within the last 3 months, current immunizations and PPD, and will be required to pay for fingerprints and criminal background screening. Materials fee required (fingerprints and criminal background check, items for infection control, and/or malpractice liability insurance).

Field trips may be required. (GR)

**NURSE 115—GUIDANCE FOR NURSING MAJORS**

Acquaints students with the college, its curriculum, facilities, services, academic requirements, nursing program, degree and transfer requirements. Students view the role and function of the nurse. Students analyze their educational needs and goals and choose alternatives to enhance success through nursing education. Students will understand the curriculum requirements that pertain to them and formulate a detailed educational plan with alternatives for higher education. The role of aptitudes, interests, values and skills will be addressed. Important aspects of nursing as an occupational choice will be covered along with information regarding the nursing profession. Lecture. Students must meet with a counselor one hour during the semester to receive class credit. (CSU, CR/NC)

**NURSE 219—INTRODUCTION TO NURSING PROCESS**

Recommended for Success: Reading ability at the 12th grade level (or a minimum score of 12 [50th percentile] on the MJC Reading Assessment test, and keyboarding skills.

An overview of the problem-solving process used by nurses when caring for patients. May also be used as a review of the nursing process. Introductory course offered only in an online Internet-based format. The course will not prepare students for the practice of nursing. One of two Required Courses for LVN to ADN upgrades. An elective for students selecting the 30-unit option. Two maximum completions. Internet. (CSU, GR)

**NURSE 220—VN TRANSITION**

Recommended for Success: FDNTR 219 with a grade of “C” or better.

Concurrent Enrollment: NURSE 219

Focus on providing the skills and knowledge required for Licensed Vocational Nurses (LVNs) desiring to enter the third semester of the Associate Degree Nursing (ADN) Program. Course content introduces the concepts and principles of the Roy Adaptation Model as applied to the development of nursing care plans. Additional content includes role transition, legal, ethical and regulatory issues, and clinical skills inherent in the RN role. Lecture/Laboratory. Materials fee required. (CSU, GR)

**NURSE 250—LIFE SPAN NURSING**

Human life span from conception through the older adult years. Growth and development, issues of health promotion/protection and adaptation to common health problems. Utilizing the Roy Adaptation Model, the course examines the interplay of the four modes on the life span. Field trips may be required. Lecture. (GR, CSU)

**NURSE 251—NURSING PROCESS 1**

Recommended for Success: Acceptance into the ADN program

Concurrent Enrollment: SOCIO 101 or SOCIO 125 or SOCIO 150 or SOCIO 154, ANTHR 102, SPCCM 100 or SPCCM 102, NURSE 251P, NURSK 900

Recommended for Success: FDNTR 219 with a grade of “C” or better.

Applies the basic concepts and principles of the Nursing Process to the care and needs of patients within the acute care setting. The primary focus of the course is on assessment and care of patients with alterations in basic health needs. Students practice fundamental clinical skills in a simulated lab setting prior to beginning care in the hospital. Additional theoretical principles taught in the course include therapeutic communication, professional ethics, and legal aspects of nursing. Field trips may be required. Lecture/Laboratory. Materials fee required (items for skills lab materials, infection control and/or malpractice liability insurance). (GR, CSU)
NURSE 251P—INTRODUCTION TO PHARMACOLOGY  
1 Unit  
**Prerequisite:** Acceptance into ADN program. 
**Recommended for Success:** FDTR 219 with a grade of “C” or better.  
**Concurrent Enrollment:** NURSE 251 and NURSK 800.  
Introduction to concepts of Pharmacology, including nursing responsibilities, principles of drug action and pharmaceutical systems of measurements and calculations. Lecture. (GR, CSU)

NURSE 252—NURSING PROCESS 2  
8 Units  
**Prerequisite:** Completion of NURSE 251, 251P with a grade of “C” or better.  
**Concurrent Enrollment:** NURSE 250 and NURSK 800.  
Applies the basic principles and concepts of the Roy Model and Nursing Process to meet the adaptation needs of the pediatric patient, the patient with alterations of the reproductive system, the childbearing woman, and the childbearing family. Family centered care in the acute hospital will be emphasized. Throughout the course, health maintenance and prevention of illness will be emphasized in patient/family teaching. Field trips may be required. Lecture/Laboratory. Materials fee required (items for infection control and/or malpractice liability insurance). (GR, CSU)

NURSE 253—NURSING PROCESS 3  
9 Units  
**Prerequisite:** Completion of NURSE 252 with a grade of “C” or better.  
**Concurrent Enrollment:** NURSK 800  
Focuses on promoting adaptation for adolescent through senescent clients with serious or complex alterations in health. Students will complete didactic units in oxygenation, protection, oncology, and psychosocial-spiritual nursing. Acute hospital setting will be utilized for the clinical practicum of the course. Students will also be assigned in an acute psychiatric setting and acute areas that support and provide community mental health care services. Field trips may be required. Lecture/Laboratory. Materials fee required (items for skills lab materials, infection control and/or malpractice liability insurance). (GR, CSU)

NURSE 254—NURSING PROCESS 4  
11 Units  
**Prerequisite:** NURSE 253  
**Concurrent Enrollment:** NURSK 800  
Concepts and principles of advanced medical/surgical nursing; student will provide care for patients in the acute-care setting. The last six weeks of the course consists of a clinical preceptorship in which the student works directly under the supervision of an identified staff nurse preceptor to assist the student in transition to the role of staff nurse. Field trips may be required. Lecture/Laboratory. Materials fee required (items for infection control, testing materials, and/or malpractice liability insurance and NCLEX test). (GR, CSU)

NURSE 350—VOCATIONAL NURSE 1  
12½ Units  
**Prerequisites:** Reading 184, English 49, Math 20, Certified Nursing Assistant.  
Enrollment limited to those admitted to the CNA to LVN program.  
Applies the fundamentals of nursing to the care and needs of patients within the acute and long-term hospital setting. The primary focus of the course is on the care of patients with alterations in basic health care needs. Students practice fundamental clinical skills in a simulated lab setting prior to beginning care in the hospital. Additional theoretical principles taught in the course are Anatomy and Physiology; Pharmacology and Psychology. Lecture/Laboratory. Field trips required. (GR)

NURSE 351—VOCATIONAL NURSE 2  
16 Units  
**Prerequisite:** NURSE 350 – completed with a grade of “C” or better.  
Applies basic nursing knowledge to the care and needs of adult patients with disorders of musculoskeletal system, integumentary system, cardiopulmonary system, neurological system, urinary system, and endocrine system. Practical experience will be gained in the acute hospital setting. Lecture/Other. Field trips required. (GR)

NURSE 352—VOCATIONAL NURSE 3  
12 Units  
**Prerequisite:** NURSE 351 – completed with a grade of “C” or better.  
Applies the basic principles and concepts of the nursing process to meet the adaptation needs of the pediatric patient, the patient with alterations of the reproductive system, the childbearing woman and family, basic emergency care, and patient with disorders of the eyes, ears, nose, and throat. Family-centered care in the acute hospital will be emphasized. Lecture/Other. Field trips required. (GR)

NURSE 353—VOCATIONAL NURSE 4  
8½ Units  
**Prerequisite:** NURSE 352  
Applies basic nursing knowledge to the care and needs of adult patients with disorders of the reproductive system and with normal maternity and nursing care. Practical experience will be gained in the acute hospital setting. Nursing leadership principles are introduced. (GR, CSU)

NURSE 354—VOCATIONAL NURSE 5  
6½ Units  
**Prerequisite:** NURSE 353  
Applies the basic principles and concepts of the nursing process to meet the adaptation needs of the pediatric patient, patients with disorders of the eyes, ears, nose, and throat, and provide basic first aid and emergency care.

NURSE 355—INTRAVENOUS THERAPY  
**Prerequisite:** NURSE 354  
Applies the foundation and basic concepts of infusion therapy, including LVN nursing responsibilities to the initiation, maintenance, and therapeutic modalities of intravenous therapy. The course focuses on risk management and legal responsibilities, quality assessment and competency criteria, infection control practices related to infusion therapy, fundamentals of fluid and electrolyte balance, and special needs of the pediatric and geriatric population.

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Nursing: Work Experience Courses

**NURSE 251 and 252 — WORK EXPERIENCE**  
**1,2 Units**  
**NURSING**

**Prerequisite:** Enrollment in a minimum of 7 units which may include Cooperative Vocational Work Experience. Students enrolled in Work Experience during a summer session need only complete one other course, regardless of the number of units.  
Must be employable as a Nurse Assistant.  
**Concurrent Enrollment:** Enrollment in one of the following: NURSE 252, 253, or 254.  
If enrolled in Work Experience during summer session, must be in good standing in the Associate Degree Nursing (ADN) program and be enrolled in NURSE 299A or one other college course.  
Provides students enrolled in the ADN program an opportunity to obtain additional nursing experience in a structured clinical work/study community service program in participating clinical agencies. Students gain additional practice in nursing by applying previously learned knowledge and skills. Nurse 361 has five maximum completions for a total of five units. Nurse 362 has five maximum completions for a total of 10 units. (Cooperative General Work Experience is included in this maximum.) Lecture: 1 hour arranged. Seventy-five hours related work experience per semester equals 1 unit. One hundred fifty hours related work experience per semester equals 2 units.
NURWE 385A-D—WORK EXPERIENCE 1-4 Units
**VOCATIONAL NURSE 1**
Concurrent enrollment: NURSE 350
The Nursing Work Experience is designed to provide an opportunity for students enrolled in Vocational Nursing Program to participate in relevant work experiences in a community clinical agency participating in nursing work experience. Students acquire knowledge, skills, and attitudes necessary for success in the field of nursing. (CR/NC)

**Nutrition**
See Foods and Nutrition

**Occupational Therapy, Pre**
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

**Office Administration (OFADM)**
"MOFADM" in the Schedule of Classes

**Clerical Program**
The Clerical A.A./A.S. Degree/Certificate programs are designed to prepare students for various types of office occupations in the clerical field. Clerical training involves the study of various procedures, duties, and practices applicable to many business offices, as well as the development and acquisition of basic skills necessary for success in those positions. Students learn keyboarding, records management, human relations, business communication, and math.

Career possibilities in the clerical field are numerous. Jobs exist in governmental agencies, schools, health facilities, stores, and in private businesses. Some of the career alternatives for clerical graduates are record keeper, file clerk, general office clerk, mail clerk, inventory clerk, receptionist, and word processor.

**Certificate: Clerical**
* To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 30 units
- BUSAD 310 [NP] Bookkeeping 1 .............................................. 3
- MATH 50 [NP] Business Math .............................................. 3
- OFADM 303 [NP] Keyboarding for Speed and Accuracy (twice at ½ unit) 1
- OFADM 313 [1] Office Skills ..................................................... 3
- OFADM 353 [2] Introduction to Computers and Windows ............... 1
- OFADM 359 [3] Introduction to Spreadsheet Software .................. 1
- OFADM 362 [NP] Introduction to Business Presentation Software ....... 1
- OFADM 363 [NP] Understanding the Internet ........................... 1
- OFADM 366 [NP] Proofreading Techniques ............................. 1
- BUSAD 300 [NP] Machine Calculation .................................... 2
- BUSAD 310 [NP] Bookkeeping 1 .......................................... 3
- BUSAD 379 [NP] Customer Relations ..................................... 1
- BUSAD 380 [NP] Customer Service ....................................... 1

**TOTAL UNITS FOR CERTIFICATE** ............................................. 30

**AA Degree: Clerical**
* To earn an Associate in Arts Degree, student must complete the 20 Required Units and must meet MJC Graduation Requirements.

**REQUIRED COURSES** - Complete 20 units
- OFADM 313 [1] Office Skills ..................................................... 3
- OFADM 353 [2] Introduction to Computers and Windows ............... 1
- OFADM 359 [3] Introduction to Spreadsheet Software .................. 1
- OFADM 375 [4] 10-Key on the Computer .................................. 1

**TOTAL UNITS FOR A.A. MAJOR** ............................................ 20

**AS Degree: Clerical**
* To earn an Associate in Science Degree, the student must complete the 20 Required Units for A.A. Degree, plus 10 Elective Units from the Elective Courses below, and complete the MJC Graduation Requirements. Student should consult with a Clerical advisor for selection of Elective Units.

**ELECTIVE COURSES** - Complete 10 units
- OFADM 303 [NP] Keyboarding for Speed and Accuracy (twice at ½ unit) 1
- OFADM 330 [NP] Beginning Word Processing ............................ 3
- OFADM 362 [NP] Introduction to Business Presentation Software ....... 1
- OFADM 363 [NP] Understanding the Internet ........................... 1
- OFADM 366 [NP] Proofreading Techniques ............................. 1
- BUSAD 300 [NP] Machine Calculation .................................... 2
- BUSAD 310 [NP] Bookkeeping 1 .......................................... 3
- BUSAD 379 [NP] Customer Relations ..................................... 1
- BUSAD 380 [NP] Customer Service ....................................... 1

**TOTAL UNITS FOR A.S. MAJOR** ............................................. 30

**Office Administration Program**
The Office Administration A.A./A.S. Degree/Certificate Program is designed to prepare students for occupations in the office administration field. Some career possibilities are administrative assistant, executive secretary, office manager, office supervisor, and transcriptionist. Office administration involves the study of office procedures, duties, and practices applicable to many business offices, as well as the development and acquisition of skills necessary for success in these positions. Students learn keyboarding, word processing, records management, human relations, business communication, and math. Word processing, letter composition, and office administration procedures are emphasized to prepare students for the assumption of responsible positions.

**Certificate: Office Administration**
* To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 32 units
### Office Administration

**COURSES AND ACADEMIC PROGRAMS**

Continued

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- **Student should consult with an Office Administration advisor for selection of Elective Units.**

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>OFADM 314</td>
<td>Office Procedures and Technologies</td>
<td>3</td>
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<tr>
<td>OFADM 315</td>
<td>Today’s Office</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>Business Communication</td>
<td>3</td>
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<tr>
<td>CMPSC 274</td>
<td>Microcomputer Applications</td>
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<td>OFADM 232</td>
<td>Advanced Word Processing &amp; Desktop Pub.</td>
<td>3</td>
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<tr>
<td>OFADM 328B</td>
<td>Machine Transcription</td>
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<td>OFADM 375</td>
<td>10-Key on the Computer</td>
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<td>CMPGR 215</td>
<td>Business Presentation Graphics</td>
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<td>MATH 50</td>
<td>Business Math</td>
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</table>

**TOTAL UNITS FOR CERTIFICATE ............................................. 32**

### AA Degree: Office Administration

- **To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.**

**REQUIRED COURSES - Complete 20 units**

- CMPSC 274 [1] Microcomputer Applications ........................................... 4

**TOTAL UNITS FOR A.A. MAJOR....................................................... 20**

### AS Degree: Office Administration

- **To earn an Associate in Science Degree, the student must complete the required courses for AA Degree, the 10 Elective units below, and the MJC Graduation Requirements. Student should consult with an Office Administration advisor for selection of Elective Units.**

**ELECTIVE COURSES - Complete 10 units**

- BUSAD 310 [NP] Bookkeeping 1 ............................................................ 3
- BUSAD 377 [NP] Human Relations in Business ........................................ 3
- OFADM 303 [NP] Keyboarding for Speed and Accuracy ½ \(\text{(May be repeated up to a maximum of 2 units)}\) | 1/2
- OFADM 304 [NP] Business English ..................................................... 3
- OFADM 305 [NP] Records Management .................................................. 3
- OFADM 328B [NP] Machine Transcription .............................................. 1 or 2
- OFADM 375 [NP] 10-Key on the Computer ............................................. 1
- SUPR 351 [NP] Elements of Supervision ............................................. 3

**TOTAL UNITS FOR A.S. MAJOR..................................................... 30**

### Office Computer Applications Program

The Office Computer Applications Certificate will be given for occupational preparation and/or career supplementation and/or career upgrade. These courses will help students meet the “computer” requirements needed for today’s office worker: keyboarding, advanced document preparation including mail merge and linking/embedding documents, spreadsheet design and analysis, computer presentation design, information management utilizing a database, and the Windows operating system.

**Certificate: Office Computer Applications**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 17 units**

- OFADM 301 [NP] Beginning Keyboarding ............................................. 1½
- OFADM 302 [NP] Beginning Document Processing .................................... 1½
- OFADM 203B [NP] Intermediate Keyboarding ...................................... 2
- OFADM 330 [NP] Beginning Word Processing ........................................ 3
- OFADM 231 [NP] Intermediate Word Processing ..................................... 3
- CMPSC 278 [NP] Spreadsheet Software ............................................... 3
- OFADM 361 [NP] Introduction to Databases ......................................... 1
- OFADM 362 [NP] Introduction to Business Presentation Software ............ 1
- OFADM 353 [NP] Introduction to Windows .......................................... 1

**TOTAL UNITS FOR CERTIFICATE ............................................. 17**

### Office Support Program

The Office Support Certificate is designed for students desiring to meet entry-level qualifications for office support positions which require keyboarding, telephone techniques, business document formatting, document organization, time management, word processing skills, Internet and e-mail protocol, and spreadsheet design.

**Certificate: Office Support**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 17 units**

- OFADM 301 [NP] Beginning Keyboarding ............................................. 1½
- OFADM 302 [NP] Beginning Document Processing .................................... 1½
- OFADM 304 [NP] Business English ..................................................... 3
- OFADM 305 [NP] Records Management ................................................ 3
- OFADM 313 [NP] Office Skills ........................................................... 3
- OFADM 330 [NP] Beginning Word Processing ........................................ 3
- OFADM 359 [NP] Introduction to Spreadsheets ..................................... 1
- OFADM 363 [NP] Introduction to the Internet ...................................... 1

**TOTAL UNITS FOR CERTIFICATE ............................................. 17**

### Records Management/Data Entry Specialist Program

The Records Management/Data Entry Specialist Certificate is designed for students desiring to meet entry-level requirements for records management and data entry employees: keyboarding, filing rules and their applications, manual and computer filing system development, telephone techniques, time management skills, ten-key data entry and math calculations.

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*Continued ➢*
Office Administration

Certificate: Records Management/Data Entry

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 16 units
OFADM 301 [NP] Beginning Keyboarding ........................................ 1 1/2
OFADM 302 [NP] Beginning Document Processing .......................... 1 1/2
OFADM 304 [NP] Business English .................................................. 3
OFADM 305 [NP] Records Management ........................................... 3
OFADM 313 [NP] Office Skills ......................................................... 3
OFADM 361  [NP] Introduction to Databases ................................... 1
OFADM 375  [NP] Ten Key on the Computer .................................... 1
BUSAD 300  [NP] Machine Calculations ........................................ 2

TOTAL UNITS FOR CERTIFICATE ............................................ 16

Word Processing Program

The Word Processing Certificate program is designed to teach students word processing skills and concepts. Students acquire the necessary competencies for the modern office. Word processing and Desktop publishing has become one of the fastest growing careers during the past decade. There is a wide variety of employment opportunities available.

Certificate: Word Processing

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 26 units
OFADM 303 [NP] Keyboarding for Speed and Accuracy (twice at 1/2 unit) 1
OFADM 203C [1] Intermediate Keyboarding .................................... 3
OFADM 231 [1] Intermediate Word Processing .................................. 3
OFADM 311 [1] Business English and Transcription .......................... 3
CMPSC 274 [1] Microcomputer Applications .................................... 4

ELECTIVE COURSES - Complete 6 units
CMPGR 217 [NP] Computer Illustration Software .......................... 3
CMPGR 235 [NP] Image Manipulation Software ............................. 3
OFADM 363 [NP] Understanding the Internet .................................. 3
OR
CMPGR 262 [NP] Exploring the World Wide Web ............................. 1

TOTAL UNITS FOR CERTIFICATE ............................................ 32

Note: Not all courses are offered every semester; therefore, students should see an advisory for appropriate course sequence.

Office Administration Courses

OFADM 203A,B,C—INTERMEDIATE KEYBOARDING 1,2,3 Units
Recommended for Success: One semester of keyboarding and 40 gross words per minute on a three-minute test.
Further development of keyboarding speed and accuracy skills; practice and drill on production keyboarding; drill and practice on formatting techniques and procedures for setting up business documents; business letters, tabulated reports, reports, business forms, including invoices, interoffice memoranda, envelopes, outlines, minutes, and agendas. Individualized instruction. Three maximum completions for 203A only. Materials fee required. Open entry/open exit. (CSU, GR)

OFADM 231—INTERMEDIATE WORD PROCESSING 3 Units
Recommended for Success: OFADM 203 and either OFADM 330 or CMPSC 274.
Also as Offered as CMPSC 231.
Intermediate word processing features such as mail merge, macros, styles, graphics, tabs, and sorts. Features will be applied in creating business documents. Two maximum completions. Materials fees required. Lecture/Laboratory. (CSU) (CC OFTEC 41)

OFADM 232—ADVANCED WORD PROCESSING 3 Units
AND DESKTOP PUBLISHING
Recommended for Success: CMPSC 231 or OFADM 231 or prior knowledge of word processing.
Application of advanced word processing techniques and procedures including those features relating to desktop publishing. For students who are already knowledgeable in word processing software. Lecture/Laboratory. (CSU)

OFADM 301—BEGINNING KEYBOARDING 1 1/2 Units
Development of basic alpha/numeric keyboarding skills needed for the operation of the keyboard by the touch system. Drills to develop speed and accuracy on straight copy. Designed for students with no previous keyboarding/typing experience. Lecture/Laboratory and orientation. Materials fee required. (GR) (CC OFTEC 120)

OFADM 302—BEGINNING DOCUMENT PROCESSING 1 1/2 Units
Recommended for Success: OFADM 301 or ability to keyboard by touch at 25 GWAM.
Further development of speed and accuracy on the alpha/numeric keyboard. Instruction in opening, saving, naming, printing documents; deletion and addition of text; margin/tab settings; spacing techniques; text editing techniques; vertical/horizontal centering, basic business letter, memo and report formats. Laboratory. Materials fee required. (GR) (CC OFTEC 120)

OFADM 303—KEYBOARDING FOR SPEED AND ACCURACY 1/2 Unit
Recommended for Success: OFADM 301 or ability to keyboard by touch at 25 GWAM.
Keyboarding course designed to diagnose a student’s current keyboarding skills needs, prescribe appropriate practice materials, measure skill development, improve speed and accuracy, and continually evaluate the skill-building process. Four maximum completions. Materials fee required. (GR)

OFADM 304—BUSINESS ENGLISH 3 Units
Review of basic grammar, stressing the parts of speech, sentence structure, capitalization, punctuation, spelling rules, meaning of words often confused and business vocabulary. Lecture.

OFADM 305—RECORDS MANAGEMENT 3 Units
Filing rules and their application to alphabetic, numeric, geographic, and subject systems; establishing manual and computer filing systems; records, control, retention, transfer, equipment, and supplies; micrographics; using the computer to store, organize, maintain, and retrieve information. Field trips may be required. Lecture/Laboratory.

OFADM 311—BUSINESS ENGLISH AND TRANSCRIPTION 3 Units
Recommended for Success: Ability to keyboard assignments.
Development of skills in transcribing notes including mastery of problems in spelling, word usage, punctuation, grammatical construction, capitalization, syllabication, and use of figures. Lecture.
OFADM 313—OFFICE SKILLS 3 Units
A study of various positions available in an office. Emphasis on location, skills, salary, benefits and retirement packages of office positions. Covers entry-level skills and experiences necessary for beginning office positions, including career planning, telephone and time management skills. Recommended as a first semester course for students pursuing an Office Administration or Clerical certificate or degree. Field trips may be required. Lecture.

OFADM 314—OFFICE PROCEDURES AND TECHNOLOGIES 3 Units
Recommended for Success: OFADM 203 or 231.
A study of the attributes and skills needed to work in an office. Explores duties of receptionist, office clerk, word processing operator, and administrative assistant. Covers topics in telecommunications, reprographics, oral and written communications, mailing and shipping, and financial record keeping. Field trips may be required. Lecture. (Fall Only)

OFADM 315—TODAY’S OFFICE 2 Units
Recommended for Success: Previous completion of all Required Courses for Office Administration or Clerical degree or certificate.
Provides a simulated office environment to give students the experience that is often necessary in obtaining and keeping an office position. Students will be "hired" as an employee within the simulated office with the availability of transferring to other positions later in the course. Application of skills and knowledge necessary to be an effective employee will be emphasized. Upon mastery of necessary skills, students may be placed as interns in offices to gain additional experience. The course should be taken in the student’s last semester before graduation or certificate completion. Field trips may be required. Two maximum completions. Laboratory. (Spring Only)

OFADM 328A,B—MACHINE TRANSCRIPTION 1.2 Units
Recommended for Success: One of the following: OFADM 311 or 304 with grade "C" or better, and ability to keyboard 40 gross words per minute on three-minute test.
Instruction and practice in the use of a standard transcribing machine. Individualized instruction in the keyboarding of general business documents including letters, memonanda and reports. Open entry/open exit. Two maximum completions for 328A only. Materials fee required. Laboratory. (GR) (CC OFTEC 20)

OFADM 330—BEGINNING WORD PROCESSING 3 Units
Recommended for Success: Beginning keyboarding or equivalent.
Introduction to the use and capabilities of word processing software with hands on experience in creating, revising and printing documents. Course designed for initial exposure to word processing. Students who have completed CMPSC 201, 202, or 274 or OFADM 356 should enroll in OFADM/CMPSC 231. Two maximum completions. Lecture/Laboratory.

OFADM 351—INTRODUCTION TO COMPUTERS AND WINDOWS 1 ½ Unit
Recommended for Success: Ability to keyboard by touch.
Basic introduction to computers and the Windows Operating Environment. Course will explain components of a computer system and provide hands-on training using a personal computer with Windows software. Course is for students new to using personal computers and the Windows environment. Lecture/Laboratory. Materials fee required. (GR)

OFADM 352—INTRODUCTION TO COMPUTERS AND WINDOWS 2 ½ Unit
Recommended for Success: Ability to keyboard by touch.
Continuation of OFADM 351. Explores Windows accessories, providing hands-on experience in the use of the features and use of a graphical user interface. Lecture/Laboratory. Materials fee required. (GR)

OFADM 353—INTRODUCTION TO COMPUTERS AND WINDOWS 1 Unit
Recommended for Success: Ability to keyboard by touch.
A combination of OFADM 351 and 352 courses. Basic introduction to computers and the Windows Operating Environment. Explains components of a computer system and provide hands-on training using a personal computer. Intended for students new
PHILO 107—PHILOSOPHY OF SCIENCE 3 Units
Systematic study of the methods of scientific inquiry. Application of critical thinking through philosophical analysis of scientific methodology. Significant emphasis on essay writing in developing analytic skills. For both science and non-science majors. Lecture. (CSU, UC)

PHILO 115—RELIGION: A PHILOSOPHICAL AND COMPARATIVE INQUIRY 3 Units
Introduction to the philosophical problems of religion and a comparative analysis of religious traditions and spiritual practices. Topics include the nature and existence of God, faith and reason, religious knowledge, language and experience in human life. Lecture. (CSU, UC) (CC HUMAN/PHILO 4)

PHILO 120—HISTORY OF PHILOSOPHY: ANCIENT 3 Units
Western ideas and philosophers from ancient Greece to the 16th century, with a consideration of prominent Eastern philosophies. The primary focus is on Greek and Roman philosophy, and the development of Christian philosophy through the middle ages. Some of the topics include free will/determinism, the nature of existence, being, definition and logic. Lecture. (CAN PHIL 4, CAN PHIL SEQ A, CSU, UC)

PHILO 121—HISTORY OF PHILOSOPHY: MODERN 3 Units
Western ideas and philosophers from the 16th century to the present, with a consideration of prominent Eastern philosophies. The primary focus is on renaissance thought, the rise of modern science, 18th and 19th century empirical thought and critical philosophies, and trends in the 20th century. Lecture. (CAN PHIL 10, CAN PHIL SEQ A, CSU, UC)

PHILO 123—TWENTIETH CENTURY PHILOSOPHY 3 Units
An examination of late nineteenth and twentieth century philosophy, including but not limited to representative thinkers of American Pragmatism, Continental Existentialism and Phenomenology, and Anglo-American Analytic Philosophy. Lecture. (CSU, UC)

PHILO 130—POLITICAL THEORY 3 Units
A study of social and political thought using classical and contemporary writings, with emphasis on current issues. Ideologies discussed include democracy, socialism, capitalism, communism, fascism, and anarchism. Lecture. (CSU, UC)

PHILO 140—PHILOSOPHY AND FILM 3 Units
An introduction to philosophical problems and reasonings through an analysis of films. Topics discussed include philosophy of life and existence, political ideologies, the nature of aesthetic experience, and theories of film. Field trips may be required. Lecture/Laboratory (CSU, UC)

PHILO 111—ETHICS: THEORY AND APPLICATION 3 Units
Systematic study of reflective choice, standards of right and wrong by which it may be guided and attainable goods toward which it may be directed. Readings on concepts of good, duty, egoism, altruism, freedom, personal and social responsibility. Lecture. (CAN PHILO 4, CSU, UC)

PHILO 101—PHILOSOPHY 3 Units
A careful and critical examination of some of the “Great Questions” philosophers have pursued from ancient times to the present. Some of these include: What is human nature? What is real? Do we have free will? Does God exist? What can we know? How should we act? What is the source of evil? And, what is the nature of truth? Lecture. (CAN PHILO 2, CSU, UC) (CC PHILO 1)

PHILO 103—SYMBOLIC LOGIC 3 Units
Also offered as CMPSC 103.
An introduction to modern deductive logic; includes sentential and predicate logic with identity theory and definite descriptions. Lecture. (CAN PHILO 6, CSU, UC)

PHILO 105—REASONING 3 Units
Prerequisite: ENGL 101
An examination of logic and its practical application in everyday situations, including problem solving, advertisement discrimination, political evaluation and argumentation. Lecture. (CSU, UC)

PHILO 107—PHILOSOPHY OF SCIENCE 3 Units
Prerequisite: ENGL 101
Systematic study of the methods of scientific inquiry. Application of critical thinking through philosophical analysis of scientific methodology. Significant emphasis on essay writing in developing analytic skills. For both science and non-science majors. Lecture. (CSU, UC)

PHILO 107—PHILOSOPHY OF SCIENCE 3 Units
Systematic study of the methods of scientific inquiry. Application of critical thinking through philosophical analysis of scientific methodology. Significant emphasis on essay writing in developing analytic skills. For both science and non-science majors. Lecture. (CSU, UC)
Repeat Limitations on Physical Education Courses

No activity may be taken more than four times, regardless of the number of skill levels it may have listed. Students who have met the limit of repetition may continue to enroll in such courses as a Community Participant, registering in the Community Education Office, Morris Memorial 204. Varsity sports are exempt.

For purposes of this limitation, activities are defined as Adaptive, Baseball, Basketball, Body Mechanics, Bowling, Cross Country, Dance, Diving, Fencing, Football, Golf, Gymnastics, Lifesaving, Racquetball, Self-Defense, Soccer, Softball, Swimming, Table Tennis, Tennis, Track and Field, Volleyball, Water Polo, Weight Training, and Wrestling.

CSU - 12 units maximum.

UC - See UC All Campus Credit List for credit limitations

(Available in Counseling Office)

Physical Education Program

AA Degree: Physical Education

To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUISITE COURSES - Complete 15 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 100</td>
<td>Introduction to Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>PE 108</td>
<td>Care and Prevention of Athletic Injuries</td>
<td>3</td>
</tr>
<tr>
<td>PE 109</td>
<td>Peak Performance Through Mental Training</td>
<td>3</td>
</tr>
<tr>
<td>PE 110</td>
<td>Officiating: Spring Sports</td>
<td>3 OR</td>
</tr>
<tr>
<td>PE 115</td>
<td>Officiating: Fall Sports</td>
<td>3</td>
</tr>
<tr>
<td>HE 101</td>
<td>Advanced First Aid and Emergency Care</td>
<td>3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - Complete 5 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 101</td>
<td>Basketball Theory</td>
<td>1</td>
</tr>
<tr>
<td>PE 102</td>
<td>Offensive Football Theory</td>
<td>2</td>
</tr>
<tr>
<td>PE 103</td>
<td>Track and Field Theory</td>
<td>1</td>
</tr>
<tr>
<td>PE 104</td>
<td>Wrestling Theory</td>
<td>1</td>
</tr>
<tr>
<td>PE 105</td>
<td>Defensive Football Theory</td>
<td>2</td>
</tr>
<tr>
<td>PE 106</td>
<td>Offensive Baseball Theory</td>
<td>2</td>
</tr>
<tr>
<td>PE 107</td>
<td>Defensive Baseball Theory</td>
<td>2</td>
</tr>
<tr>
<td>PE 111</td>
<td>Application of Sports Medicine</td>
<td>3</td>
</tr>
<tr>
<td>PE 110</td>
<td>Officiating: Spring Sports</td>
<td>3</td>
</tr>
<tr>
<td>PE 114</td>
<td>Offensive/Defensive Softball Theory</td>
<td>1</td>
</tr>
<tr>
<td>PE 113</td>
<td>Cross Country Concepts</td>
<td>1</td>
</tr>
<tr>
<td>PE 115</td>
<td>Officiating: Fall Sports</td>
<td>3</td>
</tr>
<tr>
<td>PE 116</td>
<td>Football Team Play Concepts</td>
<td>2</td>
</tr>
<tr>
<td>PE 121</td>
<td>Coaching Effectiveness</td>
<td>3</td>
</tr>
</tbody>
</table>

1-5 units of PE activity classes from the following list

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEA 102</td>
<td>Adaptive Weight Training</td>
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</tr>
<tr>
<td>PEA 104</td>
<td>Adaptive Strength Development</td>
<td>1</td>
</tr>
<tr>
<td>PEA 106</td>
<td>Functional Water Exercise</td>
<td>1</td>
</tr>
<tr>
<td>PEA 107</td>
<td>Adapted Swimming</td>
<td>1</td>
</tr>
<tr>
<td>PEA 108</td>
<td>Adapted Aquatics</td>
<td>1</td>
</tr>
<tr>
<td>PEA 116</td>
<td>Adapted Run/Walk</td>
<td>1</td>
</tr>
<tr>
<td>PEA 119</td>
<td>Adapted Sports</td>
<td>1</td>
</tr>
<tr>
<td>PEA 154</td>
<td>Back Basics</td>
<td>1</td>
</tr>
<tr>
<td>PEC 141</td>
<td>Adaptive Fitness</td>
<td>1</td>
</tr>
<tr>
<td>PEC 102</td>
<td>Water Aerobics</td>
<td>1</td>
</tr>
<tr>
<td>PEC 106</td>
<td>Badminton</td>
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<tr>
<td>PEC 108</td>
<td>Deep Water Aerobics</td>
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<tr>
<td>PEC 111</td>
<td>Beginning Racquetball</td>
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<tr>
<td>PEC 112</td>
<td>Intermediate Racquetball</td>
<td>½, 1</td>
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<tr>
<td>PEC 118</td>
<td>Bowling</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 122</td>
<td>Beginning Modern Dance</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 124</td>
<td>Advanced Modern Dance</td>
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<tr>
<td>PEC 126</td>
<td>Jazz Dance</td>
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<tr>
<td>PEC 128</td>
<td>Aerobics</td>
<td>½, 1</td>
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<tr>
<td>PEC 130</td>
<td>International Folk Dance</td>
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<tr>
<td>PEC 133</td>
<td>Ballet 1</td>
<td>½, 1</td>
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<tr>
<td>PEC 134</td>
<td>Contact Improvisation</td>
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</tr>
<tr>
<td>PEC 140</td>
<td>Exercise for Fitness</td>
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</tr>
<tr>
<td>PEC 141</td>
<td>Fitness for Special Populations</td>
<td>1</td>
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<tr>
<td>PEC 143</td>
<td>Beginning Golf</td>
<td>½, 1</td>
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<tr>
<td>PEC 144</td>
<td>Intermediate Golf</td>
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<tr>
<td>PEC 145</td>
<td>Advanced Golf</td>
<td>½, 1</td>
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<tr>
<td>PEC 147</td>
<td>Gymnastics</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 148</td>
<td>Yoga for Better Health</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 150</td>
<td>Intermediate Yoga for Better Health</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 159</td>
<td>Spirit Leadership Training</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 164</td>
<td>Self-Defense</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 167</td>
<td>Paddle Tennis/Pickleball</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEC 168</td>
<td>Beginning Swimming</td>
<td>½, 1</td>
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<tr>
<td>PEC 170</td>
<td>Advanced Swimming</td>
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<tr>
<td>PEC 171</td>
<td>Swim for Fitness</td>
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<tr>
<td>PEC 172</td>
<td>Lifeguard Training</td>
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<tr>
<td>PEC 173</td>
<td>Water Safety Instructor</td>
<td>½, 1</td>
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<tr>
<td>PEC 174</td>
<td>Table Tennis</td>
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<td>PEC 175</td>
<td>Beginning Tennis</td>
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<tr>
<td>PEC 176</td>
<td>Intermediate Tennis</td>
<td>½, 1</td>
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<tr>
<td>PEC 177</td>
<td>Advanced Tennis</td>
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<tr>
<td>PEC 178</td>
<td>Tournament Tennis</td>
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<tr>
<td>PEC 179</td>
<td>Track and Field</td>
<td>½, 1</td>
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<tr>
<td>PEC 182</td>
<td>Training for Distance Running</td>
<td>½, 1</td>
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<tr>
<td>PEC 183</td>
<td>Volleyball</td>
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<td>PEC 184</td>
<td>Power Volleyball</td>
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<td>PEC 185</td>
<td>Hiking 1</td>
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<td>PEC 187</td>
<td>Pilates for Fitness</td>
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<td>PEC 190</td>
<td>Advanced Water Polo</td>
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<td>PEC 191</td>
<td>Power Lifting</td>
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<td>PEC 195</td>
<td>Weight Training</td>
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<td>PEC 197</td>
<td>Advanced Weight Training</td>
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<td>PEM 108</td>
<td>Baseball</td>
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<tr>
<td>PEM 111</td>
<td>Baseball Team Play Concepts</td>
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</tr>
<tr>
<td>PEM 112</td>
<td>Beginning Basketball</td>
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<tr>
<td>PEM 113</td>
<td>Intermediate Basketball</td>
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</tr>
<tr>
<td>PEM 114</td>
<td>Advanced Basketball</td>
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</tr>
<tr>
<td>PEM 115</td>
<td>Basketball Team Play Concepts</td>
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<tr>
<td>PEM 140</td>
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<td>PEM 141</td>
<td>Advanced Touch Football</td>
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<td>PEM 162</td>
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<td>Women's Self-Defense</td>
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<td>Varsity Baseball</td>
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<td>PEVM 105</td>
<td>Men's Varsity Basketball (Fall)</td>
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<td>PEVM 110</td>
<td>Men's Varsity Cross-Country</td>
<td>3</td>
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<td>PEVM 115</td>
<td>Varsity Football</td>
<td>3</td>
</tr>
<tr>
<td>PEVM 120</td>
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<td>PEVM 122</td>
<td>Men's Varsity Soccer</td>
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<tr>
<td>PEVM 125</td>
<td>Men's Varsity Swimming and Diving</td>
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<tr>
<td>PEVM 130</td>
<td>Men's Varsity Tennis</td>
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</tr>
</tbody>
</table>
Physical Education

Athletic Training/Sports Medicine Program

The Athletic Training/Sports Medicine program at MJC is designed to prepare students for appropriate procedures in prevention, care, and rehabilitation of athletic injuries. This degree is also designed to transfer students to four-year institutions where they can continue their education to fulfill the requirements of the National Athletic Trainer’s Association. This will lead to the student’s eventual eligibility to challenge the national examination, and upon successful completion of the Required Courses and passing the exam, become a Certified Athletic Trainer.

AS Degree: Athletic Training/Sports Medicine

- To earn an Associate in Science degree, students must complete the following coursework and meet the MJC Graduation Requirements. Courses should be selected with the assistance of an Athletic Training faculty advisor.

REQUIRED COURSES - Complete 28 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 111</td>
<td>3</td>
<td>Applications of Sports Medicine</td>
<td></td>
</tr>
<tr>
<td>PE 109</td>
<td>3</td>
<td>Peak Performance Through Mental Training</td>
<td></td>
</tr>
<tr>
<td>PE 108</td>
<td>3</td>
<td>Care and Prevention of Athletic Injuries</td>
<td></td>
</tr>
<tr>
<td>HE 110</td>
<td>3</td>
<td>Healthful Living</td>
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<tr>
<td>ANAT 125</td>
<td>4</td>
<td>Human Anatomy</td>
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</tbody>
</table>

TOTAL UNITS FOR A.A. MAJOR .................................................. 20

Physical Education Courses

Graduation Activity Requirement

Physical Education classes used to fulfill the graduation activities requirement must be from the PEA, PEC, PEM, PEW, PEVM, or PEVW class listings.

PE 90A, B – ASSISTING IN ADAPTED PHYSICAL EDUCATION

Prerequisite: PE 122

Experience working with physically limited students enrolled in the PEA programs. Emphasis on application and improvement in skills acquired in PE 122. Opportunity to work with students with a wide range and varying degrees of disabilities and disease manifestations. PE 90A has four maximum completions and PE 90B has two maximum completions. Laboratory.

PE 100 – INTRODUCTION TO PHYSICAL EDUCATION 3 Units

History, philosophy, and principles of Physical Education. Study of the aims and objectives of modern physical education with emphasis on the development of basic philosophy and background for the profession of physical education. Lecture. (CSU, UC, GR, CAN KINE/PE 2)

PE 101 – BASKETBALL THEORY 1 Unit

Basketball rules, mastery of position and team play. Development of strategies and philosophy. Lecture. (CSU, UC)

PE 102 – OFFENSIVE FOOTBALL THEORY 2 Units

An analysis of offensive position and team play. Critical analysis of offensive techniques, rules, physical and mental training procedures, and film evaluation. Lecture. (CSU, UC)

PE 103 – TRACK AND FIELD TEAM CONCEPTS 1 Unit

Specialized approach to track and field. Rules, training procedures, strategy, and performance evaluation. Two maximum completions. Lecture. (CSU, UC)

PE 104 – WRESTLING THEORY 1 Unit

Analysis of wrestling; rule interpretations, winning psychology, film analysis. Lecture. Not offered every semester. (CSU, UC)

PE 105 – DEFENSIVE FOOTBALL THEORY 2 Units

An analysis of defensive position and team play. Critical analysis of defensive techniques, rules, physical and mental training, and film evaluation. (CSU, UC, Fall)

PE 106 – OFFENSIVE BASEBALL THEORY 2 Units

An analysis of offensive techniques, position and team play. Coverage of rules and training procedures. Two maximum completions. Lecture/Laboratory. Not offered every semester. (CSU, UC)

PE 107 – DEFENSIVE BASEBALL THEORY 2 Units

Analysis of defensive techniques, position and team play. Coverage of rules and training procedures. Two maximum completions. Lecture/Laboratory. Not offered every semester. (CSU, UC)
PE 108—CARE AND PREVENTION OF ATHLETIC INJURIES
3 Units
Designed for prospective coaches, trainers, health and physical educators, and athletes; to aid in the recognition, evaluation and care of athletic injuries. Techniques in taping, prevention, and rehabilitation of injuries. Sport specific injuries are examined and discussed to familiarize students with the multitude of injuries that can and will occur in sporting activities. Field trips are required. Lecture. (CSU, UC, GR) (CC H-HP 4)

PE 109—PEAK PERFORMANCE THROUGH MENTAL TRAINING
3 Units
The study of and practical experience in techniques for maximizing sport and dance performance through the development of mental skills and strategies for stress control, imagery, goal setting, and concentration. Lecture. (GR, UC, CSU)

PE 110—OFFICIATING: SPRING SPORTS
3 Units
Regulations and techniques of officiating baseball and softball. Lecture. (CSU, UC, Fall)

PE 111—APPLICATION OF SPORTS MEDICINE
3 Units
Prerequisite: PE 108
Practical application of modalities and techniques used in the treatment and care of athletic injuries for the prospective Athletic Trainer. Emphasis on injury recognition, development of conditioning and reconditioning programs, and taping techniques to enable athletes to return to competitive activities. Lecture. (GR, UC, CSU)

PE 113—OFFENSIVE/DEFENSIVE SOFTBALL THEORY
1 Unit
Analysis of offensive and defensive techniques, strategies, positions and team play which includes rules and physical and mental training procedures. Two maximum completions. Lecture/Laboratory. Not offered every semester. (CSU, UC)

PE 114—CROSS COUNTRY CONCEPTS
1 Unit
Specialized approach to cross country and long distance running. Training procedures, performance evaluation, nutritional strength, and racing strategy components. Three maximum completions. Lecture. (CSU, UC)

PE 115—OFFICIATING: FALL SPORTS
3 Units
Regulations and techniques of officiating football, basketball, and volleyball. Lecture. (CSU, UC)

PE 116—FOOTBALL TEAM PLAY CONCEPTS
2 Units
Essential concepts of team-building in football. Goal-setting and development of individual roles. Exploration of team communication processes and activation of leadership of the successful football team. Lecture/Laboratory. Field trips may be required. (CSU) (GR) Fall

PE 121—COACHING EFFECTIVENESS
3 Units
Roles of a coach in athletics; ethics, physiological systems, physical training theory, sports psychology, and leadership models and management principles. Lecture. (CSU, UC) (GR)

PE-122—ADAPTED PHYSICAL EDUCATION THEORY AND LAB
3 Units
Common definitions, scope and basic concepts of Adapted Physical Education. A study of specific disabilities, with a primary focus on identification, etiology and implications for physical education. Course includes practical experience in the field. Intended for students interested in pursuing a career in physical therapy, nursing, adapted physical education, gerontology or fields requiring one to work with individuals with disabilities. Lecture/Laboratory (CSU, GR)

PE 141—SUPERVISION IN ATHLETIC TRAINING
2 Units
Policies and procedures, emergency protocols, vital signs, bloodbourne pathogens, and daily functions that are necessary for the student to work in the Athletic Treatment Center. Students will develop a plan using decision-making strategies, analysis, and an awareness of the factors related to medical protocols. The students will work in the Athletic Treatment Center with our athletes and coaches for an in-depth experience related to sports medicine. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, GR)

PE 194 – INTRODUCTION TO WORLD DANCE
3 Units
Also offered as THETR 194.
A survey of dance and its development as an art form through social, political and cultural context. Investigation of cultural traditions and styles, values, aesthetics and more will be explored. Field trips required. Lecture. (CSU, UC)

PEA 102—ADAPTIVE WEIGHT TRAINING
1 Unit
Use of adaptive weight room and equipment for body maintenance, strengthening and conditioning. Designed for students with disability limitations. Lecture/Laboratory. (CSU, UC)

PEA 104 – ADAPTED STRENGTH DEVELOPMENT
1 Unit
Recommended for Success: Provide medical verification of disability and recommendation of medical specialist.
Development and maintenance of muscular strength for students with physical/medical limitations. Emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Four maximum completions. Lecture/Laboratory/Other. (CSU)

PEA 106—FUNCTIONAL WATER EXERCISE
1 Unit
Recommended for Success: Medical verification of physical or learning disability or motor problems.
A specialized course in physical fitness involving group aquatic exercises which include range of motion, strength, endurance, and flexibility training. Specialized adapted equipment appropriate for limited mobility conditions may be used.

PEA 107—ADAPTED SWIMMING
1 Unit
Recommended for Success: Medical verification of physical or learning disability or motor problems. Basic swimming and water safety skills.
A specialized course in physical exercise which includes: personalized and group swim exercises which include strength, endurance, and flexibility training and instruction in improving and/or modifying swimming skills.

PEA 108—ADAPTED AQUATICS
1 Unit
Medical verification of physical or learning disability or motor problems.
A specialized course in physical exercise which includes: personalized and group aquatic exercises for strength, endurance, and flexibility which may which can involve specialized adapted equipment appropriate to one’s disability or injury.

PEA 116—ADAPTED RUN/WALK
1 Unit
Personalized and group exercises that include development of an overall fitness routine involving conditions for walking and/or running: balance, gait, functional motor control, developmental movement, strength and endurance. Emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Recommended for students with physical and learning disabilities. Laboratory. Four maximum completions. (CSU, UC)

PEA 119—ADAPTED SPORTS
3 Units
Introduces students with a physical and/or developmental disabilities to a variety of sports. Students will safely participate in sorts such as, but not limited to, softball, volleyball, tennis, Frisbee, soccer, basketball, and golf. Laboratory. Four maximum completions. (CSU, UC)
PEA 141 – ADAPTED FITNESS 1 Unit
Recommended for Success: Provide medical verification of physical or learning disability or motor problems.
A specialized course in physical exercise which includes individual and group exercises that include development of an overall fitness routine involving all aspects of body conditioning: balance, flexibility, functional motor control, developmental movement, strength and endurance. There will be an emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Four maximum completions. Lecture/Laboratory. (CSU, UC)

PEC 154—BACK BASICS 1 Unit
Intended for students with medically verified physical disabilities. Improvement of back health including; structure of healthy spine and musculature, common deviations and back injuries and proper body mechanics. Students participate in flexibility training, pilates, body mechanics, and a progressive exercise program to build musculature and correct posture. Students learn how to perform daily living activities while maintaining back health. Lecture/Laboratory. Four maximum completions. (CSU, UC)

PEC 102, A—WATER AEROBICS 1 Unit
Formerly listed as PE-W 102
Designed to elevate the heart rate to contribute to cardiovascular fitness; provide increased resistance for strength improvement with virtually no impact; help joints move through their range of motion, promoting flexibility. Lecture/Laboratory. Not offered every semester. (CSU, UC)

PEC 108,A—DEEP WATER AEROBICS 1 Unit
Recommended for Success: Basic swimming and water skills
Group aquatic exercises utilizing strength, endurance, flexibility training in deep water which can involve specialized aquatic equipment.

PEC 106—aBADMINTON ½, 1 Unit
Basic skills, rules, strategy; practice in singles and doubles play. Lecture/Laboratory. (CSU, UC)

PEC 111,A—BEGINNING RACQUETBALL ½, 1 Unit
Fundamentals of racquetball. Participation at local court. Expenses are the responsibility of the student. Lecture/Laboratory. (CSU, UC)

PEC 112,A—INTERMEDIATE RACQUETBALL ½, 1 Unit
Recommended for Success: PEC 111
Intermediate skills and theory. Basic singles and doubles play. Participation at local court. Expenses are the responsibility of the student. Lecture/Laboratory. (CSU, UC)

PEC 118, A—BOWLING ½, 1 Unit
Fundamentals of bowling. Students are required to pay line and shoe charges at bowling alley. Lecture/Laboratory. (CSU, UC)

PEC 122,A—BEGINNING MODERN DANCE ½, 1 Unit
Also offered as THETR 185.
Fundamental dance movement, elementary composition components. Dance movement education, exploration and recreation. Lecture/Laboratory. (CSU, UC)

PEC 123,A—INTERMEDIATE MODERN DANCE ½, 1 Unit
Also offered as THETR 186.
Recommended for Success: PEC 122 or THETR 185 or equivalent.
Introduction, exploration and experience in choreography and performance. Movement through space, energy and time and compositional form. Lecture/Laboratory. (CSU, UC)

PEC 124,A—ADVANCED MODERN DANCE ½, 1 Unit
Also offered as THETR 187.
Recommended for Success: PEC 123 or THETR 186 or equivalent.
Emphasis on composition, improvisation, expression, dance history and philosophy; an outlet for expressive movement ideas. Lecture/Laboratory. (CSU, UC)

PEC 126,A—JAZZ DANCE ½, 1 Unit
Also offered as THETR 188.
Technique of Jazz Dance with explorations into contemporary derivations of jazz. Emphasis is given to technical style of this form, and to the interrelationship of music and movement. Field trips may be required. Lecture/Laboratory. (CSU, UC)

PEC 128,A—AEROBICS ½, 1 Unit
Aerobic movements for improved cardiovascular condition, muscle tone, flexibility, balance, agility, coordination and weight control. Lecture/Laboratory. (CSU, UC)

PEC 130—INTERNATIONAL FOLK DANCE ½, 1 Unit
Folk dance is accessible to the average person in good condition at this introductory level. Dances which originated with people living in or native to various countries/areas, such as Middle East, Balkans, Russia, etc. Dance exploration and recreation. Four maximum completions. Lecture/Laboratory. (CSU, UC)

PEC 133,A—BALLET ⅓, 1 Unit
Also offered as THETR 189.
Fundamental ballet techniques and terminology. Lecture/Laboratory. (CSU, UC)

PEC 134—CONTACT IMPROVISATION ½, 1 Unit
Contact improvisation is an exciting movement art form, exploring the vast potential for movement generated by two or more people, communicating spontaneously through weight, motion and touch. Four maximum completions. Lecture/Laboratory. (CSU)

PEC 140,A—EXERCISE FOR FITNESS ½, 1 Unit
Course in physical fitness with emphasis on cardiovascular improvement and respiratory efficiency through a variety of physical activities consisting of continuous motion exercises. Lecture/Laboratory. (CSU, UC)

PEC 141—FITNESS FOR SPECIAL POPULATIONS 1 Unit
Positive exercise experience to modify personal attitudes and actions toward health and physical activity. Specifically designed for the physically mature individual or those who may have experienced physical impairment. Lecture/Laboratory. (CSU, UC)

PEC 143,A—BEGINNING GOLF ½, 1 Unit
Fundamentals of golf. Students will be required to participate at local course at their own expense. Lecture/Laboratory. (CSU, UC)

PEC 144,A—INTERMEDIATE GOLF ½, 1 Unit
Recommended for Success: PEC 143 or equivalent.
Further application of fundamentals and rules. Students will be required to participate at local course at their own expense. Lecture/Laboratory. (CSU, UC)

PEC 145,A—ADVANCED GOLF ½, 1 Unit
Recommended for Success: PEC 144 or equivalent.
Golf course play and skills improvement on individual basis. Students will be required to participate at local course at their own expense. Lecture/Laboratory. (CSU, UC)

PEC 147,A—GYMNASTICS ½, 1 Unit
Use of parallel bars, horizontal bars, rings, balance beam and tumbling and progressing from simple mounts, dismounts, and individual stunts to simple and intermediate combination exercises. Lecture/Laboratory. (CSU, UC)

PEC 148,A—YOGA FOR BETTER HEALTH ½, 1 Unit
Fitness class using Yoga postures, breathing, and relaxation techniques to increase flexibility and strength, balance and coordination. Appropriate for all ages and learning abilities. Lecture/Laboratory. (CSU)

PEC 150,A—INTERMEDIATE YOGA FOR BETTER HEALTH ½, 1 Unit
Recommended for Success: PEC 148 or prior experience in yoga.
Intermediate class using yoga postures, breathing, and relaxation techniques to increase flexibility, strength, balance and coordination. Lecture/Laboratory. (CSU)

PEC 159—SPIRIT LEADERSHIP TRAINING 3 Units
Instruction, training and development of a corps of spirit leaders to promote enthusiasm for school athletic activities. (CSU)
PEC 164,A—SELF DEFENSE 1⁄2,1 Unit
A practical course in self defense. Practice of various basic techniques and principles of balance, leverage, and momentum. Discussion of how to avoid threatening situations in the home or on the street. Designed for law enforcement personnel, but open to all students. Lecture/Laboratory. (CSU, UC)

PEC 167—PADDLE TENNIS/PICKLEBALL 1⁄2,1 Unit
A net game played indoors with paddle racquets and whiffle balls. Team play and individual play. Lecture/Laboratory. (CSU, UC)

PEC 168,A—BEGINNING SWIMMING 1⁄2,1 Unit
Basic skills of floating, breathing, kicking, pulling, using arms and legs. Lecture/Laboratory. (CSU, UC)

PEC 170,A—ADVANCED SWIMMING 1⁄2,1 Unit
Recommended for Success: PEC 168 or equivalent. Perfect swimming skills; endurance swimming, starts and turns, practice of competitive strokes. Lecture/Laboratory. (CSU, UC)

PEC 171,A—SWIM FOR FITNESS 1⁄2,1 Unit
Recommended for Success: Ability to handle self in deep water. To meet individual needs in basic stroke techniques and endurance swimming for intermediate and/or advanced swimmers. Lecture/Laboratory. (CSU, UC)

PEC 172—LIFEGUARD TRAINING 1 Unit
Prerequisite: Pass swimming pre-test, be at least 15 years old. Preventive lifeguarding, learning how to recognize specific characteristic behaviors of patrons at an aquatic facility, facility emergency planning; First Aid and CPR for the Professional Rescuer included. Admission limited to those who are at least 15 years old and can pass a swimming pretest on the first day of class. Upon 80% passing rate students will be eligible to take the Ellis & Associates lifeguard certification exam. (CSU, UC)

PEC 173—WATER SAFETY INSTRUCTOR 1 Unit
Recommended for Success: Must be able to perform skills in the swimmer courses. Techniques, methods skills and knowledge necessary to teach nine American Red Cross course levels—infant to adult age. Certificates are awarded upon satisfactory completion to those students who were at least 17 years old on the first day of class. Lecture/Laboratory. (CSU, UC)

PEC 174,A—TABLE TENNIS 1⁄2,1 Unit
Instruction in basic skills, rules, strategy, practice in singles and doubles play, plus supplemental films, video tapes and class competition. Lecture/Laboratory. (CSU, UC)

PEC 175,A—BEGINNING TENNIS 1⁄2,1 Unit
Fundamentals of tennis. Lecture/Laboratory. (CSU, UC)

PEC 176,A—INTERMEDIATE TENNIS 1⁄2,1 Unit
Recommended for Success: PEC 175 or equivalent. Development of net and backcourt skills and strategies, net play, volleying, and proficiency in rules, terminology, and etiquette. Lecture/Laboratory. (CSU, UC)

PEC 177,A—ADVANCED TENNIS 1⁄2,1 Unit
Recommended for Success: PEC 176 or equivalent. Skills and strategy of competitive tennis, including tournaments, and ladder play. Lecture/Laboratory. (CSU, UC)

PEC 178,A—TOURNAMENT TENNIS 1⁄2,1 Unit
Recommended for Success: PEC 177 or competitive tennis experience. Designed for the expert tennis player and includes intra-class competition. Lecture/Laboratory. (CSU, UC)

PEC 179,A—TRACK AND FIELD 1⁄2,1 Unit
Generalized training and techniques for track and field. Lecture/Laboratory. (CSU, UC)

PEC 182,A—TRAINING FOR DISTANCE RUNNING 1⁄2,1 Unit
Become better prepared for endurance distance running with organized training runs. Information on creating an effective training program, nutrition, weight training and cross training. Field trips may be required. Lecture/Laboratory. (CSU, UC)

PEC 183,A—VOLLEYBALL 1⁄2,1 Unit
Fundamentals of volleyball. Lecture/Laboratory. (CSU, UC)

PEC 184,A—POWER VOLLEYBALL 1⁄2,1 Unit
Recommended for Success: PEC 183 or equivalent. Power volleyball for team play. Advanced offensive and defensive strategy and game skills. Lecture/Laboratory. (CSU, UC)

PEC 185,A—HIKING 1⁄2,1 Unit
This course emphasizes using and creating familiarity with trails within this area (a parameter of no more than two hours by car). Lectures will also cover the use of compass and map, various hiking themes, hiking activities, hiking safety, and awareness of the unique aspects of areas to be hiked. Lecture/Laboratory. Four maximum completions. Field trips required. (CSU)

PEC 186,A—INTERMEDIATE VOLLEYBALL 1⁄2,1 Unit
Intermediate skills and theory. Intermediate offensive and defensive strategy. Lecture/Laboratory. (CSU, UC)

PEC 187,A—PILATES FOR FITNESS 1⁄2,1 Unit
A fitness class that utilizes the Pilates exercise system focused on improving flexibility and strength for the total body through a series of controlled movements. Pilates exercises can improve posture, alignment, coordination and balance. Movements are designed to tone muscles without putting stress on the spine. For people of all ages and fitness levels. Lecture/Laboratory. (CSU)

PEC 190,A—ADVANCED WATER POLO 1⁄2,1 Unit
Recommended for Success: PEC 189 or equivalent. Advanced team play and game strategy in water polo for recreation exercise. Lecture/Laboratory. (CSU, UC, Summer)

PEC 191,A—POWERLIFTING 1⁄2,1 Unit
Prerequisite: PEC 195 or PEW 192. Advanced techniques of effective strength training in a supervised weight training program with emphasis on traditional powerlifting using free weight. Lecture/Laboratory. (CSU)

PEC 195—WEIGHT TRAINING 1⁄2,1 Unit
Principles and procedures of effective strength training techniques in a supervised weight training program. Lecture/Laboratory. (CSU, UC)

PEC 197—ADVANCED WEIGHT TRAINING 1⁄2,1 Unit
Recommended for Success: PEC 195 or PEW 192. Advanced techniques of effective strength training in a supervised weight training program with emphasis on Olympic lifts with free weight. Lecture/Laboratory. (CSU).

The PEI series, Intramural activities providing opportunity for individual and group competition. See previous section on “Repeat Limitations on Physical Education Courses.” Laboratory: 2 hours per week. (CSU, UC, CR/NC, 9 wks.)

PEI 112 FOOTBALL ........................................ 1⁄2 Unit
PEI 117 SOFTBALL ........................................ 1⁄2 Unit
PEI 122 INTERMEDIATE TENNIS ...................... 1⁄2 Unit
PEI 123 ADVANCED TENNIS .......................... 1⁄2 Unit
PEI 125 TABLE TENNIS .................................. 1⁄2 Unit
PEI 129 VOLLEYBALL .................................... 1⁄2 Unit
Courses listed below offer advanced instruction and intensive training in sports fundamentals to develop teams for intercollegiate competition. A varsity activity may be taken a maximum of four times.

Participation in intercollegiate sports requires concurrent enrollment in not less than 12 units of work, nine of which must be in courses counting toward the associate degree, remediation, transfer and/or certification. Special medical examinations are required for students participating in competitive sports. Verification of insurance is also required. Participation in a second sport or a second year of a sport requires a 2.0 grade point average and 24 units passed.

**PE: Men's Activities - PE: Varsity Women's Activities**

### Physical Education:
**Men's Activities (PEM)**
"MPEM" in the Schedule of Classes

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<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>PEM 108</td>
<td>BASEBALL</td>
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<tr>
<td>PEM 111</td>
<td>BASEBALL - TEAM PLAY CONCEPTS</td>
</tr>
<tr>
<td>PEM 112</td>
<td>BEGINNING BASKETBALL</td>
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<tr>
<td>PEM 113</td>
<td>INTERMEDIATE BASKETBALL</td>
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<tr>
<td>PEM 114</td>
<td>ADVANCED BASKETBALL</td>
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<tr>
<td>PEM 115</td>
<td>A—BASKETBALL TEAM PLAY CONCEPTS</td>
</tr>
<tr>
<td>PEM 140</td>
<td>TOUCH FOOTBALL AND KANAKI</td>
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<td>PEM 141</td>
<td>ADVANCED TOUCH FOOTBALL</td>
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<tr>
<td>PEM 162</td>
<td>SOCCER</td>
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<td>PEM 196</td>
<td>ADVANCED WRESTLING</td>
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### PEVM Courses

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<tbody>
<tr>
<td>PEVM 100</td>
<td>VARSITY BASEBALL</td>
</tr>
<tr>
<td>PEVM 105</td>
<td>MEN'S VARSITY BASKETBALL (Fall)</td>
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<tr>
<td>PEVM 106</td>
<td>MEN'S VARSITY BASKETBALL (Spring)</td>
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<tr>
<td>PEVM 110</td>
<td>MEN'S VARSITY CROSS-COUNTRY</td>
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<tr>
<td>PEVM 115</td>
<td>VARSITY FOOTBALL</td>
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<tr>
<td>PEVM 120</td>
<td>MEN'S VARSITY GOLF</td>
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<tr>
<td>PEVM 122</td>
<td>MEN'S VARSITY SOCCER</td>
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<tr>
<td>PEVM 125</td>
<td>MEN'S VARSITY SWIMMING AND DIVING</td>
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<tr>
<td>PEVM 130</td>
<td>MEN'S VARSITY TENNIS</td>
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<td>PEVM 135</td>
<td>MEN'S VARSITY TRACK-FIELD</td>
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<tr>
<td>PEVM 140</td>
<td>MEN'S VARSITY WATER POLO</td>
</tr>
<tr>
<td>PEVM 145</td>
<td>VARSITY WRESTLING</td>
</tr>
</tbody>
</table>

### Physical Education:
**Varsity Men's Activities (PEVM)**
"MPEVM" in the Schedule of Classes

### Physical Education:
**Varsity Women's Activities (PEVW)**
"MPEVW" in the Schedule of Classes

Courses listed below offer advanced instruction and intensive training in sports fundamentals to develop teams for intercollegiate competition. A varsity activity may be taken a maximum of four times.

Participation in intercollegiate sports requires concurrent enrollment in not less than 12 units of work, nine of which must be in courses counting toward the associate degree, remediation, transfer and/or certification. Special medical examinations are required for students participating in competitive sports. Verification of insurance is also required. Participation in a second sport or a second year of a sport requires a 2.0 grade point average and 24 units passed.

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**Courses and Academic Programs**

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PEVW Courses

PEVW 100—WOMEN’S VARSITY BASKETBALL (Fall) 3 Units
Instruction, training, and competition in intercollegiate basketball. Laboratory/Other. (CSU, UC, Fall)

PEVW 101—WOMEN’S VARSITY BASKETBALL (Spring) 1½ Units
Recommended for Success: PEVW 100
Continued instruction, training and competition in intercollegiate basketball. Laboratory/Other. (CSU, UC, Spr.)

PEVW 103—WOMEN’S VARSITY CROSS COUNTRY 3 Units
Instruction, training, and competition in intercollegiate cross country running. Laboratory/Other. (CSU, UC, Fall)

PEVW 115—WOMEN’S VARSITY GOLF 3 Units
Instruction, practice, and competition in intercollegiate golf. Four maximum completions. Laboratory/Other. (Fall, CSU, UC)

PEVW 120—WOMEN’S VARSITY SOFTBALL 3 Units
Instruction, training, and competition in intercollegiate softball. Laboratory/Other. (CSU, UC, Spr.)

PEVW 123—WOMEN’S VARSITY SOCCER 3 Units
Instruction, training and competition in intercollegiate soccer. Laboratory/Other. (CSU, UC, Fall)

PEVW 125—WOMEN’S VARSITY SWIMMING AND DIVING 3 Units
Instruction, training, and competition in swimming and diving. Laboratory/Other. (CSU, UC, Spr.)

PEVW 130—WOMEN’S VARSITY TENNIS 3 Units
Instruction, training, and competition in intercollegiate tennis. Laboratory/Other. (CSU, UC, Spr.)

PEVW 135—WOMEN’S VARSITY TRACK AND FIELD 3 Units
Instruction, training, and competition in intercollegiate track and field events. Laboratory/Other. (CSU, UC, Spr.)

PEVW 140—WOMEN’S VARSITY VOLLEYBALL 3 Units
Instruction, training, and competition in intercollegiate volleyball. Laboratory/Other. (CSU, UC, Fall)

PEVW 145—WOMEN’S VARSITY WATER POLO 3 Units
Instruction, training, and competition in intercollegiate water polo. Four maximum completions. Laboratory/Other. (CSU, UC, Fall)

Physical Science (PHSCI)

PEW 180—WOMEN’S SOFTBALL 1½ Units
Discussion and practical application of rules, strategy, fielding, throwing, baserunning, team offense, and team defense. Lecture/Laboratory. Not offered every semester. (CSU, UC)

PEW 182—WOMEN’S WEIGHT TRAINING 1½ Units
Introduction to individual opportunities in development of power, strength, flexibility and/or endurance through weight training. Lecture/Laboratory. (CSU, UC)

Physical Science: Women's Activities (PEW)

PEW 116—EXERCISE FOR HEALTHY LIVING ½,1 Unit
The theory of exercise, including techniques of endurance, methods of strength attainment, flexibility training, nutritional influences on exercise and weight control. Lecture/Laboratory. (CSU, UC)

PEW 164—WOMEN’S INDOOR-OUTDOOR SOCCER ½,1 Unit
Practical application of basic offensive and defensive tactics; individual and team skills; strategy and rules review; scrimmages. Indoor rules and techniques will be applied when facility is available. Lecture/Laboratory. (CSU, UC)

PEW 166—WOMEN’S SELF DEFENSE ½,1 Unit
A practical course in women’s self defense. Practice of various basic techniques and principles of balance, leverage and momentum. Discussion and practical exercises on how to avoid threatening situations in the home or on the street. Open to all female students. Lecture/Laboratory. (CSU, UC)

AS Degree: Physical Science

This curriculum plan is intended for those interested in transferring to a four-year college or university. However, the courses in this program do not necessarily fulfill the prerequisites for the major at any particular institution. Students are encouraged to consult with the physical science and counseling staff in order to choose courses satisfying the prerequisites of the major and addressing the student’s career goals.

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 26 units

Complete all of the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>1</td>
<td>General Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 102</td>
<td>1</td>
<td>General Chemistry</td>
<td></td>
</tr>
<tr>
<td>MATH 171</td>
<td>1</td>
<td>Calculus: First Course</td>
<td>Calculus: Second Course</td>
</tr>
<tr>
<td>MATH 172</td>
<td>2</td>
<td>Calculus: Second Course</td>
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Complete one of the following Physics sequences

**Sequence A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>NP</td>
<td>General Physics</td>
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</tr>
<tr>
<td>PHYS 102</td>
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**Sequence B**

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<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
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</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>NP</td>
<td>General Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 103</td>
<td>NP</td>
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</table>

**Sequence C**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
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</thead>
<tbody>
<tr>
<td>PHYS 142</td>
<td>NP</td>
<td>Mechanics, Heat, and Waves</td>
<td></td>
</tr>
<tr>
<td>PHYS 143</td>
<td>NP</td>
<td>Electromagnetism, Optics, Atomic and Nuclear Structure</td>
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ELECTIVE COURSES - Complete 4 units

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<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTRO 141</td>
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<td>Introduction to Astrophysics</td>
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</tr>
<tr>
<td>ASTRO 151</td>
<td>1</td>
<td>Introduction to Astronomy Laboratory</td>
<td></td>
</tr>
<tr>
<td>ASTRO 152</td>
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</tr>
<tr>
<td>ASTRO 160</td>
<td>3</td>
<td>Introduction to Modern Astronomy</td>
<td></td>
</tr>
<tr>
<td>CHEM 112</td>
<td>5</td>
<td>Organic Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 113</td>
<td>5</td>
<td>Organic Chemistry</td>
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</tr>
<tr>
<td>GEOL 161</td>
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<td>Physical Geology</td>
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<td>EASCI 161</td>
<td>4</td>
<td>Earth Science</td>
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</tr>
<tr>
<td>MATH 173</td>
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<td>PHYS 102</td>
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<td>General Physics</td>
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</tr>
<tr>
<td>PHYS 103</td>
<td>4</td>
<td>General Physics</td>
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</tbody>
</table>

TOTAL UNITS FOR A.S. MAJOR 30
Physical Science Courses

PHSCI 52—THE WAY THINGS WORK 3 Units
Basic physical principles underlying common devices such as cameras, electrical systems, home appliances, automobiles. General understanding of basic principles in order to analyze a wide range of other common devices. Lecture.

PHSCI 62—MATHEMATICAL SKILLS FOR THE SCIENCES ½ Unit
Prerequisite: Eligibility for MATH 90.
Also offered as MATH 62.
An overview of the essential mathematical skills for success in the sciences. Topics include units conversion, percentages, scientific notation, graphing data, and an introduction to the use of logarithms. Lecture.

PHSCI 161—SCIENCE MATTERS 3 Units
The basic ideas—conceptual and applied—underlying all physical science. Specific areas of the traditional triad of physical, earth, and chemical sciences are explored. Designed to develop science literacy. Field trips may be required. Lecture. Not offered every semester. (CSU, UC)

PHSCI 164—PHYSICAL SCIENCE ENVIRONMENTAL LABORATORY 1 Unit
Concurrent enrollment in or previous completion of PHSCI 161.
Experience using applications in physical science; e.g., physical science environments and related sciences. Field trips may be required. Laboratory. Materials fee may be required. Not offered every semester. (CSU, UC, Spring)

Physical Therapy, Pre
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Physics (PHYS)
"MPHYS" in the Schedule of Classes

PHYS 101—GENERAL PHYSICS: MECHANICS 4 Units
Prerequisites: PHYS 165 and MATH 171.
Concurrent Enrollment: MATH 172.
Introduction to calculus-based physics: linear, rotational, and oscillatory mechanics with computer applications. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN PHYS 8, CAN PHYS SEQ B, CSU, UC, Spring) (CC PHYS 5A)

PHYS 102—GENERAL PHYSICS: WAVES, THERMODYNAMICS, AND OPTICS 4 Units
Prerequisites: PHYS 101 and MATH 172.
Continuation of calculus-based physics: thermodynamics, wave motion, acoustics, and optics. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN PHYS 14, CAN PHYS SEQ B, CSU, UC, Fall)

PHYS 103—GENERAL PHYSICS 4 Units
Prerequisites: PHYS 101 and MATH 172.
Continuation of calculus-based physics, electricity, magnetism, and modern physics. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN PHYS 12, CAN PHYS SEQ B, CSU, UC, Spring) (CC PHYS 5B)

PHYS 142—MECHANICS, HEAT AND WAVES 4 Units
Prerequisite: MATH 115 or 122 or qualification by the MJC assessment process.
Non-calculus introduction to principles and laws of mechanics, thermodynamics and waves. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN PHYS 2, CAN PHYS SEQ A, CSU, UC, Fall) (CC PHYS 4A)

PHYS 143—ELECTRICITY, MAGNETISM, OPTICS, ATOMIC AND NUCLEAR STRUCTURE 4 Units
Prerequisite: PHYS 142.
Continuation of PHYS 142, including electricity, magnetism, light and atomic structure. Field trips may be required. Lecture/Laboratory/Discussion. Materials fee may be required. (CAN PHYS 4, CAN PHYS SEQ A, CSU, UC, Spring) (CC PHYS 48)

PHYS 160—DESCRIPTIVE INTRODUCTION TO PHYSICS 3 Units
Prerequisite: Satisfactory completion of MATH 70 or qualification by MJC assessment process.
Survey of main topics of physical inquiry including electricity and magnetism, light and optics, wave motion, mechanics, heat, atomic and nuclear theory. Field trips may be required. Lecture. (CSU, UC) (CC PHYSCS 1)

PHYS 164—PHYSICS ENVIRONMENTAL LABORATORY 1 Unit
Concurrent enrollment in or previous completion of PHYS 160.
Experience using applications in physical science; e.g., physics environments and related sciences. Field trips may be required. Laboratory. Materials fee may be required. Not offered every semester. (CSU, UC)

PHYS 165—INTRODUCTORY PHYSICS 4 Units
Recommended for Success: Satisfactory completion of MATH 115 or 122, or qualification by the MJC assessment process.
Introduction to physics through the study of measurement in the areas of mechanics, wave motion, thermodynamics, and electricity. Develops the theoretical and experimental foundation for PHYS 101 and PHYS 142. Lecture/Laboratory/Discussion. Materials fee may be required. (CSU, UC, Spring)

Physiology (PHYSO)
"MPHYSO" in the Schedule of Classes

PHYSO 101—INTRODUCTORY HUMAN PHYSIOLOGY 4 Units
Prerequisite: Successful completion of ANAT 125 and satisfactory completion of CHEM 143.
Study of function, integration and homeostasis of the major body systems using biochemistry, cell metabolism, acid-base relationships and membrane functions. (CAN BIOL 12, CAN BIOL SEQ B, CSU, UC) (CC BIOL 60)

Plant Science (PLSC)
"MPLSC" in the Schedule of Classes

Crop Science Program
The student acquires skills in production of the common row and field crops grown in the Central Valley. Specific skills are emphasized in seedbed preparation, planting, fertilizing, weed control, pest management, harvesting, and marketing. Training leads to farming as well as employment in allied businesses such as fertilizer or agricultural chemical companies, seed companies, processing companies, and other related industries. Contact the division office in the Agriculture Building for advising assistance.

AS Degree: Crop Science
• To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.
I. Agriculture Career Core - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers ..1
AG 349A-D [NP] Work Experience....................................4 OR
AG 249 [NP] Agriculture Internship.................................4

II. Agriculture Science Breadth Core - Complete 9 units
ANSC 200 [2,3,4] Introduction to Animal Science.........................3
NR 200 [2] Soils ................................................................4
AGM 200 [2,3,4] Introduction to Mechanical Technology..............3
AGEC 225 [2,3,4] Agriculture Computer Applications OR
AGEC 210 [2,3,4] Elements of Agriculture Economics OR
AGEC 200 [2,3,4] Agriculture Accounting and Analysis................3

III. Agriculture Major Courses - Complete 9 units
PLSC 200 [1] Introduction to Plant Science ...............................3
PLSC 205 [2] Field Crops......................................................4
PLSC 215 [1] Vegetable Crops.................................................3

IV. Agriculture Major Electives - Complete 7 units
AG 280 [1] Agricultural Computations ...................................3
AGM 220 [2,3,4] Farm Machinery .........................................3
AGM 235 [2,3,4] Irrigation and Drainage .................................3
PLSC 260 [2,3,4] Plant Disease Control.................................3
PLSC 380 [2,3,4] Weed Control .............................................2

TOTAL UNITS FOR A.S. MAJOR ........................................30

Fruit Science Program

The student will develop skills and knowledge in managing a horticultural fruit production operation. Training in this course includes practical horticultural skills such as propagation, pruning, thinning, planting, and management skills, such as supervision of labor, selecting insurance, credit, orchard planning, spray programs, and calendar of operation. The program also prepares students for transfer to a four-year college. Contact the division office in the Agriculture Building for advising assistance.

AS Degree: Fruit Science

* To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Courses - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers ..1
AG 349A-D [NP] Work Experience....................................4 OR
AG 249 [NP] Agriculture Internship.................................4

II. Agriculture Science Breadth Courses - Complete 9 units
ANSC 200 [1,2] Introduction to Animal Science .......................3
NR 200 [3,4] Soils ..............................................................4
AGM 200 [1,2] Introduction to Mechanical Technology ..............3
AGEC 225 [1,2] Agriculture Computer Applications OR
AGEC 210 [1,2] Elements of Agriculture Economics OR
AGEC 200 [1,2] Agriculture Accounting and Analysis ................3

III. Agriculture Major Courses - Complete 9 units
Complete 3 units
PLSC 230 [1,2] Fruit Science ................................................3

Complete 6 units
PLSC 241 [3,4] Viticulture ....................................................3
PLSC 255 [3,4] Plant Pest Control ........................................3
PLSC 200 [1,2] Introduction to Plant Science ........................3
PLSC 260 [3,4] Plant Disease Control ..................................3

IV. Agriculture Major Electives - Complete 7 units
PLSC 235 [3,4] Plant Propagation/Production
AG 220 [3,4] Agribusiness Management ................................3
PLSC 250 [3,4] Plant Nutrition and Fertilizers .......................3
AGM 235 [3,4] Irrigation and Drainage ..................................3

ANY CLASS NOT ALREADY TAKEN IN AREA III

TOTAL UNITS FOR A.S. MAJOR ........................................30

Soil Science

In this program the student will develop skills and knowledge for entry-level employment in fields of soil and water management. These fields may include conservation, analysis, survey and farm management, as well as related fields such as range management, hydrology, irrigation, drainage, fertilization, and rural and urban planning. This program will also prepare the student for transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

AS Degree: Soil Science

* To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

I. Agriculture Career Core - Complete 5 units
AG 115 [1] Introduction to Agricultural Education and Careers ..1
AG 349A-D [NP] Work Experience....................................4 OR
AG 249 [NP] Agriculture Internship.................................4

II. Agriculture Science Breadth Core - Complete 9 units
PLSC 200 [1,2] Introduction to Plant Science ..........................3
ANSC 200 [1,2] Introduction to Animal Science .......................3
AGM 200 [1,2] Introduction to Mechanical Technology ..............3
AGEC 200 [3,4] Agriculture Accounting and Analysis ................3 OR
AGEC 210 [3,4] Elements of Agriculture Economics .................3 OR
AGEC 225 [3,4] Agriculture Computer Applications ................3

III. Agriculture Major Courses - Complete 9 units
Complete 4 units
NR 200 [1,2] Soils ..............................................................4

Complete 5 units
AGM 235 [3,4] Irrigation & Drainage ....................................3
PLSC 250 [3,4] Plant Nutrition & Fertilizers ........................3
PLSC 230 [1,2] Fruit Science ................................................3
PLSC 205 [1,2] Field Crops..................................................3
NR 220 [3,4] Introductory Forestry .......................................3
PLSC 241 [3,4] Viticulture ....................................................3

IV. Agriculture Major Electives - Complete 7 units
NR 222 [1,2] Native Plants Identification ...............................3
NR 224 [3,4] Mapping & Photo Interpretation .........................3
EHS 210 [1,2] Introduction to Environmental Horticulture ........3
PLSC 255 [3,4] Plant Pest Control ........................................3
AGM 230 [1,2] Field Surveying .............................................2
PLSC 260 [3,4] Plant Disease Control ...................................3
AGGE 146 [3,4] Agriculture, Environment & Society ..............3

Any course not already taken in Area III. above

TOTAL UNITS FOR A.S. MAJOR ........................................30
Plant Science Courses

PLSC 50—PREPARATORY PLANT SCIENCE 3 Units
Preparation in plant science including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants. Field trips required. Lecture.

PLSC 200—INTRODUCTION TO PLANT SCIENCE 3 Units
Introduction to plant science, including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants. Field trips required. Lecture. (CAN AG 8, CSU, UC, GR)

PLSC 205—FIELD CROPS 3 Units
Economic importance, adaptation, cultural practices, irrigation, integrated pest management, cost analysis, calendar of operations, and marketing in the production of field crops (including: barley, oats, wheat, corn, grain sorghum, alfalfa, rice, dry beans, sugar beets, cotton, and seed crops). Field trips required. Lecture/Laboratory. (CSU, GR)

PLSC 215—VEGETABLE CROPS 3 Units
Vegetable crops common to the area; economic importance, cultural sequence, fertilization, irrigation, cultivation, integrated pest control, harvest and related factors; marketing, cost analysis, risks; environmental relationships including moisture, temperature, soil and weather in the production of vegetable crops. Field trips required. Lecture/Laboratory. (CU, UC, GR)

PLSC 230—FRUIT SCIENCE 3 Units
Elementary botany of fruit and nut crops including growth and fruiting habits, varieties, characteristics and adaptations; environmental factors influencing local fruit production; pruning and training procedures on local fruit crops. Field trips required. Lecture/Laboratory. (CSU, UC, GR)

PLSC 235—PLANT PROPAGATION/PRODUCTION 3 Units
Also offered as EHS 235.
Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest and disease control, structures and site layout. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Regulations pertaining to plant production. Field trips required. Lecture/Laboratory. Not offered every semester. (CSU, GR)

PLSC 241—VITICULTURE 3 Units
Recommended for Success: NR 200 and PLSC 200.
California grape production; study of table and wine grape varieties, uses, adoptions and products, production practices, propagation and planting, training, pruning and irrigation systems; recognition and control of grape pests and diseases. Student is required to design a new vineyard and critique an existing operation. Field trips required. Lecture/Laboratory. (CSU, GR, Fall)

PLSC 244—WINE GRAPE VINEYARD DEVELOPMENT 1 Unit
Wine grape vineyard development including site evaluation through vineyard design, development planning and scheduling, installation, and management. Field trips may be required. Three maximum completions. Lecture. (CSU)

PLSC 248—ORCHARD MANAGEMENT 3 Units
Evaluation of local fruit production factors including soils, climate, irrigation, fertilization, and harvesting; fruit ranch organization emphasizing investment, labor, production cost and sales. Student is required to outline calendar of orchard operations. Field trips required. Lecture/Laboratory. (CSU, GR)

PLSC 250—PLANT NUTRITION AND FERTILIZERS 3 Units
Recommended for Success: NR 200
An overview of plant nutrition principles in order to understand fertilizers, their uses, value, application, and relationship to soils and to crops grown in this area. Deficiency symptoms, pH, soil and plant tissue testing, and environmental factors and concerns. Field trips required. Lecture/Laboratory. (CSU, GR)

PLSC 255—PLANT PEST CONTROL 3 Units
Study of crop pests and insects, their morphology, identification, life cycles, host and habitat relationships, methods and materials of control. Lecture/Laboratory. (CSU, UC, GR)

PLSC 260—PLANT DISEASE CONTROL 3 Units
Study of common local crop diseases, their economic importance, identification, life cycles, host and habitat relationships, and methods of control. Field trips required. Lecture/Laboratory. (CSU, GR)

PLSC 374—BEEKEEPING 2 Units
Principles of beekeeping designed for both commercial and small operation beekeepers. Includes all basic operations necessary for successful beekeeping. Field trips may be required. Lecture/Laboratory. (GR)

PLSC 380—WEED CONTROL 2 Units
Identification, life cycle, and control of common, noxious, and poisonous California weeds. Fundamentals of preventive, cultural, biological, physical, and chemical control methods. Field trips may be required. Lecture/Laboratory. (GR)

PLSC 383—PESTICIDE APPLICATION 1½ Units
Designed to train students as pest control applicators and assist in passing state certification and licensing exams. Emphasis on the correct and safe method of using pesticides. Field trips required. Two maximum completions. Lecture. (GR)

PLSC 385—PRUNING 1 Unit
Pruning of deciduous fruits, nuts and vines. Care and maintenance of tools and equipment. Proper irrigation, fertilization, and insect control also included. Field trips required. Lecture/Laboratory. Saturday labs. (GR)

PLSC 386—BUDDING AND GRAFTING 1 Unit
Proper budding and grafting procedures for local fruit and nut crops. Use of correct tools is included. Field trips required. Lecture/Laboratory. Saturday labs. (GR)

PLSC 387—SEMINAR IN INTEGRATED PEST MANAGEMENT 1 Unit
Current topics and discussion on integrated pest management, designed to satisfy Department of Pesticide Regulation requirements for certified pesticide applicator’s continuing education. Field trips may be required. Four maximum completions. Lecture. (GR)

PLSC 388—SEMINAR IN INTEGRATED PEST MANAGEMENT 2 1 Unit
Current topics and discussion on integrated pest management, designed to satisfy Department of Pesticide Regulation requirements for certified pesticide applicator’s continuing education. Students who complete the maximum completions of PLSC 387 should enroll in this course. Lecture. Field trips may be required. Four maximum completions. (GR)

PLSC 202—THE CONSTITUTION AND THE RIGHTS OF AMERICANS 3 Units
Introduction to United States politics emphasizing the essential institutions, groups, beliefs, behaviors and processes that comprise the American political system at the national, state, and local levels. Special attention to rights and obligations of citizenship. Lecture. (CAN GOVT 2, CSU, UC) (CC POLSC 10)

PLSC 101—AMERICAN POLITICS 3 Units
Introduction to U.S. constitutional government emphasizing the principles and problems of a constitutional system: governmental powers and sources of power at the national, state and local levels. Special emphasis on the role of the courts and the rights and responsibilities of democratic citizenship, including units on racial and sexual discrimination, the rights of the accused, privacy, political participation, and freedom of expression and religion. Special attention to current constitutional problems at the national and state levels. Lecture. (CSU, UC)
POLSC 110—INTERNATIONAL RELATIONS 3 Units
Introduction to principles and practices of international politics emphasizing problems of war and peace, foreign policies of major powers, problems of third world nations. Emphasis on formulation of American foreign policy within constitutional and political frame. A special unit will cover U.S. constitutional questions as well as California state and local government. Field trips may be required. Lecture. (CSU, UC)

POLSC 111—WAR AND PEACE IN THE TWENTIETH CENTURY 3 Units
Survey of major events and personalities in international politics since 1914. Topics include World Wars I and II; Russian Revolution; Lenin; Hitler; Mussolini; Churchill; rise of Communism in China; the Cold War; revolution in nuclear weapons and the third world; Desert Storm, war in Kosovo. Lecture. (CSU, UC)

POLSC 120—CALIFORNIA POLITICS AND PROBLEMS 3 Units
Analysis of government institutions, politics, issues and political behavior in California in constitutional, social, economic and cultural perspective. Included are studies of issues confronted by U.S. and California state, county, city and regional governments including political representation, resources and energy, land use and planning, population growth, poverty, education, criminal justice, pollution, budgets and taxation. Special attention to the rights and obligations of citizenship. One day field trip to State Capital may be required. Lecture. (CSU, UC)

POLSC 130—POLITICAL THEORY 3 Units
Also offered as PHIL 130.
A study of social and political thought using classical and contemporary writings, with emphasis on current issues. Ideologies discussed include democracy, socialism, capitalism, communism, fascism, and anarchism. Lecture. (CSU, UC)

POLSC 140—COMPARATIVE POLITICS 3 Units
Recommended for political science majors.
Comparative survey of major totalitarian, authoritarian and democratic political systems. Emphasis on Great Britain, France, Germany, Russia, People's Republic of China, Japan and selected Third World countries. Participation in Model United Nations may be required. Lecture. (CSU, UC)

POLSC 151—WOMEN AND POLITICS 3 Units
The status and role of women in American politics from philosophical, empirical, and historical perspectives. The unique place of women in American political history, public policy development, the law, and as political leaders. Women in the international political arena, including leaders and public policy issues. Lecture. Field trips may be required. (CSU, UC)

POLSC 190—MODEL UNITED NATIONS 3 Units
Enrollment limited to 15.
Study of International Organization in International Politics with a special emphasis on the institutions and processes of the United Nations. Participation in a five day Model United Nations simulation of the UN is required. Lecture. Field trips required. (CSU, UC)

PORTG 51—INTRODUCTION TO PRACTICAL PORTUGUESE 1 3 Units
Basic conversational Portuguese. Emphasis on the development of conversational skills rather than on reading and writing. Designed for students who need to speak Portuguese in their work or who wish to refresh their Portuguese-language background, or who need preparation for PORTG 101. Lecture/Laboratory. (Fall)

PORTG 52—INTRODUCTION TO PRACTICAL PORTUGUESE 2 3 Units
Recommended for Success: PORTG 51
A continuation of PORTG 51. Designed for those who need it for their work, travel, or to prepare for PORTG 101. Lecture/Laboratory. (Spr.)
PSYCH 110—HUMAN SEXUALITIES 3 Units
Study of human sexualities from a biopsychosocial perspective. The intersections of biology, culture, ethnicity, race, social class, sexual orientation and gender as they relate to sexualities will be explored throughout the course. Lecture. (CSU, UC) (CC PSYCH 5)

PSYCH 111—PSYCHOLOGY OF GENDER 3 Units
Recommended for Success: PSYCH 101
A survey of various factors in the development of gender identity and gender roles, including psychological, sociological, biological and cultural influences. Lecture. Field trips may be required. (CSU, UC)

PSYCH 118—PHARMACOLOGY OF ABUSED SUBSTANCES 3 Units
Also offered as HUMSR 118. Recommended for Success: HUMSR 116 or PSYCH 101.
An introduction to psychopharmacology and the process of drug addiction. Topics include classification of abused and psychotherapeutic drugs, basic principles of pharmacology, behavioral and psychological effects of drugs, major neurotransmitter systems and how they are influenced by drugs. Lecture. (CSU)

PSYCH 130—PERSONAL ADJUSTMENT 3 Units
The study of personal growth and adjustment. Includes discussion of personality development, interpersonal relationships, stress management, work, and other concerns of the individual in society. Lecture. (CSU)

PSYCH 141—HUMAN LIFESPAN 3 Units
Recommended for Success: PSYCH 101 and ENGL 101 eligibility.
Introduction to the scientific study of human development from conception through adulthood. Examines interplay of biological, psychological, social and cultural forces on the developing human being. Field trips may be required. Lecture. (CSU)

Public Administration
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Public Relations
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Radio/Television (RATV)
"MRATV" in the Schedule of Classes

Radio students at MJC learn in an environment designed to be as close to the "real world" of professional broadcasting as possible. The Radio Broadcasting program is designed to teach students skills in production, announcing, and writing. These courses are put to work on the campus radio station, MJC wavradio, which is operated daily by broadcasting students as a model commercial broadcasting station employing current FCC standards and practices. The Modesto area provides advanced students ample opportunities for internships, part-time employment, and independent directed studies.

Radio Broadcasting Program

Certificate: Radio Broadcasting

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 13 units
RATV 131 [1] Introduction to Radio Production
RATV 137 [NP] Radio and Television Announcing
RATV 138 [NP] Writing for Radio and Television

ELECTIVE COURSES - Complete 4 units
Select one course from the following:
RATV 133 [3] Advanced Radio Production

If necessary, select one course from the following:
RATV 101 [NP] Basic Voice Improvement
RATV 134 [NP] Television Studio Production
RATV 150 [NP] Introduction to Mass Communication
CMGPR 287 [NP] Introduction to Multi-Media

TOTAL UNITS FOR CERTIFICATE.................................................. 17

AA Degree: Radio Broadcasting

• To earn an Associate in Arts Degree, student must complete the 13 Required Units and 7 Elective Units, plus meet the MJC Graduation Requirements. (Student should consult with Radio Broadcasting advisor regarding choice of Elective Units.) Students who plan to transfer to a four-year college or university should consult with a Radio Broadcasting faculty advisor to ensure that all required transfer courses are completed.

REQUIRED COURSES - Complete 13 units
RATV 131 [1] Radio Control Room and Studio Production
RATV 137 [NP] Radio and Television Announcing
RATV 138 [NP] Writing for Radio and Television

ELECTIVE COURSES - Complete 7 units
RATV 101 [NP] Basic Voice Improvement
RATV 133 [2] Radio Production
RATV 150 [1] Introduction to Radio and Television
THETR 120 [NP] Oral Reading and Interpretation

TOTAL UNITS FOR A.A. MAJOR.................................................. 20

Radio/Television Courses

RATV 101—BASIC VOICE IMPROVEMENT 3 Units
Also offered as SPCOM 101 and THETR 101.
Training program in basic voice improvement. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. Credit given for only one of SPCOM 101, RATV 101, or THETR 101. This is not a class for persons with a major speech impediment. Lecture. (CAN DRAM 6, CSU, UC, Fall) (CC CAM 18)
RATV 131—RADIO CONTROL ROOM AND STUDIO PRODUCTION  
Theory and operation of broadcast audio control room and studio equipment. Basic planning and production techniques for radio programs, station promotions, commercial and public service announcements. Field trips may be required. Lecture/Laboratory. (CSU)  
3 Units

RATV 132—ADVANCED RADIO PRODUCTION 1  
Prerequisite: RATV 131  
Students operate a limited power radio station incorporating standard broadcast procedures and practices and exercising their skills in the production of commercials and public service announcements, promotional announcements, news, and remote broadcasts. Students may produce programs for community commercial stations. Field trips may be required. Two maximum completions. Lecture/Laboratory. (CSU)  
4 Units

RATV 133—ADVANCED RADIO PRODUCTION 2  
Prerequisite: RATV 132  
Continuation of RATV 132. Refinement of skills utilizing digital recording and equipment operation. Students will prepare an audition tape for entry level in the job market. Outside speakers from broadcast industry will be featured. Field trips may be required. Two maximum completions. Lecture/Laboratory. (CSU)  
4 Units

RATV 134—TELEVISION STUDIO PRODUCTION  
Fundamental theory and operation of television control room and studio equipment including TV cameras, video switcher, audio equipment, basic studio lighting, and character generator. Electronic field production and editing will also be covered. Students will participate in group projects and fill the roles of talent, camera operators, technical directors, floor managers, video and audio technicians, as well as producers and directors. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)  
3 Units

RATV 135—ADVANCED TELEVISION PRODUCTION 1  
Recommended for Success: RATV 134, 142  
Practical applications in single and multiple camera television production. Creative use of camera, sound, editing, and production planning. Students will produce, direct, and edit individual features that will be incorporated into a half hour television program. This class will provide expanded responsibilities in producing, directing, and operating video and audio equipment in remote and studio productions. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)  
3 Units

RATV 136—ADVANCED TELEVISION PRODUCTION 2  
Recommended for Success: RATV 135, 142  
Continuation of RATV 135. Development of leadership skills, directing techniques, and the producing process for the television industry. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)  
3 Units

RATV 137—RADIO AND TELEVISION ANNOUNCING  
Recommended for Success: Computer/Internet literacy  
Performance for the electronic media. Includes announcing, newscasting, interview, and narration. Practical development of radio and television announcing skills through practice and evaluation. Field trips may be required. Lecture/Laboratory. (CSU)  
3 Units

RATV 138—WRITING FOR RADIO AND TELEVISION  
Applied studies in the techniques of writing for radio and television, including the gathering and writing of news, commercials and public service announcements, radio features and short dramatic scripts. Includes interview techniques, storyboarding, and the presentation of newscasts. Lecture/Laboratory. (CSU)  
3 Units

RATV 141—TELEVISION-VIDEO DOCUMENTARY PRODUCTION  
Recommended for Success: RATV 134 or FILM 150  
Technical and aesthetic elements of producing and directing a television documentary. This course will cover the process from conceptualization to postproduction. Exploration of historical, social, political, and personal concerns that are communicated through the television documentary. Students will participate in the production of a local documentary to be broadcast on cable television. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. Not offered every semester. (CSU, GR)  
3 Units

RATV 142—LIGHT, SOUND, CAMERA AND EDITING WORKSHOP  
Recommended for Success: FILM 150, RATV 134  
Fundamental technical and aesthetic principles of lighting, sound, editing, and camera operation. Creative applications are stressed to highlight mood or to produce an effect. Expanded knowledge in the areas of: preproduction planning, lighting and sound design, camera blocking and videotape editing. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)  
3 Units

RATV 150—INTRODUCTION TO MASS COMMUNICATION  
Exploration of the impact of the mass media on American society and culture, within a global perspective, and the importance of being more conscious "consumers" of the mass media. Explores the growing variety of career options. Topics include the origin, development and contemporary structure of the print, electronic and digital media, including the Internet, and how they shape the economic, political and social fabric of society; the impact of technology; legal and ethical issues, and social issues including gender and cultural diversity. Field trips may be required. Lecture. (CSU)  
3 Units

Radiology Technician  
MJC offers only prerequisite courses. Interested students should contact the MJC Counseling Center for prerequisite course requirements.
**COURSES AND ACADEMIC PROGRAMS**

**READ 82—COLLEGE READING - COMPREHENSION** 3 Units

*Recommended for Success: Appropriate skill level as demonstrated on the MJC Reading Placement Examination.*

Course is designed to improve student’s comprehension and retention of college level materials. Lecture. (GR)

**READ 184—CRITICAL READING** 3 Units

*Recommended for Success: Appropriate skill level as demonstrated on the MJC Reading Placement Examination.*

Reading for inferred ideas, evaluation of ideas, tone, mood, and style. Discussion of application of reader’s knowledge to reading material. This course with a grade of "C" or better meets MJC reading proficiency requirements. Lecture. (CSU, GR)

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**Real Estate Program**

**Certificate: Real Estate**

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 15 units

- **RLES 380 [NP]** Real Estate Principles .................. 3
- **RLES 381 [NP]** Real Estate Practices .................. 3
- **RLES 384 [NP]** Real Estate Finance .................. 3
- **RLES 385 [NP]** Real Estate Appraisal/Residential .......... 3
- **RLES 392 [NP]** Basic Escrow Procedures ................ 3

**ELECTIVE COURSES** Complete 6-8 units

- **RLES 382 [NP]** Legal Aspects of Real Estate OR
- **BUSAD 218 [NP]** Business Law .................. 3-4
- **BUSAD 201 [NP]** Financial Accounting .......... 4

Complete 3-5 units to meet 26 unit requirement

Courses in Business Administration, Economics, Psychology, or Speech ........ 3

**TOTAL UNITS FOR CERTIFICATE** .................. 26

**AA Degree: Real Estate**

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

**REQUIRED COURSES** - Complete 20 units

- **RLES 380 [1]** Real Estate Principles .................. 3
- **RLES 381 [2]** Real Estate Practices .................. 3
- **RLES 382 [2]** Legal Aspects of Real Estate 1 .......... 3
- **RLES 384 [3]** Real Estate Finance .................. 3
- **BUSAD 201 [2]** Financial Accounting .......... 4
- **BUSAD 218 [1]** Business Law .................. 4

**TOTAL UNITS FOR A.A. MAJOR** .................. 20

**AS Degree: Real Estate**

- To earn an Associate in Science Degree, the student must complete the 20 Required Units, 10 business Elective Units, and meet the MJC Graduation Requirements. Student should consult with a Real Estate advisor for selection of Elective Units.

**REQUIRED COURSES** - Complete 20 units

- **RLES 380 [1]** Real Estate Principles .................. 3
- **RLES 381 [2]** Real Estate Practices .................. 3
- **RLES 382 [2]** Legal Aspects of Real Estate 1 .......... 3
- **RLES 384 [3]** Real Estate Finance .................. 3
- **BUSAD 201 [2]** Financial Accounting .......... 4
- **BUSAD 218 [1]** Business Law .................. 4

**TOTAL UNITS FOR A.S. MAJOR** .................. 20
Real Estate Courses

RLES 380—REAL ESTATE PRINCIPLES 3 Units
Real estate principles and laws in California, including contracts, deeds, land titles, liens, escrows, leases, financing, land descriptions, mandatory disclosures, terminology, ethics, fair housing and licensing. Field trips may be required. Lecture. (CC RLEST 1)

RLES 381—REAL ESTATE PRACTICES 3 Units
Prerequisite: RLES 380
Practices and techniques of broker and salesperson including listing, prospecting, advertising, disclosures, selling, escrow procedures, financing, exchanges, property management and leases, land utilization and development, public relations and professional ethics, and fair housing in real estate business. Field trips may be required. Lecture. (CC RLEST 5)

RLES 382—LEGAL ASPECTS OF REAL ESTATE 1 3 Units
Prerequisite: RLES 381
California real property laws including the principle legal aspects of ownership, acquisition and transfer of real property, legal descriptions, contracts, escrow procedures, forms of trust and foreclosure, liens and restrictions, legal instruments. Lecture. Not offered every semester. (CC RLEST 10)

RLES 384—REAL ESTATE FINANCE 3 Units
Prerequisite: RLES 380 or 381.
Lending regulations, policies and procedures applicable to financing residential, multifamily, commercial and special purpose properties. Special attention to the money market, sources of funds and FHA and VA loans as factors in property financing. Lecture. Not offered every semester.

RLES 385—REAL ESTATE APPRAISAL, RESIDENTIAL 3 Units
Prerequisite: RLES 380
Examination of appraisal process to determine property value on cost, sales comparison, and income basis. Consideration of neighborhood and site analysis, residential style and functional utility, three approaches to value, reconciliation of value indicators, and Uniform Standards of Professional Practice. Field trips may be required. Lecture.

RLES 392—BASIC ESCROW PROCEDURES 3 Units
Prerequisite: RLES 380 or 381.
Basic escrow elements and practices. Terms, phraseology, and documents. Preparation of instructions and statements and their use; legal descriptions; vesting of title, balancing, debts and credits, loan payoffs and dispensing funds. Lecture. Not offered every semester.

Recreational Land Management
See Natural Resources

Respiratory Care (RSCR)
“MRSCR” in the Schedule of Classes

The MJC Respiratory Care Program is a two-year Associate Degree Program to prepare students to sit for the State Board Respiratory Care Practitioner Exam. The program is fully accredited by the Committee on Accreditation for Respiratory Care (formerly known as the Joint Review Committee for Respiratory Therapy Education). Graduates are also eligible for both Certification and Registration administered by the National Board for Respiratory Care.

The MJC Respiratory Care Program begins once a year in the spring. For additional Program information, contact Allied Health, 575-6362. For academic advising, contact the Respiratory Care Program Director in Allied Health at 575-6388, the Clinical Director at 575-6381, or the MJC Counseling Office at 575-6080.

Program Eligibility and Preparation

RESPIRATORY CARE CANDIDATES
1. Must have a High School Graduate or have proof of equivalent
2. Must provide official stamped and sealed transcripts (from high school or equivalent and other colleges) for Records Office prior to the Program application deadline.

RECOMMENDED COMPETENCIES

PROGRAM PREREQUISITES - Complete each course with a C or better

AND
CPR Certification (included in RSCR 220)

PRIOR TO ENROLLING IN THE PROGRAM
Students are advised to complete most if not all of the required non-Respiratory Care courses, additional graduation requirements, and other courses prior to entering the Program.

ADVANCED STANDING
Individuals who are already graduates of a one-year technician program and are licensed by the Respiratory Care Board as Respiratory Care Professionals (RCP)
will be considered for admission to the second year of the program. Credit for previous coursework and clinical work experiences will be evaluated on a case-by-case basis. Those wishing to be considered for Advanced Standing should call 575-6388 for more information.

PROGRAM APPLICATION

Students who have met the met/completed the requirements above may complete and submit a Respiratory Care Application at the Allied Health Division during the following periods:

FOR EACH ACADEMIC YEAR: Aug. 1 through November 15

SELECTION PROCESS

All students who meet the enumerated prerequisites and application deadlines will be eligible for admission to the program. In the event there are more qualified applicants than spaces available in the program, a lottery system will be implemented to select the candidates. Only those courses completed by the time of application will be considered.

PROOF OF HEALTH AND IMMUNIZATIONS

Upon notification of admission to the Respiratory Care Program, students must submit proof of the following:

A. A medical history and physical examination completed by a Physician, Physician’s Assistant or Nurse Practitioner within 3 months prior to program start date. The physical must state that the applicant is free from communicable diseases and does not have any health conditions that would create a hazard to self, employees or patients.

B. Documentation of required immunizations.

C. A negative PPD skin test. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Program Requirements

AS Degree: Respiratory Care

To earn an Associate in Science Degree, the student must complete the specified program prerequisites, meet/complete the recommended competencies, complete the MJC Graduation Requirements and the coursework below.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 101</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MICRO 101</td>
<td>Microbiology (Prerequisite to RSCR 242)</td>
<td>4</td>
</tr>
<tr>
<td>RSCR 220</td>
<td>Introduction to Respiratory Care Principles</td>
<td>5</td>
</tr>
<tr>
<td>RSCR 230</td>
<td>Clinical 1.</td>
<td>1</td>
</tr>
<tr>
<td>RSCR 222</td>
<td>Basic Cardiopulmonary Anatomy &amp; Physiology</td>
<td>3</td>
</tr>
<tr>
<td>RSCR 224</td>
<td>Respiratory Care Theory 2</td>
<td>5</td>
</tr>
<tr>
<td>RSCR 232</td>
<td>Clinical 2.</td>
<td>3</td>
</tr>
<tr>
<td>RSCR 240</td>
<td>Advanced Cardiopulmonary Physiology &amp; Diagnostics</td>
<td>4½</td>
</tr>
<tr>
<td>RSCR 242</td>
<td>Critical Care Procedures</td>
<td>4½</td>
</tr>
<tr>
<td>RSCR 250</td>
<td>Clinical 3.</td>
<td>4</td>
</tr>
<tr>
<td>RSCR 244</td>
<td>Neonatal-Pediatric Respiratory Care</td>
<td>2</td>
</tr>
<tr>
<td>RSCR 251</td>
<td>Neonatal and Pediatric Clinical Practice</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 253</td>
<td>Neonatal &amp; Clinical Practice</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 246</td>
<td>Current Issues in Respiratory Care</td>
<td>3</td>
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<tr>
<td>RSCR 248</td>
<td>Self-Directed Study</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 252</td>
<td>Physician Rounds for Respiratory Care</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 255</td>
<td>Clinical 4.</td>
<td>5</td>
</tr>
</tbody>
</table>

RSCR 257     | Clinical Preceptorship                             | 3     |

TOTAL UNITS FOR AS MAJOR: 45

POLICY FOR IMPOSING PENALTIES OR DENIAL OF LICENSURE

The law provides for denial of licensure for crimes or acts which may in any way be related to patient care activities, i.e. sex crimes, drug crimes, alcohol or drug abuse, and crimes of violence. In such cases, it is the applicant’s responsibility to present sufficient evidence of rehabilitation to the Respiratory Care Board of California prior to taking the licensure examination. If the above violations are only misdemeanors, an in-house review and penalty determination may be performed and fines, warning letters, and/or probation may be issued without denial of a license. The Respiratory Care Board of California will screen applicants individually. Any student considering a career as a Respiratory Therapist who might be denied licensure is advised to consult the Disciplinary Guidelines (California Code of Regulations, 1399.374) published by the Respiratory Care Board of California before entering the Program. This document is available on reserve in the MJC library. Further information on disciplinary guidelines may be obtained at www.rcb.ca.gov or by calling the Board at (866) 375-0386.

Respiratory Care Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCR 220</td>
<td>INTRODUCTION TO RESPIRATORY CARE PRINCIPLES</td>
<td>5</td>
</tr>
<tr>
<td>PREREQUISITE: CHEM 143 with a grade of &quot;C&quot; or better. Formerly listed as RSCR 200.</td>
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<tr>
<td>Covers basic physical principles necessary for the practice of respiratory care to include the following: medical terminology, fundamentals of general bedside patient care skills, underlying physical principles of respiratory care equipment, indications for the use of oxygen and aerosol therapy and related equipment. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU, GR)</td>
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<tr>
<td>RSCR 222</td>
<td>BASIC CARDIOPULMONARY ANATOMY AND PHYSIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>PREREQUISITES: AP 150 or ANAT 125 and PHYS 101. Formerly listed as RSCR 202.</td>
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<tr>
<td>Structure and functions of the pulmonary and cardiovascular systems. Application of laws of gas and fluid physics to the cardiopulmonary system. Field trips may be required. Lecture. (GR, CSU)</td>
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<tr>
<td>RSCR 224</td>
<td>RESPIRATORY CARE THEORY 2</td>
<td>5</td>
</tr>
<tr>
<td>PREREQUISITES: RSCR 220 with a grade of &quot;C&quot; or better. Formerly listed as RSCR 203.</td>
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<tr>
<td>Theoretical foundation for basic treatment modalities utilized in respiratory care. Topics covered include: hyper-inflation therapies, chest physical therapy, basic airway care and cardiopulmonary pharmacology. Associated equipment will be covered during scheduled labs. Field trips may be required. Lecture/Laboratory. Materials fee required. (GR, CSU, Spr.)</td>
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</tr>
<tr>
<td>RSCR 230</td>
<td>CLINICAL 1.</td>
<td>1</td>
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<tr>
<td>CONCURRENT ENROLLMENT: RSCR 220. Formerly listed as RSCR 205.</td>
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</tr>
<tr>
<td>Clinical experience in oxygen therapy, aerosol-humidity therapy and other basic respiratory care modalities used in area hospitals. Two maximum completions. Field trips may be required. Laboratory. Materials fee required (items for infection control and/or malpractice liability insurance). (GR/NC, CSU)</td>
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</tr>
<tr>
<td>RSCR 232</td>
<td>CLINICAL 2.</td>
<td>3</td>
</tr>
<tr>
<td>CONCURRENT ENROLLMENT: RSCR 230 with a grade of Pass.</td>
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<td></td>
</tr>
<tr>
<td>Clinical experience in the various routine respiratory care procedures and the equipment used in area hospitals. Attention is paid to the student performing critical evaluations of current therapy and the application of clinical practice guidelines. Field trips may be required. Two maximum completions. Laboratory. (GR/NC, CSU, Spr.)</td>
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</tbody>
</table>
RESPIRATORY CARE

RSCR 240—ADVANCED CARDIOPULMONARY PHYSIOLOGY AND DIAGNOSTICS 4 1/2 Units
Prerequisites: RSCR 222 and 224 with a grade of "C" or better. Formerly listed as RSCR 211.
Advanced cardiopulmonary physiology and diagnostics for the second year respiratory care student. Includes advanced arterial blood gas analysis, indices of oxygenation, chest x-ray interpretation, hemodynamic monitoring, laboratory testing, capnography, and ECG interpretation with an emphasis on clinical setting application. Also includes discussion of various pathologies caused by cardiovascular conditions. Field trips may be required. Lecture. (GR, CSU, Spr.)

RSCR 242—CRITICAL CARE PROCEDURES 4 1/2 Units
Prerequisites: RSCR 222, 224 and MICRO 101 with a grade of "C" or better. Formerly listed as RSCR 212.
Theory and application of critical care procedures for second year respiratory care students. This includes advanced theory and application of mechanical ventilators, associated pathophysiology and pharmacology, microbiological issues in respiratory care; application of ECG interpretation and chest x-ray interpretation. Field trips may be required. Lecture/Laboratory. (GR, CSU, Fall)

RSCR 244—NEONATAL-PEDIATRIC RESPIRATORY CARE 2 Units
Prerequisites: RSCR 240 and 242 with a grade of "C" or better. Formerly listed as RSCR 214.
Introduction to respiratory care in the neonatal patient. Topics include fetal and neonatal development, resuscitation, pathophysiology, and neonatal and pediatric respiratory care procedures. Also open to those holding valid Respiratory Care Practitioner or Registered Nurse license. Field trips may be required. Lecture. (GR, CSU, Spr.)

RSCR 246—CURRENT ISSUES IN RESPIRATORY CARE 3 Units
Prerequisites: RSCR 240 and 242 with a grade of "C" or better. Formerly listed as RSCR 215.
Specially areas in Respiratory Care: home care, skilled nursing facility care, management and administrative issues, pulmonary rehabilitation and education, metabolic studies, nutrition, sleep studies, assisting physicians in procedures, and blood gas analysis. Course also includes a comprehensive review to prepare students for state and national examination. Field trips may be required. Lecture. (GR, CSU, Spr.)

RSCR 248—SELF-DIRECTED STUDY 1/2 Unit
Prerequisites: RSCR 242 with a grade of "C" or better. Formerly listed as RSCR 218.
Preparation for therapist level clinical simulation exam. Students spend 1.5 hours per week on a self-directed basis completing computerized clinical teaching and testing simulations. Also open to those possessing a valid RCP license. Three maximum completions. Laboratory. Materials fee required. (CR/NC, CSU)

RSCR 250—CLINICAL 3 4 Units
Prerequisites: RSCR 232 with a grade of "C" or better. Concurrent Enrollment: RSCR 240 and 242. Formerly listed as RSCR 213.
Clinical experience in the various critical care respiratory procedures and the equipment used for these procedures in various area hospitals. Field trips may be required. Two maximum completions. Laboratory. Materials fee required. (CR/NC, CSU, Fall)

RSCR 251—NEONATAL AND PEDIATRIC CLINICAL PRACTICE 1 1/2 Unit
Prerequisites: RSCR 242 Concurrent Enrollment: RSCR 244
Introduction to respiratory care clinical practice in perinatal, neonatal and pediatric care. Field trips may be required. Laboratory. (CSU, Summer, CR/NC)

RSCR 252—PHYSICIAN ROUNDS FOR RESPIRATORY CARE 1/2 Unit
Concurrent Enrollment: RSCR 244 and 246. Formerly listed as RSCR 210.
Opportunity for interaction between physicians and respiratory care students to determine the appropriateness of a respiratory care plan; includes use of computer instruction in formulating adequate care plans and use of respiratory care protocols. Laboratory. (CSU, CR/NC, Spr.)

RSCR 253—NEONATAL AND PEDIATRIC CLINICAL PRACTICE 2 1/2 Unit
Prerequisites: RSCR 242 Concurrent Enrollment: RSCR 244
Additional respiratory care clinical practice in perinatal, neonatal and pediatric care. Field trips may be required. Laboratory. (CSU, Summer, CR/NC)

RSCR 255—CLINICAL 4 5 Units
Prerequisites: RSCR 244 Concurrent Enrollment: RSCR 246 Formerly listed as RSCR 254.
Continued clinical experience in critical care units and introduction to clinical care in the neonatal intensive care unit as well as alternative site respiratory care. Field trips may be required. Laboratory. Materials fee required (items for malpractice liability insurance). (CSU, Fall, CR/NC)

RSCR 257—CLINICAL PRECEPTORSHIP 3 Units
Prerequisites: RSCR 244 Concurrent Enrollment: RSCR 246 Formerly listed as RSCR 256.
Four week clinical preceptship in which student must demonstrate proficiency in all areas of clinical respiratory care practice. Field trips may be required. Laboratory. (CSU, CR/NC)

Retail Management
See Business Administration

Scholars Project
See Interdisciplinary Studies

Science (SCI)

SCI 201 — CONCEPTS OF EARTH SCIENCE 2 Units
An introduction to the fundamental concepts of Earth science and astronomy. Designed to provide a general knowledge of rock formation, plate tectonics, mountain building, erosion, water cycles, weather, and the solar system. Field trips may be required. Materials fee may be required. Lecture/Discussion. Not offered every semester. (CSU)

SCI 202 — CONCEPTS OF LIFE SCIENCE 2 Units
An introduction to the fundamental concepts of Life Science. Designed to provide a general knowledge of the structure and function of living things, ecological principles, and the scientific method. Lecture/Discussion. Field trips may be required. (CSU)

SCI 203 — CONCEPTS OF PHYSICAL SCIENCE 2 Units
An introduction to the fundamental concepts of Physical Science. Designed to provide a general knowledge of electricity, magnetism, thermal energy, and the structure and classification of matter. Lecture/Discussion. Field trips may be required. (CSU)

SCI 310A,B,C,D—WORK EXPERIENCE – NATURAL HISTORY AND SCIENCE – SUPERVISED PRACTICE 1, 2, 3, 4 Units
Prerequisite: Enrollment in a minimum of 6 units, which may include Cooperative Vocational Work Experience and previous completion or concurrent enrollment in a total of 6 units of science courses. Designed for science majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Maximum of 4 units may be earned per semester. May be repeated to a maximum of 16 units Work Experience credit. (Cooperative General Work Experience is included in this maximum.) Also offered during May, June and July. Field trips may be required. Lecture.
Sheet Metal: Vocational Courses

SM 331—VOCATIONAL SHEET METAL AND INSTALLATION 1
Formerly listed as SM 31.
Tools and machinery used by sheet metal trades. Training in the procedures using patterns, cutting, making seams and riveting metals. Safety in sheet metal shop. Basic mathematical application. Opportunities in the trade. Field trips may be required. Lecture. (GR)

SM 332—VOCATIONAL SHEET METAL AND INSTALLATION 2
Prerequisite: SM 331
Formerly listed as SM 32.
Techniques perfected in turning, burring, raising, forming, crimping, and beading: short method of pattern development. Parallel line and radial line development. Linear and geometric measure. Field trips may be required. (GR)

SM 333—VOCATIONAL SHEET METAL AND INSTALLATION 3
Prerequisite: SM 332
Formerly listed as SM 33.
Mathematics for sheet metal fabrication. Specifications development. Sheet metal design. Pattern development. Field trips may be required. Lecture. (GR)

SM 334—VOCATIONAL SHEET METAL AND INSTALLATION 4
Prerequisite: SM 333
Formerly listed as SM 34.

SM 335—VOCATIONAL SHEET METAL AND INSTALLATION 5
Prerequisite: SM 334
Formerly listed as SM 35.
Sheet metal pattern development and pattern drafting. Continued study of mathematics for sheet metal fabrication. Field trips may be required. Lecture. (GR)

SM 336—VOCATIONAL SHEET METAL AND INSTALLATION 6
Prerequisite: SM 335
Formerly listed as SM 36.
Continuation of mathematics for sheet metal fabrication, pattern development and pattern drafting. Field trips may be required. Lecture. (GR)

SM 337—VOCATIONAL SHEET METAL AND INSTALLATION 7
Prerequisite: SM 336
Formerly listed as SM 37.
Advanced study of mathematics for sheet metal fabrication, sheet metal pattern development and pattern drafting. Field trips may be required. Lecture. (GR)

SM 338—VOCATIONAL SHEET METAL AND INSTALLATION 8
Prerequisite: SM 337
Formerly listed as SM 38.
Advanced training in conjunction with the manipulation skills acquired in daily work, to develop well qualified sheet metal workers. Field trips may be required. Lecture. (GR)

Sign Language (SIGN)

SIGN 125—ASL: BEGINNING COMMUNICATION WITH THE DEAF
Introduction to the American Manual Alphabet and American Sign Language, designed to provide basic conversational skill in the language used among most deaf people in the U.S. Field trips may be required. Lecture. (CSU, UC)

SIGN 126—ASL: INTERMEDIATE COMMUNICATION WITH THE DEAF
Prerequisite: SIGN 125 or equivalent.
Communicating with and interpreting for the deaf through use of the American Manual Alphabet and American Sign Language. Field trips required. Lecture. (CSU, UC)

SIGN 127—ASL: ADVANCED COMMUNICATION WITH THE DEAF
Prerequisite: SIGN 126 or equivalent.
Use of the American Manual Alphabet and American Sign Language for those who would like to interpret for the deaf or for those who are or plan to become professional workers with the deaf. Lecture. (CSU, UC)

Social Science (SOCSC)

SOCSC 58—STUDENT LEADERSHIP DEVELOPMENT 2 Units
Theory and practice of leadership. Prepares students for productive involvement in community service, college activities, and civic governance. Designed especially, but not exclusively, for students participating in student government and club activities. Field trips may be required. Two maximum completions. Lecture/Laboratory. (CC GUIDE 115)

SOCSC 105 — WOMEN'S STUDIES 3 Units
Recommended for Success: ENGL 101; INDIS 55 or 105
A multidisciplinary introduction to the origins, purpose, subject matter, and methods of feminist theory in the social sciences. This course explores political, economic, social, cultural and historical issues from a feminist perspective. The focus is on classic feminist texts: how they have changed gender roles in society, how feminist politics have evolved, and how they have shaped contemporary world views. Lecture. (CSU, UC)

SOCSC 109—INTRODUCTION TO EDUCATION - PRACTICUM IN TUTORING 2 Units
Orientation to the teaching profession. Designed for prospective elementary, secondary or college teachers but open to all students. Students are required to observe and tutor in an appropriate educational setting. Partially meets field experience requirement for teaching credential program at CSU Stanislaus. Fingerprint clearance and TB clearance is required. Lecture. (CSU) (CC INDIS 10)

SOCSC 110—INTRODUCTION TO EDUCATION 3 Units
Orientation to the teaching profession. Designed for prospective elementary, secondary or college teachers but open to all students. Students are required to observe and participate in community classrooms. Meets field experience requirements for teaching credential program. Fingerprint clearance and TB clearance is required. Lecture. (CSU) (CC INDIS 12)

SOCSC 120A, 120B, 120C—COMPUTER APPLICATIONS IN THE SOCIAL SCIENCES 1,2,3 Units
Application of computers to social sciences activities. Writing, research, data collection, simulations, survey and laboratory research. Field trips may be required. May be repeated to six units maximum. Lecture or Laboratory. (CSU)
SOCC 154 – MOVIES WITH A MESSAGE: 3 Units
SOCIAL TOPICS IN FILM
Also offered as FILM 154.
A thematic film course aimed at using the medium of film to broaden the awareness of current societal and global issues, focusing on different topics semester to semester. Selected sequences of feature films, documentaries, unusual foreign and domestic releases will explore how film makers depict aspects of history, culture, religion, race, gender, class, ideology and other issues in a global perspective. Course will cover related elements of film style and theory, such as the relationship of subject to style, form and function. Field trips may be required. Lecture. (CSU, UC)

Social Welfare
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Sociology (SOCIO)  "MSOCIO" in the Schedule of Classes

SOCIO 101—INTRODUCTION TO SOCIOLOGY 3 Units
The study of human social interaction, groups and societies with emphasis upon culture, social differences, institutions and change. Field trips may be required. Lecture. (CAN SOC 2, CSU, UC) (CC SOCIO 1)

SOCIO 102—SOCIAL PROBLEMS IN THE UNITED STATES 3 Units
The study of contemporary social problems within the American society emphasizing, among other topics, alcohol and drugs, crime and violence, family problems, power, race, and gender inequalities. Construction of possible solutions to social problems will also be discussed. Field trips may be required. Lecture. (CSU, UC) (CAN SOC 4)

SOCIO 125—SOCIOLOGY OF THE FAMILY 3 Units
Comparative and historical treatment of the family. Analysis of kinship and family structure; roles and relationships within the family. Assessment of contemporary society on the family in America. Lecture. (CSU, UC) (CC SOCIO 12)

SOCIO 131—SOCIOLOGY OF MEDICINE: CROSS-CULTURAL PERSPECTIVES 3 Units
The experiences of caregivers and patients from several ethnic minority groups (Hispanic, African American and Southeast Asian) provide access to an understanding of some of the meanings and traditions of health in the U.S. Definitions of health and strategies of healing as well as the distribution of illness in our stratified, multicultural society are examined. The influence of Western biomedicine, its network of roles and relationships and the effects of economics and bioethics on health care delivery are evaluated. Field trips may be required. Lecture. (CSU, UC)

SOCIO 150—ETHNICITY AND CULTURE IN AMERICA 3 Units
A multidisciplinary study of ethnic and racial groups in the United States including Asian-Americans, African-Americans, Hispanics, among others. Emphasizes emergence, change, marginality, and integration of major ethnic groups in the United States. Field trips may be required. Lecture. (CSU, UC) (CC SOCIO 5)

SOCIO 154—AFRICAN-AMERICAN CULTURES AND COMMUNITIES 3 Units
A sociological exploration of the social and historical forces shaping contemporary African-American experiences and their multiple statuses in American society. Effects of stratification, conflict and change as well as the historical and current roles of the family within dynamic communities are emphasized. Lecture. (CSU, UC)

SOCIO 156—MEXICAN CULTURE IN THE UNITED STATES 3 Units
Contemporary Mexican-American Culture, problems and contributions, origins and nature. Intergroup contacts and conflicts. Field projects concern Mexican-American assimilation within the region. Lecture. (CSU, UC)

Spanish (SPAN)

Spanish (SPAN)  "MSPAN" in the Schedule of Classes

SPAN 45, A, B, C—PRACTICAL SPANISH FOR THE PROFESSIONS ½, 1, 2, 3 Units
Non-degree course.
Conversational Spanish for people working with the Spanish-speaking in the following areas: health, education, law enforcement, social work, agriculture, construction, public safety, and business. Occupational topics vary from semester to semester. May be repeated for credit as topic changes. Field trips may be required. Lecture. Multiple completions not to exceed 9 units in any combination.

SPAN 51—INTRODUCTION TO PRACTICAL SPANISH 1 3 Units
An introduction to current Spanish, with emphasis on practical application in travel, occupations, and daily life. Basic Spanish grammar and pronunciation. Field trips may be required. Lecture/Laboratory. (CC SPAN 10A)

SPAN 52—INTRODUCTION TO PRACTICAL SPANISH 2 3 Units
Prerequisite: SPAN 51 or equivalent introductory course.
A continuation of SPAN 51. Emphasis on practical application in travel, occupations, and daily life. Basic Spanish grammar and pronunciation. Field trips may be required. Lecture/Laboratory.

SPAN 101—SPANISH 1 4 Units
Fundamentals of spoken and written Spanish. Field trips may be required. Lecture/Laboratory. (CAN SPAN 2, CAN SPAN SEQ A, CSU, UC) (CC SPAN 1A)

SPAN 102—SPANISH 2 4 Units
Prerequisite: SPAN 101 or two years of high school Spanish. Continuation of SPAN 101. Field trips may be required. Lecture/Laboratory. (CAN SPAN 4, CAN SPAN SEQ A, CSU, UC) (CC SPAN 1B)

SPAN 103—SPANISH 3 4 Units
Prerequisite: SPAN 102 or three years of high school Spanish. Continuation of SPAN 102. Includes Spanish grammar, conversation, reading, and composition. Also includes reading and discussion in Spanish of selections from literary works of Spanish and Latin American writers. Field trips may be required. Lecture/Laboratory. (CAN SPAN 8, CAN SPAN SEQ B, CSU, UC) (CC SPAN 2A)

SPAN 104—SPANISH 4 4 Units
Prerequisite: SPAN 103 or four years of high school Spanish. Continuation of SPAN 103. Includes reading and discussion in Spanish of literary works of Spanish and Latin American writers. Field trips may be required. Lecture/Laboratory. (CAN SPAN 10, CAN SPAN SEQ B, CSU, UC) (CC SPAN 2B)

SPAN 111—FUNDAMENTALS OF SPoken AND WRITTEN SPANISH FOR SPANISH SPEAKERS 4 Units
Recommended for Success: Ability to understand spoken Spanish and read and write colloquial Spanish.
Fundamentals of spoken and written Spanish for Spanish speakers. Designed to help Spanish-speaking students improve their oral and written communication skills. Taught in Spanish. Field trips may be required. Lecture/Laboratory. (CSU, UC)

SOCIAL TOPICS IN FILM
Also offered as FILM 154.
A thematic film course aimed at using the medium of film to broaden the awareness of current societal and global issues, focusing on different topics semester to semester. Selected sequences of feature films, documentaries, unusual foreign and domestic releases will explore how film makers depict aspects of history, culture, religion, race, gender, class, ideology and other issues in a global perspective. Course will cover related elements of film style and theory, such as the relationship of subject to style, form and function. Field trips may be required. Lecture. (CSU, UC)
Spanish - Speech Communication

SPAN 112—INTRODUCTION TO SPANISH AND CHICANO LITERATURE 3 Units
Recommended for Success: SPAN 111
Designed to help students further improve their knowledge and understanding of Spanish and Chicano Literature. Course will be taught in Spanish. Field trips may be required. Lecture. (CSU, UC)

Special Problems
This is participation in discussion, analysis, and evaluation of a special topic or problem. Topics are announced each semester in the schedule of classes. Most areas offer Special Topics & Problems. Contact the division office for more information. See page 46.

Speech Communication (SPCOM)
"MSPCOM" in the Schedule of Classes

The Speech Communication Program at Modesto Junior College offers students a variety of courses which incorporate both theory and performance instruction. These include public speaking, argumentation and debate, organizational communication, intercultural and interpersonal communication, content speaking and forensics competition which includes debate and individual events. The MJC Forensics Team has captured a number of state and national championships. The program also offers courses in practical speech communication and voice improvement. Most courses are available to students in both day and evening hours.

Speech Communication Program

Certificate: Speech Communication
• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 12 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 100</td>
<td>Public Speaking</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 101</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>Argumentation</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 103</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 104</td>
<td>Group &amp; Organizational Communication</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 105</td>
<td>Communication &amp; Leadership Skills For Women in Management</td>
<td>3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - Complete 14 units

Total Units for Certificate: 24

AA Degree: Speech Communication
• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework. Student should consult with a Speech advisor for selection of Elective Units.

REQUIRED COURSES - Complete 6 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 102</td>
<td>Introduction to Human Communication</td>
<td>3 OR</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 104</td>
<td>Argumentation</td>
<td>3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - Complete 14 units

Total Units for A.A. Major: 36

Speech Communication Courses

SPCOM 100—FUNDAMENTALS OF PUBLIC SPEAKING 3 Units
Developing individual effectiveness in various speech activities, emphasis on public speaking; instruction and practice in selection, organization and presentation of materials. Development of self-confidence and listening skills. Field trip required. Lecture. (CAN SPCOM 4, CSU, UC)(CC SPCOM 1)

SPCOM 101—BASIC VOICE IMPROVEMENT 3 Units
Also offered as RATV 101 and THETR 101.
Training program in basic voice improvement. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. Credit given for only one of SPCOM 101, RATV 101, or THETR 101. This is not a class for persons with a major speech impediment. Lecture. (CAN DRAM 6, CSU, UC, Fall)(CC DRAM 18)

SPCOM 102—INTRODUCTION TO HUMAN COMMUNICATION 3 Units
Study of human communication including verbal, nonverbal and listening skills. Focus on effective oral participation in informal encounters, group discussion, and individual presentations in public settings. Field trip required. Lecture/Laboratory. (CSU, UC) (CC SPCOM 4)

SPCOM 103—INTERPERSONAL COMMUNICATION 3 Units
The study of interpersonal communication including perceptive, verbal and nonverbal elements. The course focuses on the concepts and skills regarding interpersonal relationships as applied to various interaction, such as the male/female relationship, the family, the workplace. Lecture. (CAN SPCOM 8, CSU, UC, Spr.) (CC SPCOM 4)
SPCOM 104—ARGUMENTATION 3 Units
Prerequisite: ENGL 101
Primary emphasis on argumentation as the study of analysis, evidence, reasoning, refutation and rebuttal, etc., in oral and written communication. Significant component of instruction in written argumentation, with special attention to the essay form. "Critical Thinking" approaches to commercial, legal, political, and academic argumentation and persuasion. Field trips may be required. Lecture. (CAN SPCH 6, CSU, UC) (CC SPCM 2)

SPCOM 105—FORENSICS WORKSHOP 2 Units
Recommended for Success: SPCM 100 or 102
Principles of applied speech communication through participation in competitive speech performances. Students will participate in intercollegiate forensics. Competitive events include debate, individual speaking and interpretive performances. Four maximum completions. Field trips required. Lecture/Laboratory. (CSU)

SPCOM 106—GROUP AND ORGANIZATIONAL COMMUNICATION 3 Units
Also offered as SUPR 106.
Communication within and between groups and organizations while enhancing relevant individual communication skills. Emphasis on communication and organizational theory as basis for focus on such communication processes as interviewing, task-oriented discussion, problem solving, leadership, conflict resolution and negotiation, communication climate, and organizational culture. Lecture. (CAN SPCH 10, CSU)

SPCOM 107—INTRODUCTION TO DEBATE 3 Units
Argumentation principles and the debate format. Emphasis on case construction, methods of attack and defense, communication strategies, and various forms of debate. Field trips required. Lecture. (CSU, UC)

SPCOM 108—ADVANCED DEBATE 3 Units
Also offered as Success: SPCM 107
Additional study of topics covered in SPCM 107. Focus is on coaching debate and planning, judging and officiating debates. Field trips required. Lecture/Laboratory. (CSU, UC)

SPCOM 109—COMMUNICATION AND LEADERSHIP SKILLS FOR WOMEN IN MANAGEMENT 3 Units
Communication and leadership skills for effective business management in the workplace. Designed to study the women's movement into management positions. Emphasis on common strategies, supervising employees, interpersonal skills, motivational methods, assertiveness and decision-making. Lecture. (CSU, Spr.)

SPCOM 110—PERSUASION 3 Units
Development of abilities to plan and deliver persuasive presentations through a combination of methods involving the study of "real" communicative events; i.e., trials, sales presentations, political campaigns, sermons, etc., and the preparation and presentation of own works. Survey of recent research in attitude change and persuasive communication. Field trips may be required. Lecture. (CSU)

SPCOM 120—ORAL READING AND INTERPRETATION 3 Units
Also offered as THETR 120.
Skills in oral interpretation of literature; choice of material, involvement with material; communication of author's thought, emotion and language; expanded knowledge of literature and literary forms. Credit given for either THETR 120 or SPCM 120, but not both. Lecture/Laboratory. (CSU, UC)

SPCOM 122—INTRODUCTION TO READERS' THEATRE 3 Units
Also offered as THETR 122.
Study of oral interpretation principles as they apply to group and choral reading. Emphasis will be placed upon the preparation and performance of Readers' Theatre productions. Students will be provided with the necessary theory, practice, and criticism to develop skills for organization and oral presentation of Readers' Theatre materials. Lecture. Field trips may be required. (CSU, UC)

SPCOM 123—STORYTELLING: THE INTERPRETATION OF CHILDREN'S LITERATURE 3 Units
Also offered as THETR 123.
Introduction to history of storytelling and techniques of critical listening to and preparation and presentation of literature. Emphasis upon sources, selection of materials, analysis, preparation and presentation of prose, verse, and drama. Designed to develop the adult reader's knowledge, critical ability and appreciation in the field of children's literature. Field trips may be required. Lecture. (CSU)

SPCOM 124—ADVANCED READERS' THEATRE 3 Units
Recommended for Success: SPCM 120, 122, THETR 120, or 122.
Also offered as THETR 124.
Continued development of vocal control and expression, emphasis on analysis of reading materials and oral communication of thought and emotion. Emphasis on construction and direction of Readers' Theatre performances suitable for public presentation. Field trips may be required. Lecture. Materials fees may be required to cover cost of course materials and theatre tickets. (CSU, UC)

SPCOM 130—INTERCULTURAL COMMUNICATION 3 Units
Study of intercultural communication with a focus on the analysis and comparisons of message perception and transmission in interactions between people from different cultures. Practical application of skills for effective communication between people of different domestic and international cultures is emphasized. Field trips may be required. Lecture. (CSU, UC)

SPCOM 145—PARLIAMENTARY PROCEDURE 1 Unit
Also offered as AGGE 145.
Introduction to Parliamentary Procedure. Preparing for and participating in meetings as a member, officer, and chairperson. Rank and use of motions. Two maximum completions. Lecture/Other. (CSU, CR/NC)

Speech Pathology/Therapy
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Spelling (SPELL)
"MSPELL" in the Schedule of Classes

SPELL 31—SPELLING: CONSONANT SOUNDS AND SYMBOLS 3 Units
Non-degree course.
Designed for non-native speakers to improve reading and spelling. Sound-symbol relationships in English with emphasis on consonants and consonant clusters. Discrimination between words which are similar in either spelling or sound. Help with spelling and with pronunciation of words encountered in reading. Two maximum completions. Lecture. (GR)

SPELL 32—SPELLING AND PRONUNCIATION 3 Units
Recommended for success: Concurrent enrollment in ENGL 49 or ENGL 50.
Non-degree course.
Course is designed to improve spelling and pronunciation habits by introducing and using the phonic patterns of English. Two maximum completions not to exceed 6 units. Lecture. (GR)

Sports Medicine
See Physical Education

COURSES AND ACADEMIC PROGRAMS 203
STSK 25—STUDENT SUCCESS STRATEGIES  1 Unit
Designed to increase the student’s success in college and to facilitate the transition to the workplace. Emphasis on goal setting, time management, study skills and interpersonal communication. Lecture.

STSK 70—MIND OVER MATH  1 Unit
Prerequisite: Eligibility for MATH 20 or MATH 70.
Designed for students who experience math anxiety and math avoidance. This course explores the fear of math including common causes, symptoms, past experiences, math myths, and negative thinking that contribute to math anxiety. Students will learn techniques to reduce their anxiety, learn practical math tips and study methods, learn about college resources available to help math students, develop strategies to more effectively learn math, and develop a more positive attitude about math and about their own abilities to do well in math. Lecture. (CR/NC)

STSK 78—COLLEGE STUDY SKILLS  3 Units
Recommended for Success: ENGL 50 and READ 82 eligibility
Introduces students to educational, psychological and social factors necessary for college success. Topics include: goal setting, time management, note-taking, textbook reading, test-taking skills, memorization, concentration, motivation, writing and speaking, critical and creative thinking, learning styles, use of technology, diversity, health relationships, finances, educational planning, and career development. Acquaints students with the college, its curriculum, facilities, services, regulations, programs, degree and transfer requirements. Lecture. (CR/NC)

STSK 120—SUCCESS STRATEGIES FOR TRANSFER STUDENTS  3 Units
Recommended for Success: Eligibility for ENGL 101 and a reading score of 10 (35th percentile or higher).
Also offered as GUIDE 120.
Increases success in college by assisting students in obtaining skills and techniques necessary to reach their educational objectives. Topics include educational planning, motivation and learning styles, research strategies, note-taking, subject-specific study techniques, time management and textbook study methods. Lecture. (CSU, CRNC)

STSK 135—COLLEGE SUCCESS FOR SCIENCE MAJORS  ½ Unit
Assists students in the study of scientific materials. Topics include reading and note-taking strategies, preparing for and taking exams in the sciences, and creating effective study groups. Lecture. (CSU, CRNC, Sum.)

Supervisory Management (SUPR)
"MSUPR" in the Schedule of Classes

The Supervisory Management Program is designed to prepare students for leadership responsibilities at the operating level in business, industry, and government. It also provides owners, managers, and other supervisory personnel with the opportunity to complete specific courses designed to develop management ability. Many of the courses are offered in the evening to accommodate working students who are interested in upgrading their skills.

Supervisory Management Program

Certificate: Supervisory Management

• To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 12 units
SUPR 106 [1] Group & Organizational Communication 3
SUPR 351 [1] Elements of Supervision 3

ELECTIVE COURSES - Complete 9 units
Any course offered by Modesto Junior College. Student may choose to pursue a single discipline, however, it is not required.

TOTAL UNITS FOR CERTIFICATE ........................................... 21

AA Degree: Supervisory Management

• To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 12 units
SUPR 106 [1] Group & Organizational Communication 3
SUPR 351 [1] Elements of Supervision 3

ELECTIVE COURSES - Complete 9 units
BUSAD 310 [2] Bookkeeping 1 OR
BUSAD 210 [2] Business Communication 3 OR
BUSAD 240 [NP] Principles of Management 3
BUSAD 245 [NP] Principles of Marketing 3
BUSAD 248 [3] Introduction to Business 3
BUSAD 377 [NP] Human Relations in Business 3

TOTAL UNITS REQUIRED FOR A.A. MAJOR .................................. 21

AS Degree: Supervisory Management

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to completing the coursework below. Student should consult with a Supervisory Management advisor for selection of Elective Units.

REQUIRED COURSES - Complete 12 units
SUPR 106 [1] Group & Organizational Communication 3
SUPR 351 [1] Elements of Supervision 3

ELECTIVE COURSES - Complete 9 units
BUSAD 310 [2] Bookkeeping 1 3 OR
BUSAD 210 [2] Business Communication 3 OR
BUSAD 240 [NP] Principles of Management 3
BUSAD 245 [NP] Principles of Marketing 3
BUSAD 248 [3] Introduction to Business 3
BUSAD 377 [NP] Human Relations in Business 3

ADDITIONAL ELECTIVE COURSES - Complete 9 units
Any course in Business Administration, Computer Science, or Office Administration

TOTAL UNITS FOR A.S. MAJOR .................................................. 30

Continued ➤
Television Production Program

Certificate: Television Production

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 13 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 150 [1]</td>
<td>3</td>
<td>Introduction to Mass Communication</td>
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<tr>
<td>RATV 134 [1]</td>
<td>3</td>
<td>Television Production</td>
</tr>
<tr>
<td>RATV 135 [2]</td>
<td>3</td>
<td>Advance Television Production</td>
</tr>
<tr>
<td>RATV 142 [2]</td>
<td>3</td>
<td>Light, Sound, Camera &amp; Editing Workshop</td>
</tr>
<tr>
<td>RATV 199C [2,3]</td>
<td>3</td>
<td>MJC Video Productions</td>
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ELECTIVE COURSES - Complete 3 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
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<tbody>
<tr>
<td>RATV 138 [1,2]</td>
<td>3</td>
<td>Writing for Radio &amp; Television</td>
</tr>
<tr>
<td>RATV 140 [NP]</td>
<td>4</td>
<td>Multi-Camera Remote Television Productions</td>
</tr>
<tr>
<td>RATV 141 [NP]</td>
<td>3</td>
<td>Documentary Video Production</td>
</tr>
<tr>
<td>ENGL 178 [NP]</td>
<td>3</td>
<td>Mass Media &amp; the Public</td>
</tr>
<tr>
<td>CMPGR 265 [NP]</td>
<td>3</td>
<td>Multimedia on the World Wide Web</td>
</tr>
<tr>
<td>CMPGR 284 [NP]</td>
<td>3</td>
<td>Desktop Video Animation</td>
</tr>
<tr>
<td>CMPGR 287 [NP]</td>
<td>3</td>
<td>Introduction to Multimedia</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE .......................... 16

AA Degree: Television Production

- To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to the following coursework.

REQUIRED COURSES - Complete 15 units

<table>
<thead>
<tr>
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<tr>
<td>RATV 134 [1]</td>
<td>3</td>
<td>Television Studio Production</td>
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<tr>
<td>RATV 135 [2]</td>
<td>3</td>
<td>Advanced Television Production</td>
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<tr>
<td>RATV 142 [2]</td>
<td>3</td>
<td>Light, Sound, Camera and Editing Workshop</td>
</tr>
<tr>
<td>RATV 150 [1]</td>
<td>3</td>
<td>Introduction to Mass Communications</td>
</tr>
<tr>
<td>FILM 150 [1]</td>
<td>3</td>
<td>Film Production</td>
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ELECTIVE COURSES - Complete 5 units

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<tr>
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<th>Units</th>
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<tr>
<td>FILM 151 [2]</td>
<td>3</td>
<td>Advanced Film Production 1</td>
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<tr>
<td>FILM 152 [3]</td>
<td>3</td>
<td>Advanced Film Production 2</td>
</tr>
<tr>
<td>RATV 101 [NP]</td>
<td>3</td>
<td>Basic Voice Improvement</td>
</tr>
<tr>
<td>RATV 131 [1]</td>
<td>3</td>
<td>Radio Control Room &amp; Studio Production</td>
</tr>
</tbody>
</table>

Television Production (RATV)

"MRATV" in the Schedule of Classes

Modesto Junior College’s department of Television Production has been created to train students to work in the television, cable, film and video entertainment industry. Students get a variety of hands-on opportunities with course study in both studio and on-location television, film, and documentary production. Students will learn to produce, direct, act as talent, shoot and edit projects and programs that air on local cable channels. Advance television and film students are encouraged to submit their work to local and national student film and video competitions. In addition, qualified students can secure internships with local production companies or MJC Video Productions.

Students who enroll in the Television Production program will get to explore new career paths that result from the development of new digital technologies. They will leave with the skills required for a promising career in the television/film industry.
Television Production Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 136</td>
<td>Television Production 2</td>
<td>3</td>
</tr>
<tr>
<td>RATV 137</td>
<td>Radio and Television Announcing</td>
<td>3</td>
</tr>
<tr>
<td>RATV 138</td>
<td>Writing for Radio and Television</td>
<td>3</td>
</tr>
<tr>
<td>RATV 141</td>
<td>Television Video Documentary Production</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR A.A. MAJOR** ............................................. 20

**Television Production Courses**

- **RATV 101—BASIC VOICE IMPROVEMENT**  
  3 Units  
  Also offered as SPCOM 101 and THETR 101.  
  Training program in basic voice improvement. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. Credit given for only one of SPCOM 101, RATV 101, or THETR 101. This is not a class for persons with a major speech impediment. Lecture. (CAN DRAM 6, CSU, UC, Fall) (CC CAM 18)

- **RATV 134—TELEVISION STUDIO PRODUCTION**  
  3 Units  
  Fundamental theory and operation of television control room and studio equipment including TV cameras, video switcher, audio equipment, basic studio lighting, and character generator. Electronic field production and editing will also be covered. Students will participate in group projects and fill the roles of talent, camera operators, technical directors, floor managers, video and audio technicians, as well as producers and directors. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)

- **RATV 135—ADVANCED TELEVISION PRODUCTION 1**  
  3 Units  
  Recommended for Success: RATV 134, 142.  
  Practical applications in single and multiple camera television production. Creative use of camera, sound, editing, and production planning. Students will produce, direct, and edit individual features that will be incorporated into a half hour television program. This class will provide expanded responsibilities in producing, directing, and operating video and audio equipment in remote and studio productions. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

- **RATV 136—ADVANCED TELEVISION PRODUCTION 2**  
  3 Units  
  Recommended for Success: RATV 135, 142.  
  Continuation of RATV 135. Development of leadership skills, directing techniques, and the producing process for the television industry. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. (CSU)

- **RATV 137—RADIO AND TELEVISION ANNOUNCING**  
  3 Units  
  Recommended for Success: Computer/internet literacy.  
  Performance for the electronic media. Includes announcing, newscasting, interview, and narration. Practical development of radio and television announcing skills through practice and evaluation. Field trips may be required. Lecture/Laboratory. (CSU)

- **RATV 138—WRITING FOR RADIO AND TELEVISION**  
  3 Units  
  Applied studies in the techniques of writing for radio and television, including the gathering and writing of news, commercials and public service announcements, radio features and short dramatic scripts. Includes interview techniques, storyboarding, and the presentation of newscasts. Lecture/Laboratory. (CSU)

- **RATV 141—TELEVISION-VIDEO DOCUMENTARY PRODUCTION**  
  3 Units  
  Recommended for Success: RATV 134 or FILM 150.  
  Technical and aesthetic elements of producing and directing a television documentary. This course will cover the process from conceptualization to postproduction. Exploration of historical, social, political, and personal concerns that are communicated through the television documentary. Students will participate in the production of a local documentary to be broadcast on cable television. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. Not offered every semester. (CSU, GR)

- **RATV 142—LIGHT, SOUND, CAMERA AND EDITING WORKSHOP**  
  3 Units  
  Recommended for Success: FILM 150, RATV 134.  
  Fundamental technical and aesthetic principles of lighting, sound, editing, and camera operation. Creative applications are stressed to highlight mood or to produce an effect. Expanded knowledge in the areas of: preproduction planning, lighting and sound design, camera blocking and videotape editing. Field trips may be required. Lecture/Laboratory. Materials fee required. (CSU)

- **RATV 150—INTRODUCTION TO MASS COMMUNICATION**  
  3 Units  
  Exploration of the impact of the mass media on American society and culture, with a global perspective, and the importance of being more conscious "consumers" of the mass media. Explores the growing variety of career options. Topics include the origin, development and contemporary structure of the print, electronic and digital media, including the Internet, and how they shape the economic, political and social fabric of society; the impact of technology; legal and ethical issues, and social issues including gender and cultural diversity. Field trips may be required. Lecture. (CSU)

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**Theatre (THETR) “MTHETR” in the Schedule of Classes**

The Theatre Program at MJC is designed to prepare students to work in professional or semi-professional theatre situations or to transfer to four-year colleges and universities to pursue additional drama classes that may include preparation for teaching theatre. The program is designed to teach students the techniques of acting, costuming, directing, playwriting, lighting, makeup, oral interpretation, stage design, and children’s theatre. The Theatre program provides students the opportunity to act in major productions.

**Certificate: Design & Technical Theatre**

To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - Complete 15 units**

- **THETR 100 [NP]** Introduction to Theatre Arts (Fall, Spring) .................. 3
- **THETR 175 [1]** Stage Costuming (Fall, 1998) .................. 3
- **THETR 178 [2]** Introduction to Scenery Design (Spr., 1999) .......... 3
- **THETR 182 [1]** Practical Stage Lighting (Spring, 1998) ........... 3
- **THETR 183 [2]** Fundamentals of Stage Make-up 1 (Fall, 1997) ....... 1
- **THETR 190A [NP]** Theatre Production Workshop (Fall, Spring) .......... 1
- **THETR 196 [NP]** Theatre Management (Fall, Spring) .................. 1

**TOTAL UNITS FOR CERTIFICATE** ........................................ 15

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**Shakespeare Academy Program**

See English
Theatre Courses

THETR 100—INTRODUCTION TO THEATRE ARTS  3 Units
Investigation of process of collective art of theatre, the role of actor, director, playwright, designer, technician and audience. Survey of theatre origins, its development as an art form, and its social, political and cultural implications in history. Attendance at MJC theatre productions required; 25 hours required work on productions or a 10 page term paper. Field trips may be required. Materials fee may be required to cover cost of theatre tickets. Lecture. (CAN DRAM 18, CSU, UC)

THETR 101—BASIC VOICE IMPROVEMENT  3 Units
Also offered as RATV 101 and SPCOM 101.
Training program in basic voice improvement. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. Credit given for only one of SPCOM 101, RATV 101, or THETR 101. This is not a class for persons with a major speech impediment. Lecture. (CAN DRAM 6, CSU, UC, Fall) (CC DRAM 18)

THETR 102—WORLD THEATRE  3 Units
Survey of world theatre and its development as an art form through social, political and cultural contexts. Investigation of cultural traditions and styles, values, aesthetics will be explored. Field trips required. Lecture. (CSU, UC)

THETR 120—ORAL READING AND INTERPRETATION  3 Units
Also offered as SPCOM 120.
Skills in oral interpretation of literature; choice of material, involvement with material; communication of author’s thought, emotion and language; expanded knowledge of literature and literary forms. Credit given for either THETR 120 or SPCOM 120, but not both. Lecture/Laboratory. (CSU, UC)

THETR 122—INTRODUCTION TO READERS’ THEATRE  3 Units
Also offered as SPCOM 122.
Study of oral interpretation principles as they apply to group and choral reading. Emphasis will be placed upon the preparation and performance of Readers’ Theatre productions. Students will be provided with the necessary theory, practice, and criticism to develop skills for organization and oral presentation of Readers’ Theatre materials. Lecture. Field trips may be required. (CSU, UC)

THETR 123—STORYTELLING: THE INTERPRETATION OF CHILDREN’S LITERATURE  3 Units
Also offered as SPCOM 123.
Introduction to history of storytelling and techniques of critical listening to and preparation and presentation of literature. Emphasis upon sources, selection of materials, analysis, preparation and presentation of prose, verse, and drama. Designed to develop the adult reader’s knowledge, critical ability and appreciation in the field of children’s literature. Field trips may be required. Lecture/Laboratory. (CSU)

THETR 124—ADVANCED READERS’ THEATRE  3 Units
Recommended for Success:  SPCOM 120, or 122, or THETR 120, or 122.
Also offered as SPCOM 124.
Continued development of vocal control and expression, emphasis on analysis of reading materials and oral communication of thought and emotion. Emphasis on construction and direction of Readers/Theatre performances suitable for public presentation. Field trips may be required. Lecture. Materials fees may be required to cover cost of course materials and theatre tickets. (CSU, UC)

THETR 131—FUNDAMENTALS OF CHOREOGRAPHY  1 Units
Introduction into the creative process involved in composing dance. The knowledge of compositional components will be explored, crafted, and aesthetically analyzed. Exploration of qualities and dynamics, elements of dance, performance qualities will be addressed through technique, improvisation, and compositional studies. Field trips required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 150—ELEMENTS OF PLAYWRITING  3 Units
Recommended for Success:  ENGL 101, THETR 100.
Introduction to the writing of dramatic scripts for the stage, culminating in a staged reading of completed drafts with actors before an audience. Field trips required. Two maximum completions. Lecture/Laboratory. (CSU)
THETR 160—FUNDAMENTALS OF ACTING  3 Units
Survey of the various elements of the actors art leading to an understanding and appreciation of the physical, mental, and emotional basis of performance. Reading plays, analysis of public performances, role analysis and fundamentals of scene playing are included. Required for Theatre Arts majors. Recommended for those who may wish to participate in play production. Lecture/Laboratory. Field trips may be required. (CSU, UC) (CC DRAM 42, CAN DRAM 8)

THETR 161—INTERMEDIATE ACTING  3 Units
Prerequisite: THETR 160 or equivalent.
Intensive study of plays through group reading and analysis of theme, content, and character. Scenes from the plays under discussion will be rehearsed and performed with a final public performance culminating the experience. Includes preparation of dramatic material and actor psychology for auditions. Four maximum completions. Field trips may be required. Lecture/Other. (CAN DRAM 22, CSU, UC, Spr.)

THETR 165—HISTORY OF THE AMERICAN MUSICAL THEATRE  3 Units
The art of the American musical theatre: the role of the performer, director, music director, book writer, composer, lyricist, choreographer, producer, designers, and audience. Survey of the origins of music theatre beginning with “The Black Crook” (1866) through the present, its development as an art form, and its relationship to other art forms and the audience. Attendance at musical theatre productions required. Lecture. Tickets fees are required. (CSU, CR/NC)

THETR 175—STAGE COSTUMING  3 Units
Principles and practice of theatrical costuming. Emphasis on the design of individual costumes and the coordination of an entire theatrical production. Field trips may be required. Lecture/Laboratory/Other. Not offered every semester. (CSU, UC)

THETR 178—INTRODUCTION TO SCENERY DESIGN  3 Units
Prerequisite: THETR 100
Introduction to the art and practice of scenery design for the stage. The process of design, selection of proper materials, safety aspects of scenery, physical, and psychological considerations of designing scenery for the stage. Practical application will include assisting in the design and execution of scenery for an actual production. Field trips may be required. Lecture/Laboratory. (CAN DRAM 12, CSU, UC)

THETR 182—PRACTICAL STAGE LIGHTING  3 Units
Prerequisite: THETR 100
An introduction to the art and practice of lighting design for the stage. Lectures will include: the use and control of stage lighting instruments, choosing color, basic electricity, the physical and psychological properties of light as applied to stage illumination. Practical application in lab work will include assisting in the design of an actual production. Field trips may be required. Lecture/Laboratory. Not offered every semester. (CSU, UC, CAN DRAM 10)

THETR 183—FUNDAMENTALS OF STAGE MAKE-UP 1  1 Unit
Design and application of two-dimensional make-up for theater use. Lecture/Laboratory. (CAN DRAM 14, CSU, UC)

THETR 184—FUNDAMENTALS OF STAGE MAKE-UP 2  1 Unit
Prerequisite: THETR 183
Creation and application of 3-D (dimensional) modeling and molding techniques in make-up for theatrical use. Lecture/Laboratory. Two maximum completions. Not offered every semester. (CAN DRAM 14, CSU, UC)

THETR 185—BEGINNING MODERN DANCE  1 Unit
Also offered as PEC 122.
Fundamental dance movement, elementary composition components. Dance movement education, exploration and recreation. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 186—INTERMEDIATE MODERN DANCE  1 Unit
Recommended for Success: THETR 185 or PEC 123 or equivalent.
Also offered as PEC 126.
Introduction, exploration and experience in choreography and performance. Movement through space, energy and time and compositional form. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 187—ADVANCED MODERN DANCE  1 Unit
Also offered as PEC 123.
Emphasis on composition, improvisation, expression, dance history and philosophy; an outlet for expressive movement ideas. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 188—JAZZ DANCE  1 Unit
Also offered as PEC 126.
Technique of Jazz Dance with explorations into contemporary derivations of jazz. Emphasis is given to technical style of this form, and to the interrelationship of music and movement. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 189—BALLET 1  1 Unit
Also offered as PEC 133.
Fundamental ballet techniques and terminology. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 190A, B—THEATRE PRODUCTION WORKSHOP  2 Units
Recommended for Success: THETR 100
A repeatable, multi-technical course focusing on the practical aspect of mounting and running a theatrical production. The different areas of construction and run crews involved are: sets, sound, lighting, properties, costumes, stage management, publicity, and house management. Four maximum completions. Laboratory. (CSU)

THETR 192—REHEARSAL & PERFORMANCE  2 Units
Recommended for Success: THETR 100
Participation and instruction in rehearsal and performance of a role in an MJC production. Required activities may include all aspects involved in the production of plays as well as rehearsal. Field trips required. Four maximum completions. Laboratory. (CSU, UC)

THETR 194 — INTRODUCTION TO WORLD DANCE  3 Units
Also offered as PE 194.
A survey of dance and its development as an art form through social, political and cultural context. Investigation of cultural traditions and styles, values, aesthetics and mores will be explored. Field trips required. Lecture. (CSU, UC)

THETR 195 — MOVEMENT FOR THE PERFORMING ARTIST  3 Units
Recommended for Success: THETR 100
Introduction to the fundamentals of movement as applied to body awareness, motor efficiency, and basic compositional components. Exploration of qualities and dynamics in performance through technique, improvisation, and compositional studies. Field trips required. Four maximum completions. Lecture/Laboratory. (CSU, UC)

THETR 196 — THEATRE MANAGEMENT  1 Unit
Recommended for Success: THETR 100
The principles of theatre management: front-of-house operations; box office management and theatre business procedures; publicity and public relations; budget and organization for school, community and professional theatre. Field trips may be required. Four maximum completions. Lecture/Laboratory. (CSU)
THETR 197—BROADWAY/EUROPE THEATRE TRAVEL  
1 Unit  
Preparation and participation in theatre related trips to New York City and Europe. The trips include theatre performances, backstage tours of theatre facilities, workshop sessions with performers, directors, writers, critics and scholars. Program also includes tours of fine art exhibits, museums and other cultural events. Field trips are required. Four maximum completions. Lecture/Laboratory. Participation fees are paid to travel agencies approved by Yosemite Community College District. Cost for each trip varies. (CSU, Spr.)

Transfer, General Education  
Interested students should contact the MJC Counseling Center or the Transfer Center for program requirements.

Tutoring (TUTOR)  
“MTUTOR” in the Schedule of Classes

TUTOR 10A,B,C,D—TUTORING SEMINAR  
½,1,1⅔,2 Units  
Non-degree course.  
Designed for students to strengthen their effectiveness as tutors. Development of techniques through role playing, lectures, outside speakers, and group sessions. Practice in individual tutoring under instructional supervision. Four maximum completions to 2 units. Lecture/Laboratory. (CR/NC)

Typing/Keyboarding  
See Office Administration

Veterinarian  
This is a four-year college transfer program. Interested students should contact the MJC Counseling Center for program requirements.

Vocabulary  
See Reading

Vocational Work Experience (VOCWE or DIV)  
“MVOCWE” in the Schedule of Classes

Vocational Work Experience Courses  

VOCWE 349S—VOCATIONAL WORK  
0 Units  
EXPERIENCE SEMINAR  
Designed to accompany vocational work experience courses in all discipline areas (with the exception of Administration of Justice, Agriculture, Child Development and Nursing). Provides an orientation to the structure of cooperative work experience education and develops specific knowledge and skills related to employment situations through the accomplishment of goals. Includes job applications, resumes, interpersonal relationships, career selection, and relevant employment laws, regulations and policies. Lecture. Non graded. Maximum completions as needed to accompany DIV 349 A,B,C, or D.

DIV 349 A,B,C,D—WORK EXPERIENCE  
1,2,3,4 Units  
Prerequisite: Enrollment in a minimum of 7 units which may include Cooperative Work Experience and completion of or concurrent enrollment in one core or elective course in designated program.  
Designed for students who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Conversely, student should have a designated area of study demonstrated by completion of or concurrent enrollment in at least a minimal number of courses in that designated program. Sixteen maximum units in any combination of vocational work experience courses. Lecture. Lab: 75 paid hours or sixty unpaid hours of related work experience per semester equals 1 unit.

Welding (WELD)  
“MWELD” in the Schedule of Classes

Welding Program  
All students who plan to earn a certificate must also meet the following competencies.

REQUIRED COMPETENCIES FOR CERTIFICATES

READ  
184  
Critical Reading..................................................... 3 or  
Reading Competency through Placement Exam

MATH  
20  
Pre-Algebra.............................................................. 3 or  
Eligibility for MATH 70 by MJC assessment process

SPCOM  
102  
Introduction to Human Communication...................... 3

Certificate: Welding

• To earn a Certificate of Achievement, the student must meet/completion the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES  - Complete 21 units

WELD  
200 [1]  
Arc and Gas Welding................................................. 3
WELD  
204 [3]  
Gas Metal Arc (MIG) and Flux
WELD  
Core Arc Welding (FCAW)......................................... 3
WELD  
206 [3]  
Gas Tungsten Arc Welding (TIG)............................... 3
WELD  
210 [1]  
Sheet Metal 1.......................................................... 3
WELD  
300 [2]  
Intermediate Welding............................................. 3
WELD  
325 [3]  
Design and Fabrication Processes............................ 3
WELD  
330 [3]  
Certification Welding............................................... 3

TOTAL UNITS FOR CERTIFICATE........................................ 21
AA Degree: Welding

To earn an Associate in Arts Degree, the student must complete the MJC Graduation Requirements in addition to completing the coursework below.

REQUIRED COURSES - Complete 21 units
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 204 [3] Gas Metal Arc (MIG) and Flux Core Arc Welding (FCAW) ................................... 3
WELD 210 [1] Sheet Metal 1 .................................................... 3
WELD 300 [2] Intermediate Welding .................................... 3

TOTAL UNITS FOR A.A. MAJOR ........................................... 21

AS Degree: Welding

To earn an Associate in Science Degree, the student must complete the MJC Graduation Requirements in addition to completing the coursework below.

REQUIRED COURSES - Complete 30 units
MACH 211D [NP] Machine Tool Technology ........................... 4
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 204 [3] Gas Metal Arc (MIG) and Flux Core Arc Welding (FCAW) ................................... 3
WELD 300 [2] Intermediate Welding .................................... 3
WELD 399 [NP] Special Problems .............................................. 1
WELD 399 [NP] Independent Study ............................................. 1

TOTAL UNITS FOR A.S. MAJOR ........................................... 30

Welding Specializations

Certificate: Shielded Metal Arc Welding

• To earn a Certificate of Achievement, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10 units
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 300 [2] Intermediate Welding .................................... 3
WELD 399 [NP] Independent Study ............................................. 1

TOTAL UNITS FOR CERTIFICATE ........................................... 10

Certificate: Gas Tungsten Arc Welding

• To earn a Certificate of Achievement, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10 units
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 300 [2] Intermediate Welding .................................... 3
WELD 399 [NP] Independent Study ............................................. 1

TOTAL UNITS FOR CERTIFICATE ........................................... 10

Certificate: Gas Metal Arc Welding

• To earn a Certificate of Achievement, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10 units
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 300 [2] Intermediate Welding .................................... 3
WELD 204 [3] Gas Metal Arc (MIG) and Flux Core Arc Welding (FCAW) ................................... 3
WELD 399 [NP] Independent Study ............................................. 1

TOTAL UNITS FOR CERTIFICATE ........................................... 10

Sheet Metal Fabricator Program

REQUIRED COMPETENCIES FOR CERTIFICATES
READ 184 Critical Reading .................................................. 3 or
Reading competency through placement exam
MATH 20 Pre-Algebra ...................................................... 3 or
Eligibility for MATH 70 by MJC assessment process
SPCOM 102 Introduction to Human Communication .......................... 3

Certificate: Sheet Metal Fabricator

• To earn a Certificate of Achievement, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10 units
WELD 200 [1] Arc and Gas Welding ........................................... 3
WELD 210 [2] Sheet Metal 1 .................................................... 3
WELD 311 [3] Sheet Metal 2 .................................................... 3
WELD 399 [NP] Independent Study ............................................. 1

TOTAL UNITS FOR CERTIFICATE ........................................... 10
Certificate: Fabrication Technician

- To earn a Certificate of Achievement, the student must complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES** - Complete 16 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>Arc and Gas Welding</td>
<td>3</td>
<td>Introduction and basic instruction in theory and techniques in oxyacetylene welding and cutting and shielded metal arc welding. Safety and machine operation in the welding shop will be presented in lecture as well as “hands on” laboratory experiences. Field trips may be required. Lecture/Laboratory. (CSU, GR) (CC WLDTCL 1)</td>
</tr>
<tr>
<td>WELD 204</td>
<td>Gas Metal Arc (MIG) and Flux Core Welding (FCAW)</td>
<td>3</td>
<td>Prerequisite: WELD 200. Formerly listed as WELD 202. Welding stainless steel, aluminum, and ferrous metals using the Metallic Inert Gas (MIG)/Flux Core Arc (Welding (FCAW)) processes. Qualification procedures for the American Welding Society (A.W.S.) D1-1 certification for mild steel and aluminum. Field trips may be required. Lecture/Laboratory. Welding rod required. (CSU).</td>
</tr>
<tr>
<td>WELD 206</td>
<td>Gas Tungsten Arc Welding (TIG)</td>
<td>3</td>
<td>Prerequisite: WELD 200. Formerly listed as WELD 202. Advanced arc welding procedures for stainless steel, aluminum, and ferrous metals utilizing the gas tungsten arc welding (TIG) process. The American Society of Mechanical Engineers (A.S.M.E.) certification qualification procedure. Field trips may be required. Lecture/Laboratory. Welding rod required. (CSU).</td>
</tr>
<tr>
<td>WELD 210</td>
<td>Sheet Metal 1</td>
<td>3</td>
<td>Introduction to sheet metal and welding shop procedures. Reading drawings and making sketches. Assembly methods, layout tools and pattern development. Shearing, notching and forming various metals. Use and care of rolling machines, hand brakes and cutting tools. Field trips may be required. Welding rod required. Lecture/Laboratory. (CSU)</td>
</tr>
<tr>
<td>WELD 300</td>
<td>Intermediate Welding</td>
<td>3</td>
<td>Prerequisite: WELD 200. Intermediate level instruction in the application of S.M.A.W. (Submerged Metal Arc Welding) and oxy-fuel cutting equipment, testing procedures and tolerances to meet A.W.S. (American Welding Society) and A.S.M.E. (American Society of Mechanical Engineers) codes. Course provides additional skill building preparatory to certification coursework. Field trips required. Welding rod required. Lecture/Laboratory.</td>
</tr>
<tr>
<td>WELD 311</td>
<td>Sheet Metal 2</td>
<td>3</td>
<td>Prerequisite: WELD 210. Introduction to sheet metal. Reading drawings and making sketches. Assembly methods, layout tools and pattern development. Shearing, notching and forming various metals. Use and care of rolling machines, hand brakes, and cutting tools. Field trips may be required. Welding rod required. Lecture/Laboratory.</td>
</tr>
<tr>
<td>WELD 311A</td>
<td>Sheet Metal 3</td>
<td>3</td>
<td>Prerequisite: WELD 311. Fabrication of common blow pipe and air conditioning fittings. Measurement and layout for belt guards and pulley covers. Short cuts for triangulation patterns. Use and care of bench mounted turning, burring, and seaming machines. Field trips may be required. Welding rod required. Lecture/Laboratory.</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE** 16

**Welding Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisite</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>Arc &amp; Gas Welding</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>WELD 300</td>
<td>Intermediate Welding</td>
<td></td>
<td>3</td>
</tr>
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<td>WELD 311</td>
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<td></td>
<td>3</td>
</tr>
<tr>
<td>WELD 311A</td>
<td>Sheet Metal 3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>WELD 204</td>
<td>Gas Metal Arc (MIG) and Flux Core Welding (FCAW)</td>
<td>WELD 200</td>
<td>3</td>
</tr>
<tr>
<td>WELD 206</td>
<td>Gas Tungsten Arc Welding (TIG)</td>
<td>WELD 200</td>
<td>3</td>
</tr>
<tr>
<td>WELD 210</td>
<td>Sheet Metal 1</td>
<td>WELD 200</td>
<td>3</td>
</tr>
<tr>
<td>WELD 300</td>
<td>Intermediate Welding</td>
<td>WELD 200</td>
<td>3</td>
</tr>
</tbody>
</table>

**WELD 200—ARC & GAS WELDING**

Introduction and basic instruction in theory and techniques in oxyacetylene welding and cutting and shielded metal arc welding. Safety and machine operation in the welding shop will be presented in lecture as well as “hands on” laboratory experiences. Field trips may be required. Lecture/Laboratory. (CSU, GR) (CC WLDTCL 1)

**WELD 204—GAS METAL ARC (MIG) AND FLUX CORE ARC WELDING (FCAW)**

Prerequisite: WELD 200. Formerly listed as WELD 202. Welding stainless steel, aluminum, and ferrous metals using the Metallic Inert Gas (MIG)/Flux Core Arc Welding (FCAW) processes. Qualification procedures for the American Welding Society (A.W.S.) D1-1 certification for mild steel and aluminum. Field trips may be required. Lecture/Laboratory. Welding rod required. (CSU).

**WELD 206—GAS TUNGSTEN ARC WELDING (TIG)**

Prerequisite: WELD 200. Formerly listed as WELD 202. Advanced arc welding procedures for stainless steel, aluminum, and ferrous metals utilizing the gas tungsten arc welding (TIG) process. The American Society of Mechanical Engineers (A.S.M.E.) certification qualification procedure. Field trips may be required. Lecture/Laboratory. Welding rod required. (CSU).

**WELD 210—SHEET METAL 1**

Introduction to sheet metal and welding shop procedures. Reading drawings and making sketches. Assembly methods, layout tools and pattern development. Shearing, notching and forming various metals. Use and care of rolling machines, hand brakes and cutting tools. Field trips may be required. Welding rod required. Lecture/Laboratory. (CSU)

**WELD 300—INTERMEDIATE WELDING**

Prerequisite: WELD 200. Intermediate level instruction in the application of S.M.A.W. (Submerged Metal Arc Welding) and oxy-fuel cutting equipment, testing procedures and tolerances to meet A.W.S. (American Welding Society) and A.S.M.E. (American Society of Mechanical Engineers) codes. Course provides additional skill building preparatory to certification coursework. Field trips required. Welding rod required. Lecture/Laboratory.

**WELD 311—SHEET METAL 2**

Prerequisite: WELD 210. Introduction to sheet metal. Reading drawings and making sketches. Assembly methods, layout tools and pattern development. Shearing, notching and forming various metals. Use and care of rolling machines, hand brakes, and cutting tools. Field trips may be required. Welding rod required. Lecture/Laboratory.

**WELD 311A—SHEET METAL 3**

Prerequisite: WELD 311. Fabrication of common blow pipe and air conditioning fittings. Measurement and layout for belt guards and pulley covers. Short cuts for triangulation patterns. Use and care of bench mounted turning, burring, and seaming machines. Field trips may be required. Welding rod required. Lecture/Laboratory.

**WELD 325—DESIGN AND FABRICATION PROCESSES**

Prerequisite: WELD 200 and 204. Theory of drawing to include techniques of sketching out ideas through the development and layout of final blueprints. Estimating cost including the selection of appropriate materials and fabrication processes. Projects are required. Two maximum completions. Field trips may be required. Lecture/Laboratory. (GR)

**WELD 330—CERTIFICATION WELDING**

Prerequisite: WELD 300. Provides the student the opportunity to prepare for certification in the area of Shielded Metal Arc to A.W.S. (American Welding Society), A.P.I. (American Pipe Institute), or A.S.M.E. (American Society of Mechanical Engineers) codes. There is an additional cost for the certification test. Field trips required. Lecture/Laboratory. Testing fee for certification test when taken. The amount of this fee is subject to change depending on type of certification test taken. Also, a materials fee is required.

**WELD 340—PIPE WELDING**

Prerequisite: WELD 200 and 300. Introduction to general pipe fitting, welding procedures, applied layout and fit-up techniques. Field trips required. Three maximum completions. Lecture/Laboratory. Welding rod required. Not offered every semester.

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**Word Processing**

See Office Administration

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**Work Experience** (WKEX)

“MWKEX” in the Schedule of Classes

Modesto Junior College serves the needs of its students and those of the community through its Cooperative Work Experience program. A program objective is to provide guidance and opportunity for career planning students in the real laboratory of the communities’ businesses, industries and public agencies. Work experience education results when it encompasses a systematic plan whereby students, while in college, gain realistic employment experiences through work.

Two Cooperative Work Experience programs are offered: Cooperative General Work Experience and Cooperative Vocational Work Experience. Employment may be on a paid or volunteer basis and may be at work sites on or off campus.

**Cooperative General Work Experience Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>WKE351,352,353</td>
<td>GENERAL WORK EXPERIENCE</td>
<td>1, 2, 3</td>
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</table>

Concurrent Enrollment: Minimum of 7 units including General Work Experience Supervised employment which assists students in acquiring desirable work habits, attitudes, and career awareness. The work experience need not be related to the student’s educational goals. Maximum of 6 units in any combination of completions. Lecture: Orientation, 2 Student/Coordinator Conferences and 5 one hour seminars. Laboratory: 75 hours paid or 60 hours non-paid work per semester equals 1 unit. One hundred fifty-five hours paid or 120 hours non-paid work per semester equals 2 units. Two hundred twenty-five hours paid or 180 hours non-paid per semester equals 3 units.
X-Ray Technician

MJC offers only prerequisite courses. Interested students should contact the MJC Counseling Center for prerequisite course requirements for admission to program at either Merced College or San Joaquin Delta College. Check in counseling office, Morris Memorial 103, for articulated agreement.

Zoology (ZOOL)
"MZOOL" in the Schedule of Classes

ZOOL 101—GENERAL ZOOLOGY
4 Units
Prerequisite: BIO 101
Principles of animal life and classification. Survey of major animal and protozoan phyla with emphasis on evolutionary relationships, structural and physiological adaptations and ecological importance. Field trips required. Lecture/Laboratory. (CAN BIOL 4, CAN BIOL SEQ A, CSU, UC) (CC BIOL 4)

Non-Credit Courses

Agriculture

AG 810—AGRICULTURE SCIENCE FIELD DAY
Participation in MJC’s Agricultural Science Field Day includes evaluation of agricultural products and livestock, troubleshooting agricultural equipment and demonstration of various agriculturally-related skills. Four maximum completions. Materials fee required. (Spr.)

AG 820A-D—AGRICULTURAL SKILLS AND LEADERSHIP DEVELOPMENT
Non-credit participation in any of MJC’s agricultural skills and leadership development activities including: agricultural product preparation, sales or marketing, agricultural product exhibition, poultry processing, agricultural field day organization and other agricultural leadership activities. Hours variable by activity. Four maximum completions.

Allied Health

LFSN 801—AGING PARENTS SEMINAR
Issues on aging. Seminar series on legal, financial, housing, distance care giving, government programs, and family dynamics aspects of aging. Designed for adult children, adult caregivers, older adults, and professionals, but open to all students. Field trips may be required. Unlimited repeats. Lecture.

Computer Science

CMPSC 801—DATABASE MANAGEMENT SYSTEM WORKSHOP
An introduction to a database management system with hands-on instruction using a microcomputer. Students will define, create, and use their own database. Unlimited repeats. Lecture/Laboratory. Materials fee required.

CMPSC 803—SPREADSHEET WORKSHOP
Introduction to the basic application of computers in the business environment. Specific instruction on use of the Electronic Spreadsheet. Unlimited repeats. Lecture/Laboratory. Materials fee required.

CMPSC 805—WORD PROCESSING WORKSHOP
Introduction to the basic application of computers in the business environment. Specific instruction on use of word processing as an office automation tool. Exploration of benefits of word processing and its ability to expand productivity. Unlimited repeats. Lecture/Laboratory. Materials fee required.

Educational Development

EDDEV 894—PRACTICAL LIFE SKILLS FOR DEVELOPMENTALLY DELAYED LEARNERS
Prerequisite: Recommendation by appropriate disability specialist.
Learning opportunities in practical life skills for developmentally delayed learners. Academic emphasis will be on the skills of mathematics, reading, spelling, oral, and written communication. Modules will be developed to enhance the individual’s ability to deal with the demands of daily living. Field trips may be required. Six maximum completions. Lecture/Laboratory.
ESL: English as a Second Language

ESL 901—ESL: BEGINNING
Beginning English for non-English speakers. Emphasis on beginning spoken English and basic literacy. Field trips may be required. Unlimited repeats. Lecture.

ESL 902—ESL: LOWER ELEMENTARY
Recommended for Success: Successful completion of ESL 901 or placement by assessment process.
Elementary English for very limited-English-speaking people. Emphasis on elementary spoken English for practical needs, preparation for advancement into credit ESL classes. Field trips may be required. Unlimited repeats. Lecture/Laboratory.

ESL 903—ESL: HIGHER ELEMENTARY
Recommended for Success: Successful completion of ESL 902 or placement by assessment process.
Elementary level English for speakers of other languages unable to attend credit ESL classes. Instruction and practice in listening, speaking, reading and writing; emphasis on spoken English, practical reading and writing. Field trips may be required. Unlimited repeats. Lecture.

ESL 904—ESL: INTERMEDIATE
Recommended for Success: Successful completion of ESL 903 or placement by assessment process.
Intermediate level English for speakers of other languages unable to attend credit ESL classes. Instruction and practice in listening, speaking, reading and writing; emphasis varies according to needs of students. Field trips may be required. Unlimited repeats. Lecture.

ESL 905—ENGLISH AT WORK
Recommended for Success: Placement by assessment process at ESL level 2 or 3 (ESL 20 or ESL 30).
Course for high beginning and lower intermediate learners of English as a second language. English needed to seek employment and function successfully in the workplace. Field trips may be required. Unlimited repeats. Lecture.

ESL 906—ENGLISH AT WORK 2
Recommended for Success: Placement by assessment process at ESL level 3 or 4 (ESL 30 or ESL 40).
Continuation of ESL 905. Practice in more fluent, accurate use of English needed to seek employment and function successfully in the workplace. Field trips may be required. Unlimited repeats. Lecture.

ESL: English as a Second Language

FSC 841—THE FAMILY
Class members select content from the following: family foods and nutrition, child and family relations, housing and family management. Wise consumer practices for low income households are emphasized. Field trips may be required. Unlimited repeats. Lecture.

FSC 850A—NEW PRACTICES/PROCEDURES IN FIRE SCIENCE
Prerequisite: FSCI 362
Update of new statutory laws and equipment and their implications to Fire Science practices and procedures. Unlimited repeats. Lecture.

FSC 850B—NEW PRACTICES/PROCEDURES IN FIRE SCIENCE
Prerequisite: FSCI 362
Update of new statutory laws and equipment and their implications to Fire Science practices and procedures. Unlimited repeats. Lecture.

FSC 850C—NEW PRACTICES/PROCEDURES IN FIRE SCIENCE
Prerequisite: FSCI 362
Update of new statutory laws and equipment, and their implications to Fire Science practices and procedures. New technology and procedures for fire incident and investigation. Unlimited repeats. Lecture/Laboratory.

FSC 860—ADVANCED MEDICAL FIRST RESPONDER COURSE
Prerequisite: FSCI 365
Designed to meet Emergency Medical Service requirements for recertification of police and fire personnel designated as first responders to the scenes of medical emergencies. Eight maximum completions. Lecture/Laboratory.

General Education

GENED 900—BASIC ADULT EDUCATION
Classes for adults who wish to improve their reading, writing, and mathematics skills. Appropriate for adults beginning these skills. Four maximum completions. Lecture.

GENED 956—GED PREPARATION
Recommended for Success: Some high school.
A class designed to give a general review of all basic high school subjects to prepare students for the General Education Development Tests (G.E.D.). Also, to prepare students with knowledge and skills for entry and success in college programs. Four maximum completions. Lecture.

Health Education

HE 805—COMMUNITY CPR
Development of knowledge and skills involved in artificial ventilation and circulation (CPR) for infant, child and adult. American Red Cross “Community CPR” card issued upon satisfactory completion. Unlimited repeats. Lecture/Laboratory.

Law Enforcement

LENF 850A, B, C, D, E—NEW PRACTICES/CONCEPTS IN LAW ENFORCEMENT
Prerequisite: LENF 388
Update of new court decisions and statutory law and their implications to law enforcement practices and procedures. New technology and procedures for patrol and investigation officers. Legal and technical developments in allied Criminal Justice components. Unlimited repeats. Lecture/Laboratory.

LENF 851—EXPANDABLE BATON TRAINING
Prerequisite: LENF 307 or 388. Student must be capable of strenuous physical activities including sufficient strength, endurance, and body flexibility to accomplish class content requirements. No felony convictions or weapon restrictions.
Basic skills and principles of the legal and tactical use of the expandable baton in self-defense situations. Unlimited repeats. Lecture/Laboratory.

LENF 853-RANGE MASTER CERTIFICATION TRAINING
Prerequisite: LENF 388 or correctional equivalent.
Recommended for Success: Successful completion of firearm proficiency exercise. Qualifies officer/agent to be a departmental range master. Trains students in methods of firearms instruction. Field trips may be required. Unlimited repeats. Lecture/Laboratory.

LENF 854—EXPANDABLE BATON INSTRUCTORS COURSE
Prerequisites: LENF 388 and 851. No felony convictions or weapon restrictions.
Students must be capable of strenuous physical activity including sufficient strength, endurance and body flexibility to accomplish class requirements. (Medical waiver required)
Advanced level of skills in the principles of legal and tactical use of the expandable baton in self-defense situations. Develop the ability to instruct basic level skills and concepts. Field trips may be required. Unlimited repeats. Lecture/Laboratory.

LENF 855—CHEMICAL AGENTS UPDATE
Prerequisite: No felony convictions or weapon restrictions.
Meets Commission on Peace Officer Standards and Training mandates for possession and use of chemical agents. Course includes: legal aspects, civil liability, types and use of chemical agents, factors affecting the use and the ethical and procedural consideration. Participation in exposure to chemical agents—medical waiver required. This course is certified by P.O.S.T. (California Peace Officer Standards and Training). Field trips may be required. Four maximum completions. Lecture/Laboratory.
Nursing Skills

"MNURSK" in the Schedule of Classes

NURSK 800—NURSING SKILLS DEVELOPMENT
   Concurrent Enrollment: NURSE 251 or 252 or 253 or 254
   Provides simulated clinical experiences in a supervised laboratory setting for students
   who must use the Allied Health skills laboratory to achieve the objectives of a course in
   which they are enrolled. Unlimited repeats. Laboratory.

Older Adult Programs

"MOLDAD" in the Schedule of Classes

OLDAD 820—JEWELRY AND METALCRAFT
   Techniques and the construction of jewelry from copper, bronze, sterling silver, and gold;
   setting of stones in jewelry; and techniques of the lost wax method of casting. Designed
   for older adults but open to all students. Unlimited repeats. Field trips may be required.
   Laboratory.

OLDAD 822—LAPIARY
   Basic lapidary skills, faceting, grinding, polishing, and mounting of semiprecious,
   precious, and ornamental stones. How to recognize, procure, and develop gem materials,
   experiment with, and display gem ornamentation showing utility and craftsmanship.
   Diamond saw cutting, carving in stone table tops, and the making of mosaics and
   intarsia. Designed for older adults but open to all students. Unlimited repeats. Field trips
   required. Laboratory.

OLDAD 830—PUBLIC SPEAKING: TALKING IT OUT
   Development of effective listening, thinking and speaking skills among the older adult
   population. Course builds and reinforces speech development skills. Unlimited repeats.
   Lecture.

OLDAD 854—CHORAL SINGING
   Study and performance of either one large-scale work or program of shorter choral works.
   Public performance required. Field trips may be required. Lecture/Laboratory.

OLDAD 861—CONCERT BAND
   Prerequisite: Previous experience in instrumental music or successful completion of
   MUSIC 140 or 160.
   Rehearsal and performance of original wind literature and transcriptions for concert band.
   Field trips may be required. Laboratory/Rehearsal.

OLDAD 862—COMMUNITY ORCHESTRA
   Recommended for Success: Previous experience in instrumental music.
   Rehearsal and public performance of orchestral music (from all areas and nationalities).
   Field trips may be required. Laboratory/Rehearsal. Unlimited repeats.

OLDAD 874—CLOTHING CONSTRUCTION THROUGH KNITTING
   Use of needles and yarn, study design principles, charting of garments, blocking and
   fitting, and garment construction. Designed for older adults but open to all students.
   Unlimited repeats. Laboratory.

Physical Education — Adaptive

PE-A 800—ADAPTIVE EXERCISE FOR MATURE ADULTS
   Use of adaptive weight room and equipment for body maintenance, strengthening,
   and conditioning. Designed for students with disability limitations. Unlimited repeats.
   Lecture/Laboratory.

PEC 825—ADVANCED BASKETBALL TEAM PLAY
   An introduction to advanced concepts and skills of collegiate basketball play for high
   school students. Laboratory. (NG) Summer.

PEC 841—EXERCISE FOR SPECIAL POPULATIONS
   Exercises designed to modify personal attitudes and actions toward health and physical
   activity. Specifically adapted for the physically mature individual or those who may have
   experienced physical impairments. Unlimited repeats. Lecture/Laboratory.

Study Skills

STSK 850—SUPERVISED TUTORING
   Prerequisite: Enrolment in related class and approval of Instructor/Counselor.
   Provides for individual learning by students with expressed needs in study skills, learning
   modes, and developmental materials. Learning experiences will be under instructional
   supervision. Open entry/open exit. Four maximum completions. Laboratory.

Tutoring

TUTOR 810—TUTORING SEMINAR
   Designed for students to strengthen their effectiveness as tutors. Development of
   techniques through role playing, lectures, outside speakers and group sessions.
   Practice in individual tutoring under instructional supervision. Four maximum completions.
   Lecture/Laboratory.

Workforce Development

WKFSK 801—INTRODUCTION TO WORKFORCE DEVELOPMENT SKILLS
   Training for employees on how to achieve success in any career situation. Explores
   elements of communication, team building, active listening and job retention skills. Open
   entry/open exit. Lecture. Field trips may be required. Four maximum completions.

WKFSK 802—THE ART OF ACTIVE LISTENING
   Training for employees on maximizing the effectiveness of communication in the workplace
   and elsewhere. Explores helpful listening techniques, dealing with listening problems,
   and moving from conflict to consensus. Open-entry/open-exit. Lecture. Field trips may be
   required. Four maximum completions.

WKFSK 803—TROUBLESHOOTING ON THE JOB
   Training for employees on how to achieve success in any career situation. Explores
   elements of communication, team building, active listening and job retention skills. Open
   entry/open exit. Lecture. Field trips may be required. Four maximum completions.

WKFSK 804—the Art of Teamwork
   Training for employees on becoming a true “team player.” Topics covered include: team
   roles, facilitation, team communication, reaching agreements, team goal-setting, and
   effective leadership. Open-entry/open-exit. Lecture. Field trips may be required. Four
   maximum completions.

WKFSK 810—SKILLS FOR SUCCEEDING AT A NEW JOB
   Designed for those just starting to work who are looking for skills to achieve success as
   a new employee. Explores in-depth job retention skills including job transition concepts,
   workplace expectations, customer service, attitude feedback and balancing work and
   personal life. Field trips may be required. Four maximum completions. Lecture.
I am a very inquisitive person so there is still so much I want to study at MJC - Art, Geology, Statistics, Photography, Women’s History and even Readers’ Theatre. Some of these apply to my major, but other classes are just for fun.

- Andrea Cerritos
MJC student

Andrea Cerritos never finished the seventh grade. At the urging of her educated, but counter culture parents, she left school when only thirteen and spent a number of years apprenticing in architecture. Following an abusive marriage and a divorce, Andrea, a mother of three, decided to attend Modesto Junior College alongside her oldest son. She selected architecture as a major and claims that attending MJC felt like a joyful homecoming. Andrea fell in love with writing, winning a 1st place in the Celebration of Humanities, writing for the Pirates Log, serving architecture with her fascination with indigenous cultures and as a visiting editor and now as a community columnist for The Modesto Bee, while nurturing a burning desire to someday write about the pueblo of Guadalupe, heavily damaged by El Salvador’s massive earthquake of 2001, and it’s calling her name.

Andrea Cerritos never finished the seventh grade. At the urging of her educated, but counter culture parents, she left school when only thirteen and spent a number of years apprenticing in architecture. Following an abusive marriage and a divorce, Andrea, a mother of three, decided to attend Modesto Junior College alongside her oldest son. She selected architecture as a major and claims that attending MJC felt like a joyful homecoming. Andrea fell in love with writing, winning a 1st place in the Celebration of Humanities, writing for the Pirates Log, serving architecture with her fascination with indigenous cultures and as a visiting editor and now as a community columnist for The Modesto Bee, while nurturing a burning desire to someday write about the pueblo of Guadalupe, heavily damaged by El Salvador’s massive earthquake of 2001, and it’s calling her name.
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Modesto Junior College

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Dennis Tucker
Director of Learning Resources

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Dean of Instructional Services

George Boodrookas
Dean of Community and Economic Development

Derek Waring
Dean for Special Programs
Date of appointment follows name.

Adams Michael (1998)
Mathematics
B.S., M.S., UC Irvine

Adler, Sue (1991)
Library Faculty
B.A., University of Michigan
B.S., Western Michigan University
M.L.S., UC Los Angeles

Ahrens, C. Donald (1969)
Earth Science, Meteorology
A.A., Modesto Junior College
B.A., M.S., San Jose State University
Ed.D., University of Northern Colorado

Aiello, Paul (1991)
Baseball Coach,
Physical Education Instructor
A.A., Modesto Junior College
B.S., University of Oregon
M.Ed., Chapman College

Akard, Michael (2001)
Computer Laboratory Instructor/ Coordinator, Library
Speech Communications
A.A. Modesto Junior College
B.A., M.A., CSU Fresno

Alcantra, Daniel (1988)
Mathematics
A.A., Porterville College
B.A., M.A., CSU Fresno

Alvarez, Juan H. (1971)
Dean, Student Services
B.S., M.A., Northern Arizona University

Alves, Ronald (1974)
Agriculture
B.S., UC Davis
M.S., CSU Fresno

Biology
B.A., M.S., University of Southern California
Ph.D., UC Santa Barbara

Anglin, Mark A. (1997)
Agriculture
B.S., M.S., California Polytechnic State University, San Luis Obispo

Ard, Gary L. (1971)
Golf Coach
Physical Education Instructor
B.A., M.A., University of Kansas

Ashleigh, David M. (1971)
Physical Education; Mathematics;
Coach A.A., Cerritos College
B.A., UC Los Angeles
M.A., CSU Stanislaus

Ashworth, Frank (1992)
Regional Fire Training Center
Program Director
A.S., Modesto Junior College
Master Instructor, California State Fire Marshal

Backlund, Nancy (1998)
Office Administration
B.A., CSU Chico
M.B.A., CSU Stanislaus

Baggett, David W. (1994)
Ornamental Horticulture/Plant Science A.A.S., Ohio State University
B.S., University of Arizona
M.Ed., University of Massachusetts, Amherst
Ed.D., University of Massachusetts, Amherst

Bailey, Kimberly (2000)
Counselor
A.A., Merced College
B.A., M.S., CSU Stanislaus

Counselor
A.A., St. Lucy’s Priory
B.A., M.Ed., Northern Arizona University

Beattie, Alex D. (1977)
Engineering
B.S., UC Berkeley
M.S., University of Illinois

Beggs, James (1991)
English
B.A., University of Georgia
M.A., Clemson University
Ph.D., University of Tennessee

Benker, Patricia D. (1978)
Dental Assisting
A.A., C.D.A., College of San Mateo
R.D.A., University of Washington- Dental Faculty Training
B.V.E., San Francisco State University

Bettencourt, Patrick J. (2001)
English
B.A., M.A., CSU Fresno

Boley, David B. (1989)
Mathematics
B.A., Sonoma State University,
M.S., University of Idaho

Boodrookas, George (1989)
WorkForce Training Center
B.A., UC Berkeley
M.P.A., CSU Stanislaus

Physical, Recreation, and Health Education, Sports Medicine
B.A., CSU Fresno

Boyd, Dan W. (1969)
Counselor, NCC, MFT
B.S., Bayler University
M.Ed., University of Texas
Ed.D., North Texas State University

Boyd, Marlies (1992)
Agriculture
B.S., M.Ed., UC Davis

Boyer, Allen H. (1968)
Music
B.A., M.A., Washington State University

Brogan, Paul (2001)
Physical Education Coach
B.A., M.A., CSU Stanislaus

Bryhni, Lori (2000)
Performing Arts - Dance
B.A., CSU Stanislaus
M.A., CSU Long Beach

Bucknam, Ines C. (1986)
French
A.A., Modesto Junior College
B.A., CSU Stanislaus
M.A., UC Santa Barbara

Buzbee, Shirley (1994)
Medical Assisting
A.A., Modesto Junior College
B.S., University of San Francisco

Cardoza, George D. (1981)
Agriculture
B.A., M.S. California Polytechnic State University, San Luis Obispo

Carroll, Iris (2000)
Library Faculty
B.A., Emory University
M.L.S., University of North Texas

Humanities
B.A., M.A, George Washington University
M.A., CSU Stanislaus
Cavazos, Leticia (2000)
Counseling
A.S., Modesto Junior College
B.S., University of San Francisco
M.A., Chapman University

Chapman, David (2001)
Music
B.A., CSU Sacramento
M.A., S.F. Conservatory of Music

Christopherson, Michelle A. (1987)
English
A.A., Modesto Junior College
B.A., UC Davis
M.A., CSU Sacramento

Cipponeri, Charles J. (2000)
Disability Specialist/Counselor
B.A., San Francisco State University
M.S., San Diego State University

Circle Shelley (2001)
English
A.A., American River College
B.A., M.A., CSU Sacramento

Clarke, James L. (1985)
Health, Respiratory Care
A.A., Mt. Hood Community College
B.A., Sonoma State University
M.S., San Francisco State University

Coats, Gloria (1993)
Nursing
B.S.N., CSU Stanislaus
M.S.N., CSU Dominguez Hills

Speech
B.A., M.A., University of the Pacific

Contreras, Marcos A. (1991)
Spanish
B.A., M.A., San Diego State University
M.A., UC San Diego
Ph.D., UC Santa Barbara

Conway, Thomas F. Jr. (1986)
Physical Education; Coach
B.S., Arizona State University
M.A., Northern Arizona University

Cooper, Ron (1990)
Automotive Technology
A.A., Bakersfield College
B.A., CSU Fresno

Costello, Bonnie (1992)
Nursing
A.D.N., Modesto Junior College
B.S.N., CSU Stanislaus
M.S.N. CSU Fresno

Cover, Alan A. (1976)
Agriculture
A.A., Modesto Junior College
B.S., CSU Fresno
M.Ed., UC Davis

Crittenden, Pamela (1990)
Counselor
B.A., UC Berkeley
M.S., San Francisco State University

Curl, James C. (1968)
Mathematics
A.A., Modesto Junior College
B.A., San Francisco State University
M.S., University of Santa Clara
Ed.D., University of Northern Colorado

Curtis, Teri (1996)
Biology
A.A., Modesto Junior College
B.A., CSU Fresno
M.S., University of the Pacific

Daly, Jillian K. (1998)
English
B.A., UC Berkeley
B.A., M.A., UC Irvine

Daniel, Michael (2000)
Chemistry
B.S., Louisiana State University, Shreveport
M.A., Ph.D., University of Texas, Austin

Davis, Jacqueline (2001)
Mathematics
A.A., Modesto Junior College
B.S., CSU Stanislaus
M.S., UC Davis

Dhillon, Hardev (1996)
Mathematics
A.S., Yuba College
B.A., M.A., CSU Sacramento

Droual, Robert (1998)
Anatomy
B.A., Queens College, New York
M.A., CSU Fresno
Ph.D., City University of New York
D.V.M., Purdue University

Drummond, Frank J. (2000)
Administration of Justice
A.A., Modesto Junior College
B.A., St. Mary’s College
M.A., Chapman University

Duarte, Hector M. (1996)
EOPS Assistant Director
B.S., M.A., College of Notre Dame

Duchscher, Lawrence Thomas (1988)
Art
A.A., Modesto Junior College
B.A., M.A., CSU Chico
M.F.A., University of Washington

Dyer, Patricia (1989)
P.E.
B.A., CSU Chico
M.A., University of the Pacific

Engstrom, Rose L. (1991)
English
A.A., Cosumnes River College
B.A., M.A., CSU Sacramento

Ennis, Kathleen (1999)
Library Faculty
B.A., CSU Stanislaus
M.A., University College, Dublin
M.L.S., San Jose State University

Ewing, Charles (1990)
Speech, Communication, Forensics
B.S., M.A., University of Texas, El Paso
Ph.D., Washington State University

Fagin, Mara (1988)
English
B.A., M.A., Humboldt State University

Merchant, Lee (1988)
Psychology
A.A., Modesto Junior College
B.A., M.A., M.F.T., CSU Stanislaus

Franco, Marianne (1987)
Spanish
A.A. Cuesta College
B.A. UC Santa Cruz
M.A., Ph.D., UC Berkeley

Gaines, Rebecca L. (1991)
Psychology
B.A., M.A., CSU Stanislaus

Garcia, Alida (2000)
EOPS Counselor
A.A., Modesto Junior college
B.S., University of San Francisco
M.A., Chapman University

Garcia, Marcos C. (1991)
Counselor
A.A., Allan Hancock College
B.A., CSU Stanislaus
P.P.S. Credential, San Jose State University
M.A., San Jose State University
Faculty and Administrators

Garcia, Mari Carmen (2000)  
Spanish  
B.A., CSU Sacramento  
M.A., Ph.D., UC Davis

Gervin, Dennis B. (1995)  
Dean of Instructional Services  
B.A., M.A., Ph.D. UC Santa Barbara

Speech  
B.A., M.A., CSU Fullerton

Glatt, Robert L. (1998)  
Culinary Arts  
B.S., UC Davis

Reading  
A.A., Foothill Junior College  
B.S., California Polytechnic State University, San Luis Obispo  
M.S., CSU Stanislaus

Greene, Catherine (2001)  
Biology  
B.S., M.S., San Jose State

Greenwood, Mary Ann (1975)  
EOPS Counselor  
B.S., Northern Michigan University  
M.A., University of Denver  
Ed. D., University of San Francisco

Groth, M. Christine  
Office Administration  
B.A., Spanish, Oklahoma University  
M.B.A., Oklahoma University

Guerra-Schmidt, Pamela (1999)  
Child Development/FCS  
B.A., M.S., CSU, Stanislaus

Director, Criminal Justice Training Ctr.  
B.S., University of North Carolina, Chapel Hill  
M.A., Sam Houston State University  
Ph.D., Golden Gate University

Gumm, Sonny C.  
Welding Technology  
A.A., Modesto Junior College  
B.V.E., CSU Stanislaus

Guy, Todd G. (1992)  
Theater, Speech  
A.A., Diablo Valley College  
B.A., CSU Long Beach  
M.A., San Francisco State University

Gyuran, Kimberly (1994)  
Speech, Organizational Communication  
B.S., Central Michigan University  
M.A., Wayne State University

Hacker, Mary Lou (1973)  
Human Services  
A.A., Yuba College  
B.A., CSU Sacramento  
M.S.W., CSU Fresno

Hagen, Joel (1997)  
Business, Computer Graphics  
B.A., CSU Stanislaus

Hahn, Henry (1957)  
English  
B.S., M.A., Bradley University

Hale, Eileen A. (1990)  
Nursing  
B.S., CSU Hayward  
M.S. Marquette University, Wisconsin  
FNP, Sonoma State University

Hartman, Terry Wesley (1975)  
Art/Design/Computer Graphics  
A.A., Pasadena College  
B.S., CSU Long Beach  
M.A., San Jose State University

Hausler-Akpovi, Annaliese (2000)  
English  
B.A., B.A., UC Berkeley  
M.A San Francisco State University

Hausman, Gregory A. (2000)  
Criminal Justice  
A.A., Merced College  
B.S., University of San Francisco

Hayes, Garry (1988)  
Geology  
A.A., Chaffey College  
B.A., Pomona College  
M.S., University of Nevada, Reno

Heinsius, John J. (1979)  
Business  
B.S., University of San Francisco  
M.F.A., CSU Hayward

Hickman, Richard (1990)  
Mathematics  
B.A., Wabash College  
M.S., University of Illinois  
Ph.D., UC Davis

Higginbotham, Richard D. (1968)  
History, Political Science  
B.A., University of San Francisco  
M.A., Stanford University

Hinton, Sharien (2000)  
L.D. Specialist  
B.S., Liberty University  
M.S., CSU Los Angeles

Administration of Justice  
A.A., Modesto Junior College  
B.A., M.A., Criminology, CSU Stanislaus

Hobert, Timothy K. (1997)  
English  
B.A., M.A., University of the Pacific

Howen, James (2001)  
Electronics  
B.A., California Polytechnic State University, San Luis Obispo

Hudelson Putnam, Cecelia (1997)  
Geography/Economic History  
A.A., Modesto Junior College  
B.A., UC Davis  
Single Subject Credential, University of Pacific  
MSc, London School of Economics

Hutchison, Bobby L. (1997)  
Psychology  
B.A., UC Santa Barbara  
M.A., Sam Houston State University, Texas

Ivory, Eric Anthony (1997)  
Counselor  
A.A., College of Alameda  
B.A., M.S., CSU Hayward

Jarrett, Elziabieta B. (1992)  
Mathematics  
M.S., Wroclaw University, Poland  
Ph.D, Western Michigan University

Jensen, Barbara (1999)  
English  
B.A., M.A., TESOL Certificate, CSU Stanislaus

Johnson, Ingrid (2001)  
English  
B.A., The Evergreen State College  
M.F.A., Eastern Washington University

Johnson, James L. (1969)  
Dean, Arts, Humanities & Communications  
B.A., M.A., CSU Hayward  
Ph.D., University of Southern California
Mathematics
B.S., University of San Francisco
M.S., Idaho State University

Johnson, Pamela (2001)
Health, Physical Education, Coach
B.A., Humboldt State University
M.A., St. Mary’s College

Juergenson, Yancey N. (1977)
Agriculture
A.A. Sacramento City College
B.S. CSU Chico
M.Ed., CSU Stanislaus

Dean, Physical, Recreation and Health Education
B.S., West Virginia University
M.A., University of Northern Colorado
Ed.D., Temple University

Keach, Robert M. (1991)
Dental Assisting
B.A., Chapman College
R.D.A., Registered Dental Assistant/State of California
C.D.A., Certified Dental Assistant/National Certification Examination

Keller, Daniel (1996)
Music
B.M., Northern Arizona University
M.M., University of Oklahoma

Kennard, Kimberly (2001)
Human Services
B.A., UC Davis
M.S., Long Island University,
C.W. Post Campus
D.S.W., City University of New York-Graduate School & University Ctr.

Keriotis, Dimitri (2000)
English
B.A., UC Santa Cruz
M.A., University of Nevada, Reno

Kerr, Susan (2000)
Anthropology
B.S., UC Davis
M.A., UC Santa Barbara

Kline, Roberta (1988)
Child Development
B.A., San Jose State University
M.A., Pacific Oaks College

Accounting, Business
B.S., San Francisco State University
M.B.A., CSU Stanislaus

Kropp, Jon (2000)
Industrial Technology
B.S., CSU Chico

Laffranchini, Deborah (2001)
Child Development
B.A., Humboldt State University
M.A., San Francisco State University

LaMont, Rose Marie (1992)
Economics
A.A., Cabrillo College
B.A., M.S., UC Santa Cruz

Lancaster Mingus, Carol (1994)
Telecommunications
A.A., Pima Community College
B.A., University of Arizona
Vocational experience 18 years

Lanigan, Elizabeth (1994)
Nursing
B.S.N., CSU Stanislaus
M.S.N., CSU Dominguez Hills

Larson, Brian (1994)
Computer Science
B.S., CSU Stanislaus
M.S., CSU Sacramento

Layne, Alan (1992)
Graphics Technology
B.S., California Polytechnic State University, San Luis Obispo

Lenkeit, Don A. (1972)
Anthropology
B.A., UC Santa Barbara
M.A., San Francisco State University

Lenkeit, Roberta D. (1976)
Anthropology
B.A., M.A., UC Santa Barbara

Llewellyn, Sharon (1997)
Music
B.A. Grand Canyon University
M.A. Arizona State University
D.M.A. Arizona State University

Lomax, Brian F. (1986)
Electronics
A.A., Ventura College
B.A., M.A., CSU Chico

Louie, Hanna (1999)
Counselor
A.A., San Joaquin Delta College
B.A., CSU Stanislaus
M.S., CSU Sacramento

Counselor
A.A., Modesto Junior College
B.A., UC Santa Barbara
M.A., CSU Sacramento

Astronomy, Physical Science
M.S., University of Chicago
B.A., Ed.D., U C Berkeley

Luman, Ruth (1999)
English as a Second Language
B.A., M.A., TESOL Certificate,
Biola University

Lyle, Terry (1983)
Program Director,
Respiratory Care Program
B.A., Sonoma State University
M.A., CSU Long Beach

Lynch, Michael (1992)
Theatre
B.A., CSU Fresno
M.A., Northwestern University,
Chicago

Mace, Joy D. (1974)
Family and Consumer Sciences
B.S., University of Wyoming
M.S., Colorado State University

Madden, Derek (1990)
Biology
B.A./B.A., M.A. CSU Fresno

Madriaga, Charles (2000)
Counselor/Study Skills
A.A., Hartnell College
B.A., M.A., CSU Stanislaus

Maki, Laura (1996)
Chemistry
B.S., CSU Fresno
Ph.D., UC Davis

Manner, Kimberly E. (1998)
English
B.A, M.A., Ph.D., University of Southern California

Martin, Anne (2001)
Music
A.S., Santa Fe Community College
B.M., New School of Music
M.M., Yale University

Martin, G. Daniel (1981)
English as a Second Language
B.A., UC Santa Barbara
M.A., University of Illinois
Martin, Harold Curtis (2000)
History
M.A., ABD, UC San Diego
B.A., UC Berkeley

Martinez, Desdemona (1989)
High Tech Specialist, DSP&S
A.A., Modesto Junior College
B.A., CSU Stanislaus
M.A., San Francisco State University

Mayhew, Lewis B., Jr. (1973)
Counselor
B.A., San Francisco State University
M.A., San Jose State University

Business; Mathematics; Philosophy
B.A., St. Joseph’s College, New York
Graduate Certif. Philosophy / Theology
Gregorian University, Rome, Italy
M.A., Georgia State Univ., Atlanta
M.A., Indiana University
M.B.A., CSU Stanislaus
L.L.M., Golden Gate University
J.D., University of Southern California

McKissick, Allan D. (1981)
Speech Communication
A.A., Glendale Community College
B.A., M.A. CSU Los Angeles

McLean, Margaret (1996)
Child Development
A.A., Reedley College
B.A., CSU Stanislaus

McLeod, Wilma J. (1990)
Vice President, Student Services
B.A., San Jose State University
M.S., CSU Los Angeles
Ph.D., UC Los Angeles

Meidl, Kenneth (1998) ...cont’d
Physics
B.S., California Polytechnic State University, San Luis Obispo
M.S., CSU Fresno

Mendes, John A. (1991)
Agriculture
A.A., Modesto Junior College
B.S., M.S. California Polytechnic University San Luis Obispo

Mendez, Pedro (1994)
Director of Technical Education
B.A., CSU Stanislaus
M.A., George Washington University

Mengel, Jane M. (1991)
Engineering
B.S., U.S. Air Force Academy
M.S., CSU Sacramento

Metcalf, Evelyn Elaine (1980)
English as a Second Language
B.A., UC Berkeley
M.A., University of Hawaii
Certificate, UC Los Angeles

Michelena, Jaymes (2001)
Math
B.S., CSU Stanislaus
M.A., California Polytechnic State University, San Luis Obispo

Mo, Eva (1999)
History
A.A., Chabot College
B.A., UC Berkeley
M.A., San Francisco State University

Monast, Joseph H (2001)
Philosophy
B.A., M.A., Ph.D., Tulane University

Monlux, Michele (2001)
Biology
A.A., Chabot College
B.A., M.A., UC Berkeley

Montalbano, James (1984)
Computer Science
A.A., Mitchell College
B.A., CSU Stanislaus
M.F.A., United States International University

Morales, Michael
Agriculture
A.S. Kings River College
B.S. CSU Fresno

Motroni, Milan (2001)
Health, Adaptive Physical Education
B.A., UC Davis
M.A., University of the Pacific

Mulder, Cheryl (1996)
Health, Physical Education, Coach
B.A., CSU Stanislaus
M.S., U.S. Sports Academy

Murov, Steven L. (1979)
Chemistry / Project Director – Modesto Area Partners in Science (MAPS)
B.S., Harvey Mudd College
Ph.D., University of Chicago

Nanez, Estella (1988)
Counselor
B.A., M.A., San Jose State University
CCC Counselor Credential
CCC Limited Teaching Credential

Nelson-Hollis, Vicki (1992)
Nursing
A.A., L.V.N., Golden West Community College
B.S.N., M.S.N., CSU Fresno

Netto, Jeffrey A. (1999)
English
Ph.D., UC Santa Barbara

Netto, Jenny Tashjian (2001)
English
B.A., B.A., UC Santa Barbara
M.A. CSU Fullerton

History
A.A., Bellevue Community College
B.A., Washington State University
M.A., Ph.D., University of Idaho

Nicewonger, John (1979)
Agriculture
B.S., CSU Chico

Nicoll-Johnson, Teri (1980)
Psychology
A.A., Rio Hondo College
B.A., CSU Fullerton
M.A., San Diego State University

Agriculture & Environmental Sciences
B.S., M.A., California Polytechnic State University, San Luis Obispo

Nomof, Thomas (2000)
Physics
B.A., UC Berkeley
M.S., San Jose State University

Nordin, David (2001)
Respiratory Care
B.A., University of North Dakota

O’Connor, Michael (1977)
Chemistry
A.S., Long Beach City College
B.S., M.S., CSU Long Beach
Ph.D., UC Irvine

Ogawa, Sayuri E. (1979)
Family and Consumer Sciences
Teacher Training, UC Berkeley
Vocational Experience, 22 years
Onorato, Daniel S. (1969)  
English, Spanish  
B.A., St. Patrick’s College  
M.A., UC Berkeley  

Onorato, Mary Alice  
Nursing  
A.A., A.S., Modesto Junior College  
R.N. State of California  
Certification in Gerontology, American  
Nurses Credentialing Center  
D.S.D., Dept. of Health Services, Sacramento  

Payvar, Kamran (1997)  
Mathematics  
B.S., Teachers Training University  
M.S., CSU Fresno  

Pehl, Susan B. (1977)  
Business  
B.A., M.A., San Jose State University  

Petersen, Carole (1989)  
Counselor  
R.N. Diploma, Highland College of Nursing  
A.S., Modesto Junior College  
B.S.N., M.A., CSU Stanislaus  

Petersen, Daniel W. (1967)  
Art  
A.A., Modesto Junior College  
B.A., M.A., San Jose State University  

Petersen, John Walter (1983)  
Auto Body  
Teacher Training, UC Berkeley  
Vocational Experience, 15 years  
I-Car Certified  
Automotive Service Excellence Certified  

Peterson, John (1997)  
Automotive Technology  
Vocational Experience, 18 years  
p/t Chabot/Las Positas 2 years  

Pham, Le-Huong (1981)  
Library Faculty  
LL.B., University of Saigon, Vietnam  
M.L.S., Emporia State University  

Pierstorff, Samuel (2000)  
English/Creative Writing  
A.A., Orange Coast College  
B.A., M.F.A., CSU Long Beach  

Pinckney, Jan (1994)  
Auto Tech  
A.A., Fresno City College  
B.V.E., CSU Fresno  
National University Credential  
Program Teacher Training - UC Berkeley  

Pollard, Dale (1999)  
A.S., Modesto Junior College  
B.S., M.S., California Polytechnic University, San Luis Obispo  

Prusso, Laurie (2001)  
Child Development  
B.A., M.S., CSU Hayward  

Raduechel, Robert D. (1983)  
Automotive Technology  
A.A., Modesto Junior College  
B.A., CSU Fresno  

Raleigh, Peter J. (1971)  
Shakespeare; Film Studies; English  
B.A., Univ. of Birmingham, England  
M.A., Ph.D., UC Santa Barbara  
M.A., University of the Pacific  

Ramsey, Jill D (2000)  
Nursing  
A.A., Modesto Junior College  
B.S., Psychology, UC Davis  
B.S., Nursing, Loyola Univ. of Chicago  
M.S., UC San Francisco  

Reilly, Jerry M. (1968)  
Art  
A.A., Fort Dodge Junior College  
B.A., Iowa State Teachers College  
M.A., State College Iowa  
M.F.A., Claremont Graduate School  

Remsing, Joseph G. (1971)  
Art  
B.A., M.A., San Jose State University  

Nursing  
B.S.N., CSU Stanislaus  
M.S.N., CSU Dominguez Hills  

Rivera, Rick P. (1997)  
English  
A.A., Santa Rose Junior College  
B.A., M.A., Sonoma State University  

Robert, Brenda J. (1997)  
Dean, Literature and Language Arts  
B.A., M.A., Kansas State University, Manhattan, KS  
Ph.D., George Mason University, Fairfax, VA  

Rose, Gina (1992)  
Dean, Business, Behavioral, Social Sciences  
A.S., Modesto Junior College  
B.A., M.A., CSU Stanislaus  

Sabre, Alejandro  
Music  
D.M.A., Eastman School of Music, Rochester, NY  

Sahlman, James (1999)  
Speech  
A.A., Modesto Junior College  
B.A., CSU Stanislaus  
M.A., University of the Pacific  
Ph.D., Ohio University  

Salazar, Roman S. (1973)  
Business  
A.A., Eastern Arizona Junior College  
B.S., Northern Arizona University  
M.S., Utah State University  

Sanders, Brian K. (1995)  
Mathematics  
B.S., UC Santa Barbara  
M.A., University of Oregon  

Sassé, Margo L. (2002)  
B.A., University of Arizona  
M.L.S., Rutgers University  

Scheff, Lawrence (2000)  
Reading  
B.A., Niagara University  
M.A., Western Connecticut State College  

Schmidt, Cynthia D. (1996)  
Nursing  
B.S.N., CSU Fresno  
M.S.N., CSU Sacramento  

Vice President of Instruction  
B.S., UCLA  
Ph.D., UC Riverside  

Scully, Dorothy L. (1980)  
Reading  
B.A., UC Los Angeles  
M.S., CSU Fullerton  

Art History  
A.A., Modesto Junior College  
B.A., PhD., UC Santa Barbara
Nursing
A.D.N., Modesto Junior College
B.S.N., CSU Sacramento
M.S.N., University of Portland

Shea, Mary (2001)
Health, Physical Education, Coach
B.S., Michigan State University
M.S., Eastern Michigan University

Short, Kathy (1977)
Computer Graphics/Computer Science
B.A., CSU Fresno

Shrock, David L. (1997)
Health Education
Coach, Cross Country, Track & Field
B.A., M.A., San Jose State University

Sielicki, Hilda M. Cagigas (1992)
Health Services Coordinator
A.D.N., East Los Angeles College
B.S.N., P.H.N., CSU Dominguez Hills
M.S.N., P.N.P., UC San Francisco

Sill, Nancy (2000)
Accounting
B.S., CSU Stanislaus
Certified Public Accountant
MAOL, Chapman University

Silva, Mary (1997)
Counseling
B. Ed., St. Patrick’s College, Dublin, Ireland
M.A., CSU Chico
J.D., Cal Northern School of Law, Chico

Smedshammer, Michael (2000)
English
A.A., Santa Rosa Junior College
B.A., UC Berkeley
M.A., M.A., Ph.D. University of New Mexico

Smith, Ann (2000)
English
B.S., Univ. of Wisconsin, Milwaukee
M.A., University of Hawaii

Smith, Al (1994)
History
A.A., Fresno City College
B.A., M.A., CSU Fresno

Smith, Del William (1999)
Biology/Botany/Natural History
B.S., Southern Utah University
M.S., Ph.D., Brigham Young University

Smith, Denise (1992)
English
A.A., Modesto Junior College
B.A., M.A., CSU Stanislaus

Photography
B.A., UC Davis
M.F.A., California College of Arts & Crafts

Spector, Stanley J. (1986)
Philosophy
B.A., M.Ed., Loyola College, Baltimore
M.A., Ph.D., University of Colorado

St. Urbain, Barbara (1998)
Counselor
B.G.S., M.A., University of Iowa

Stevens, Jim (2000)
Physical Education; Football Coach
A.A., AmericanRiver College
B.S., M.S., CSU Hayward

Stevenson, Robert (2001)
Art
B.A., UC Berkeley
M.F.A., S.F. Art Institute

Stone, Duane D. (1979)
Architecture
B.S., California Polytechnic State University, San Luis Obispo
M.A., UC Irvine

Strangio, Michael (1981)
English as a Second Language
B.A., College of Notre Dame
Certificate in TESOL, UC Los Angeles
M.A., University of San Francisco

Stroud, Stephen (1980)
Music
A.A., Modesto Junior College
B.A., UC Los Angeles
M.S., Ed.D., University of Illinois, Urbana-Champaign

Sundquist, Michael (1988)
Theatre
A.A., Crafton Hills College
B.A., M.F.A., UC Irvine

Swanson, Carol (1991)
Nursing
Nursing Diploma, Emanuel Hospital School of Nursing
B.S.N., CSU Stanislaus
M.S.N., CSU Fresno

Sweeney, Richard A. (1967)
Sociology
B.A., M.A., San Jose State University

Tingley, Ronald R. (1971)
Counselor
A.A., Modesto Junior College
B.A., M.S., San Jose State University

Top, Darrell (1968)
Mathematics
B.S., Augustana College
M.B.S., University of Colorado

Torok, Michael L. (1999)
Biological Sciences
B.A., B.S., UC Santa Barbara
M.S., Moss Landing Marine Laboratories
CSU Stanislaus

Tsuda, Dean Y. (1975)
Counselor
B.A., Occidental College
M.S., CSU Los Angeles

Upton, Pamela (1990)
Anatomy and Physiology
A.A., A.S., Merced Community College
B.A., UC Davis
M.A., CSU Fresno

Uyeshiro, Sandra (1981)
Anatomy and Physiology
B.A., Bellarmine University, Louisville, Ky
M.S., Purdue University, West Lafayette, Indiana

Vallee, Lillian (1991)
English
A.A., College of San Mateo
B.A., M.A., Ph.D. UC Berkeley

Van Cleave, Guy J. (1975)
Biological Sciences
B.S., UC Davis
M.S., San Diego State University
Vaughn, Christopher (1999)  
Computer Science  
B.S., CSU Stanislaus

Vaughn, Timothy (1996)  
Industrial Electronics  
B.S., CSU Stanislaus

Vaught, Lloyd C. (1982)  
Computer Science  
B.A., Missouri Valley College  
M.S., Central Missouri State University  
M.S., UC Berkeley

Wall, J. Patrick (2001)  
Director of Basic Skills  
B.S., U.C. Davis  
M.A., California Polytechnic State University, San Luis Obispo  
Ph.D., University of Las Vegas

Ward, David G. (1992)  
Anatomy and Physiology  
B.A., CSU Stanislaus  
Ph.D. University of Oklahoma Health Sciences Center  
Postdoctoral Certificate, The Johns Hopkins University School of Medicine

Nursing  
Nursing Diploma, Providence College of Nursing  
B.S.N., CSU Stanislaus  
M.S.N., CSU Dominguez Hills

Waring, Derek (1993)  
Dean for Special Programs  
DSP&S and EOP&S  
A.A., Modesto Junior College  
B.A., CSU Stanislaus  
M.A., University of San Francisco

Watkins, Shelly (2000)  
Psychology  
B.A., M.A., CSU Stanislaus  
Ph.D. UC San Diego

Watson, Sharon L. (1973)  
Business  
B.S., Weber State College  
M.S., Brigham Young University

Weaver, Jeffery L. (1989)  
Machine Tool Technology  
A.A., Modesto Junior College  
B.V.E., CSU Stanislaus

Weese, Larry R. (1972)  
Architecture  
B.Arch., California Polytechnic State University  
San Luis Obispo  
M.S., Rensselaer Polytechnic Institute

Wells, Barbara (1981)  
Disability Services  
A.A., Modesto Junior College  
B.A., CSU Stanislaus  
M.A., CSU Fresno

Wells, Barbara (B.J.) (2001)  
ESL  
B.F.A., University of Connecticut  
M.Sc., Aston University, Birmingham, U.K.

Wesley-Hartman, Charmaine (1990)  
Counselor  
B.S., M.S., University of Oregon  
Ph.D., Oregon State University

West, Thomas (2001)  
English  
A.A., Fresno City College  
B.A., M.A., CSU Fresno  
M.F.A., Western Michigan University

Westrope, Theron K. (1999)  
English  
B.A. University of the Pacific  
M.A. University of the Pacific  
Ph.D. University of Louisiana at Lafayette

White, Kenneth B. (1996)  
History  
A.A., Merritt College  
B.A., CSU Chico  
M.A., Florida State University  
Ph.D., University of Arizona

Whittington, Sarah J. (1991)  
Mathematics  
B.S., University of Texas  
M.A., University of Texas

Wightman, Wayne (1971)  
English  
A.A., Modesto Junior College  
B.A., M.A., San Francisco State University

Williams, James H. (2002)  
President  
A.A., Los Angeles City College  
B.A., CSU Los Angeles  
M.S., Pepperdine University  
Ph.D., Washington State University

Williams, Robert C. (1975)  
Counselor  
B.S., University of Wisconsin  
M.S., Indiana University

Wilson, E. William (1980)  
Computer Science  
A.A., College of the Sequoias  
A.B., M.A., CSU Chico

Wilson, Lynda L. (1983)  
Nursing  
A.A., College of San Mateo  
B.S., CSU Stanislaus  
M.S., CSU Fresno  
Ed.D., University of the Pacific

Wirth, Diane (1990)  
Interior Design/Merchandising  
B.A., CSU Sacramento  
M.A.O.M. University of Phoenix

Wong, B. Linda (1994)  
Counselor  
A.A., Contra Costa College  
B.A., CSU Chico  
M.S., University of LaVerne

Woodside, Sandra (2000)  
Sociology  
B.A., University of Maryland  
M.S., Drake University

Ye, Xiang-Dong (2001)  
Mathematics  
M.S., Ph.D., University of Iowa

Young, Sam C. (1996)  
Physical Education  
B.A., UC Davis  
M.S., CSU Sacramento

Zamora, John A. (2001)  
Computer Science  
A.S., College of the Sequoias  
B.S., CSU Fresno
Adams, Shirlee D.  
1971-2003  
Articulation Officer

Ahrens, Donald  
1969-2004  
Earth Science, Meteorology

Albiani, Jack P.  
1969-1997  
Physical Education Coach

Allen, Kenneth L.  
1969-2000  
English

Alvarez, Juan  
1971-2004  
Counseling, Dean of Student Services

Andrews, Howard  
1975-1985  
Automotive

Antonio, Ruth M.  
1958-1991  
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Ashley, Dave  
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Physical Education, Math

Azevedo, John  
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Bates, June  
1944-1952; 1960-1978  
Art

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Geology

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1951-1953; 1957-1971  
School Nurse

Blank, C. Arnold  
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Vice President of Instruction

Collins, L.  
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History, Anthropology

Elms, Stan W.  
1962-1992  
Zoology, Biology, Senior Curator, Great Valley Museum

Espinala, Frank Jr.  
1960-1976  
Agriculture

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Spanish

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Engineering, Department Chairman

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Counselor

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1955-1993
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Zimmerman, John W.
1955-1993
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GLOSSARY OF COLLEGE TERMS

A.A.: ASSOCIATE IN ARTS: General degree granted by California Community Colleges. See Instructional Programs for requirements.

A.S.: ASSOCIATE IN SCIENCES: General degree granted by California Community Colleges having more emphasis on two-year vocational training than the A.A. degree. See Instructional Programs for requirements.

ADVISOR: An instructor who assists students in developing a program of study within a major. Contact major division office for advisor assignment.

ADVANCED STANDING: Classification of student who has had previous college work.

BACHELOR'S DEGREE: Degree granted by four-year colleges. Usually the Bachelor of Arts (B.A.) or the Bachelor of Science (B.S.).

CALIFORNIA ARTICULATION NUMBER (CAN): The CAN system assures students that CAN courses on one participating campus will be accepted “in lieu of” the comparable CAN course on another participating campus.

CLASS SCHEDULE: The listing of courses including hours, instructors, and room assignments to be offered each semester.

COMMUNITY EDUCATION CLASSES: Fully fee-funded avocational and recreational classes. These classes carry no credit value.

COUNSELOR: A person qualified to assist students with personal, career, avocational and educational planning and development.

CREDIT (graded) COURSE: Course for which units are granted. At MJC, any course numbered 1 through 399.

CREDIT-NO CREDIT GRADING: A grading system allowing a course to be taken for a grade of Credit or No Credit rather than for a letter grade of A,B,C,D,F. See Academic Regulations for details.

ELECTIVES: Courses elected by the student which do not fulfill any specific requirement but provide units toward the degree.

GENERAL EDUCATION OR BREADTH: Courses required of all degree candidates regardless of their major, to assure a broad education. These differ for the A.A. and A.S. degrees and for transfer. See Instructional Programs for specific requirements.

GRADE POINT AVERAGE (G.P.A.): The average of a student’s grades. See Academic Regulations for method of computation.

LOWER DIVISION: The first two years of college work, i.e., freshman and sophomore years, for a bachelor’s degree. By law only lower division work can be offered at MJC.

MAJOR: The major field of study a student plans to pursue, e.g., biology, nursing, etc.

MINOR: The field of study a student plans to pursue in addition to the major but with less emphasis. A minor is not usually required.

NON-CREDIT (ungraded) COURSE: Course for which no units are given. At MJC, any course numbered 800-999.

PREREQUISITE: A requirement which must be completed prior to enrollment in a course. If required, it is listed in the course description. See section on Courses.

SEMESTER UNIT: In general, a semester unit represents 1 hour of lecture or 3 hours of laboratory per week for a semester. Graduation requires 62 semester units. One semester unit is equivalent to one and a half quarter units.

TRANSCRIPT (of record): Copy of student’s college record prepared by the Record’s Office.

UPPER DIVISION: The last two years of college work, i.e., junior and senior years and/or courses. Upper division work is not offered, and upon evaluation request may be accepted for credit at MJC.
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