Mt. San Jacinto College’s
Viticulture, Enology & Winery
and Hospitality Program

Areas of focus in the program:

• Tasting Room & Customer Service Skills
• Sales & Marketing Strategies in the Wine Industry
• Staff Development & Activities
• Wine Club Development & Management
• Event Program Coordination
• Basic Concepts of Enology & Viticulture to the Field of Hospitality

The Temecula Valley Wine Country is found less than 60 miles north of San Diego, and less than 90 miles south of Los Angeles and Orange County which makes this small city of about 100,000 people a destination spot for an area with a radius of approximately 18 million people. In a recent tourism study conducted by the Temecula Valley Visitors and Convention Bureau, Temecula Valley travel and tourism brought in $557 million to the local economy and also supported more than 6000 local jobs in 2010.

In an effort to help develop the needs of various employers in the Temecula Valley including local wineries, Mt. San Jacinto College has developed several courses in the Viticulture, Enology, and Winery Technology industry, including an internship program which combines classroom theory with a hands-on teaching approach.

The Viticulture, Enology and Winery and Hospitality Program (VEW) consist of coursework in Enology, Viticulture, Winery Business Principles and Hospitality, all are taught by industry professionals from the Temecula Valley wine industry. These courses are for students interested in finding employment in the wine industry and/or students desiring to transfer to a university and major in Viticulture and Enology.
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STATE OF CALIFORNIA

—INDUSTRY SECTORS

The State of California has identified fifteen industry sectors which each contain multiple career pathways in which to develop programs of study. Mt. San Jacinto College offers a variety of CTE programs in eleven of those industry sectors. Under each industry sector, students will find a brief industry overview, certificate and/or degree options, employment concentration certificates (if available) and career opportunities.

Program Awards

Each of the programs highlighted in this catalog lead to some type of award or degree. Some programs offer Associate in Science Degree, State Approved Certificates and/or Employment Concentration Certificates.

Associate of Science Degree: The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

State Approved Certificate: These programs take 18 units or more to complete and may lead to an Associate of Science Degree.

Employment Concentration Certificates: These are locally awarded certificates that take 18 units or less to complete and may help an individual renew or update career skills, may lead to employment competency or salary advancement but do not lead to an Associate of Science Degree. They can be used as a stepping stone towards earning a State Approved Certificate or Associate of Science Degree.

Students should always see a counselor to develop an educational plan. CTE Counseling is available by contacting the Counseling Office at one of our 4 locations:

San Jacinto Campus 951-487-3255
Menifee Valley Campus 951-639-5255
Temecula Education Complex 951-693-5309
San Gorgonio Pass Campus 951-922-1408
Fifty years after being established, Mt. San Jacinto College is still learning from the past, celebrating special moments and helping to change the future by providing education that is responsive to the needs of a diverse student population.

Through Career Technical Education (CTE), Mt. San Jacinto College offers multiple educational pathways designed to provide technical skills essential for an individual to be competitive in today’s job market. These options include Associates of Science Degrees; State approved certificate programs, occupational internships, and flexible training courses. CTE at Mt. San Jacinto College provides valuable training whether you are just beginning your educational journey, hoping to improve your professional opportunities or looking to change careers.

Here at Mt. San Jacinto College our programs are developed in collaboration with our business and industry partners so they are responsive to today’s job market. It is the goal of Career and Technical Education to provide avenues for students to enter high-skill, high demand and potentially high-wage occupations or to transfer to four-year universities and continue their education. Continual oversight from actively employed professionals ensures that we are providing relevant instruction. The hope is that you will leave the college, well-trained, motivated and ready for the next stage in your voyage.

We hope this catalog serves as a helpful guide as you pursue your educational and career goals at Mt. San Jacinto College!

The mission of Career & Technical Education Programs at Mt. San Jacinto College is to engage, prepare, and educate learners, communities, and employees for careers in a global and competitive workforce.
<table>
<thead>
<tr>
<th>Directors</th>
<th>Program Coordinators and Site Supervisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbara Carmody, Child Development &amp; Education</td>
<td>Nancy Alvarado, Child Development &amp; Education</td>
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<tr>
<td>Rhonda Dixon, Continuing Education &amp; Workplace Training</td>
<td>Kristen Ekman, CTE Counselor/ CWEE Coordinator</td>
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<tr>
<td>Soraya Ledesma, Continuing Education &amp; Workplace Training</td>
<td>Susanne Mata, Career &amp; Technical Education, Special Programs</td>
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<tr>
<td>Nancy Alvarado, Child Development &amp; Education</td>
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<td>Rhonda Dixon, Continuing Education &amp; Workplace Training</td>
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<td>Kristen Ekman, CTE Counselor/ CWEE Coordinator</td>
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<td>Susanne Mata, Career &amp; Technical Education, Special Programs</td>
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<td>Kaye Melsheimer, Business Education &amp; Computer Information Systems Departments</td>
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<td>Melissa Ott, Photography Department</td>
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<td>Bing Bruce, Audio &amp; Video Technology</td>
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<td>Susan King, Job Connect/CalWORKS</td>
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<td>Niki Love, Multimedia Department</td>
<td>Soraya Ledesma, Continuing Education &amp; Workplace Training</td>
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<td>Angela Aceves, Automotive Technology</td>
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<td>Dawn Bridge, Career &amp; Technical Education</td>
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<td>Bing Bruce, Audio &amp; Video Technology</td>
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<td>Lynn Mann, Business Education &amp; Computer Information Systems Departments</td>
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<td>Deborah McKee, Career &amp; Technical Education, Special Programs</td>
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<td>Kaye Melsheimer, Business Education &amp; Computer Information Systems Departments</td>
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<td>Kathy Ponio, Audio &amp; Video Technology</td>
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<tr>
<td>Cynthia Prentice, Career &amp; Technical Education</td>
<td>Vinson “Cody” Thorn, Automotive Technology</td>
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<td>Kathy Ponio, Audio &amp; Video Technology</td>
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<td>Cynthia Prentice, Career &amp; Technical Education</td>
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<tr>
<td>Vinson “Cody” Thorn, Automotive Technology</td>
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</tbody>
</table>

Thank you for your leadership and dedication!
Mt. San Jacinto College offers many degree programs as well as a vast array of state approved certificate and locally approved employment concentration certificates for eleven of the fifteen California Industry Sectors as shown in the following table. Please refer to the MSJC College Catalog for specific program requirements and course details.

<table>
<thead>
<tr>
<th>Program</th>
<th>Employment Concentration</th>
<th>Certificate</th>
<th>Degree</th>
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<td><strong>Agriculture and Natural Resources Industry Sector</strong></td>
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<td>Turf and Landscape Management</td>
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<tr>
<td>Golf and Grounds</td>
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<td></td>
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<tr>
<td>Irrigation Technician</td>
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<tr>
<td>Landscaping Operation</td>
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<tr>
<td><strong>Arts, Media and Entertainment Industry Sector</strong></td>
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<tr>
<td>Audio and Video Technology</td>
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<tr>
<td>Advanced Audio Video Technology</td>
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<tr>
<td>Multimedia</td>
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<td>X</td>
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<tr>
<td>Animation Production</td>
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<tr>
<td>Video Production</td>
<td>X</td>
<td></td>
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<tr>
<td>Visual Development</td>
<td>X</td>
<td></td>
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<tr>
<td>Web Design and Development</td>
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<tr>
<td>Photography</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Education, Child Development and Education Industry Sector</strong></td>
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<td>Child Development and Education</td>
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<tr>
<td>Administration</td>
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<tr>
<td>Art</td>
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<td>Assistant Teacher</td>
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<tr>
<td>Associate Teacher</td>
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<tr>
<td>Communication</td>
<td>X</td>
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<tr>
<td>Deaf Culture</td>
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<tr>
<td>Early Childhood Special Education</td>
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<tr>
<td>Elementary Education</td>
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<tr>
<td>Health and Safety</td>
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<tr>
<td>Infant/Toddler</td>
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<td>Language and Literacy</td>
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<td>Nutrition</td>
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<td>School-Age Child Care</td>
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<td>Science</td>
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<tr>
<td><strong>Energy and Utilities Industry Sector</strong></td>
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<tr>
<td>Water Technology</td>
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<td>Small Wind Energy Technology</td>
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<td>Solar Thermal Technology</td>
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<td>Surveying</td>
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<tr>
<td>Geographic Information Systems</td>
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<tr>
<td>Engineering</td>
<td>X</td>
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<tr>
<td>Multimedia</td>
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<tr>
<td>Programming</td>
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<tr>
<td>Visual Design</td>
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</table>
## Certificates, Degrees and Employment Concentrations

<table>
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<th>Program</th>
<th>Employment Concentration</th>
<th>Certificate</th>
<th>Degree</th>
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<tbody>
<tr>
<td><strong>Finance and Business Industry Sector</strong></td>
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<tr>
<td>Accounting Application</td>
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<tr>
<td>Accounting and Tax Preparation</td>
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<tr>
<td><strong>Business Administration</strong></td>
<td>X</td>
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<tr>
<td>Business, Clerical</td>
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<tr>
<td>Entrepreneurship</td>
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<tr>
<td>Event Operations Management</td>
<td>X</td>
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<tr>
<td>Management Communications</td>
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<tr>
<td>Microsoft Applications Specialist</td>
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<tr>
<td><strong>Management/Supervision</strong></td>
<td>X</td>
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<tr>
<td>Office Administration</td>
<td>X</td>
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<tr>
<td><strong>Office Administration Technician</strong></td>
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<td>Office Communications</td>
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<tr>
<td>Professional Development</td>
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<tr>
<td>Project Management</td>
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<tr>
<td>Records Management</td>
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<tr>
<td><strong>Small Business Operations</strong></td>
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<tr>
<td>Sustainable Energy Management for Business</td>
<td>X</td>
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<tr>
<td>Virtual Office Professional</td>
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<tr>
<td><strong>Health Science and Medical Technology Industry Sector</strong></td>
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<tr>
<td>Alcohol and Drug Studies</td>
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<tr>
<td>Dual Diagnosis</td>
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<tr>
<td>Certified Nursing Assistant/Home Health Aide</td>
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<tr>
<td><strong>Allied Health</strong></td>
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<tr>
<td>Certified Nursing Assistant</td>
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<tr>
<td>Emergency Medical Technician</td>
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<td>Emergency Medical Technician Advanced</td>
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<tr>
<td><strong>Diagnostic Medical Sonography</strong></td>
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<td>Registered Nursing</td>
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<td>Vocational Nursing</td>
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<tr>
<td><strong>Hospitality, Tourism and Recreation Industry Sector</strong></td>
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<tr>
<td>Viticulture, Enology and Winery Technology</td>
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<tr>
<td><strong>Information Technology Industry Sector</strong></td>
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<tr>
<td>Computer Information Systems</td>
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<tr>
<td><strong>General Track</strong></td>
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<tr>
<td>Computer Forensics</td>
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<tr>
<td>Computer Hardware Specialist</td>
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<tr>
<td>Data Analysis and Modeling</td>
<td>X</td>
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<tr>
<td>Microsoft Office Application Developer</td>
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<tr>
<td>Networking Technologies Apprentice</td>
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<td>OpenOffice Specialist</td>
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<td>Service Desk Hardware Support</td>
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<tr>
<td>Service Desk Software Support</td>
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</tbody>
</table>
### Program Employment Concentration

**Internet Authoring**
- Internet Authoring Apprentice
- Internet Authoring Journeyman
- Internet and Web Technologies

**Networking**
- LAN/WAN Administration (CCNA – Cisco Certified Network Administrator)
- Linux System Administrator
- Microsoft Certified System Administrator (MCSA)
- Security Certified Network Professional (SCNP)

**Programming**
- C++ Programming
- Database Administrator
- Database Developer
- Database Operator
- Database Programming
- Embedded Systems Programming
- JAVA Programming
- Python Programming
- SQL Programming
- Visual Basic Programming

**Public Services Industry Sector**

**Administration of Justice**
- Corrections
- Computer Forensics

**Fire Technology**
- Fire Academy Preparation
- Fire Apparatus Operator Preparation

**Legal Assistant**
- Legal Office Support

**Transportation Industry Sector**

**Automotive Transportation Technology**
- Automotive Emission Technician
- Automotive Service Advisor/Automotive Service Shop Management
- Engine Performance Technician
- General Technician
- Honda Fast track

---

**Our Commitment to Student Success**

The Administration and Staff of MSJC are constantly finding ways to help our students succeed by:

- Providing classes in a diverse learning environment: traditional classroom setting, online and hybrid environment
- Offering classes in the daytime, evenings and on weekends at our four sites: Menifee Valley Campus, San Jacinto Campus, San Gorgonio Pass Campus, Temecula Education Complex
- Meeting with community and business leaders to collect feedback and review the ever-changing workplace demands
- Maintaining classroom technology with current industry standards
All of the Career Technical Education Programs at Mt. San Jacinto College have an Advisory Committee. CTE Advisory committees play an integral role in shaping the programs and curricula development at Mt. San Jacinto College. The committees help ensure that our programs remain in touch with the needs of local business and industry and that our students receive relevant instruction. Each CTE Advisory Committee consists of a group of individuals selected to represent broad points of view relative to a specific CTE area. The members should have a strong sense of commitment to the development of our educational program and our students. Members are recognized by the MSJC District Board of trustees and are invited to advise program faculty in the area of curriculum, career guidance, facilities, funding, and staffing. All of MSJC’s CTE programs have an advisory committee that meets at least once per academic year.

COMMITTEE MEMBERSHIP

Membership on a MSJC CTE Advisory Committee is not limited to a specific portion of a particular occupation; rather membership includes a variety of individuals with diverse backgrounds that can provide varying advice and a broad perspective. Most CTE programs enjoy greater benefits when the CTE Advisory Committee represents both workers and supervisors. Therefore, our CTE Advisory committees combine people who perform the skills and those who hire and supervise workers. These individuals work together to give the instructional staff an accurate picture of the community’s employment needs. The following groups of people are considered when identifying potential new CTE Advisory Committee members:

- Business Owners
- Supervisors
- Employees
- Human Resource Directors
- Industry Representatives
- Labor Representatives
- Students
- Parents
- Community Members

Actively involved Advisory Committee Members share common characteristics:

Leadership - Committee members should have demonstrated leadership within their company, occupation and/or the community. They should work well with their committee, as well as college staff, and possess the ability to present their ideas effectively.

Business Experience - Employer representatives will be selected from business or industry firms that are recognized for their progressive practices and efficient operations.

Adequate Time - Members selected must be able to devote sufficient time and enthusiasm to the committee’s work. Serving will require participation in at least one committee meeting per year.

Helpful Resources:
http://www.msjc.edu/cte/Pages/default.aspx
http://statecenter.com/resources/industry-sectors
http://www.statewidepathways.org/
Continuing Education and Workplace Training provides professional, personal and career development courses and seminars that are relevant, current and meet the highest expected standards.

The department is divided into several different program areas designed to provide a wide array of opportunities for business and technical skill improvement, cultural enrichment and recreational learning. Fee based seminars; Career Training Certificates and Contract Training are all independently funded, self supporting programs. The Adult Education Noncredit programs are funded to provide free classes that benefit eligible members of the community with basic skills, personal and social development and some short term vocational certificates.

**FEE-BASED PROGRAMS**

*Career Training Certificates are short term training* programs to assist the individual learner in gaining marketable job skills. Current programs include: Pharmacy Technician, Optical Assistant, Medical Billing & Introductory Coding, Advanced Medical Coding, Medical Transcription, Photo Voltaic (PV) Design and Installation Training, Holistic Massage Therapy, Facilities Maintenance Technician, Veterinary Assistant, Personal Fitness Trainer, Home Inspection, Phlebotomy Technician, and Cardiographic Technician.

*Fee-based Business & Industry/Computers & Technology* sections include seminars and short skill update training; these classes can also serve the core of contract training. Topics include Notary, CPR, and one day courses in computer applications such as MS Word, Excel, PowerPoint or QuickBooks.

*Contract Training provides specific short-term* workplace training for the local business community. Training can be provided on site at your business or at the college campus. Areas of training include customer service, software updates or specific skills customized for unique business needs. Training is also available in areas of supervision, LEAN Mfg, regulatory compliance updates, Automotive specialties, Medical Insurance Billing, and much more.

*Fee-based Arts & Leisure and College for Kids* programs and short seminar series provide personal development, leisure and recreation opportunities for the whole family. Topics include art, crafts, dance, language, music. The College for Kids program is designed to offer diverse and fun learning activities throughout the year.

**FREE NON-CREDIT PROGRAMS**

Adult Education Non-credit courses that have been approved for funding by the State of California and are offered at no charge to participants.

- English as a Second Language
- Citizenship
- GED Exam Preparation
- Older Adults Writing, Art, Community Music Programs
The Cooperative Work Experience Education Program (Occupational Internship) at Mt. San Jacinto College provides employers with technologically advanced students to serve as interns in the workplace. Student interns assume the duties of a part-time employee and are expected to have the basic technological training needed to fulfill the requirements of the position for which they are interning. Most students spend 10-15 hours per week for 12-15 weeks on the job while they are completing their second year at Mt. San Jacinto College. Students earn college credits for serving as interns which may be applied towards their certificate or degree.

The Cooperative Work Experience Education (CWEE) Program is a unique program that has been integrated into career technical education programs throughout the College. The program allows students to apply knowledge gained in their college courses with practical work experience to develop job readiness skills.

**PROGRAM COMPONENTS**

**Training Plan** - The student, instructor, and work site supervisor work together to develop three objectives for the student to complete.

**Timesheets** - Are completed by the student to track hours worked.

**3-Page Essay** - Submitted at the end of the semester and completed by the student, this document summarizes the initial objectives, and how the student met those objectives.

**Final Evaluation** - At the end of the semester the student, worksite supervisor, and instructor meet for a final evaluation. The student presents a verbal summary of each objective and the tools used to complete each objective.

**Attend Job Skills Workshop** - By the end of the semester, students must attend a Job Skill Workshop. The workshop focuses on job search, résumé building, interviewing skills and professionalism in the work place.

**STUDENTS BENEFIT BY:**

- Earning college credit
- Opportunity to acquire job skills and create an employment history
- Obtaining hands-on work experience
- Linkage of classroom theory to real work
- Seamless pathway from college to career

**COMPANIES BENEFIT BY:**

- Opportunity to help educate and train their future workforce
- Interns who are an excellent worker pool
- Interns will reduce recruitment and training costs
- Interns with reliable & skilled permanent employees
- Interns who contribute to business success
- Interns will increase visibility & public outreach

**A HUGE THANK YOU TO SOME OF OUR INTERNSHIP PARTNERS:**

Ambassador Energy, Inc.
Century 21 Preferred
Cherry Hills Country Club
Diamond Valley Honda
Eastern Municipal Water District
Hemet Police Department
Hart Winery
Hemet Valley Recovery Center
Maurice Carrie Winery
Neighborhood Healthcare
Riverside County Mental Health
California Cardiovascular Center
Dr. Bruce Hayton Cancer Care Center
Santa Rosa Plateau Foundation
San Jacinto Family & Urgent Care
Sun Ray Addictions Counseling & Education
Wilson Creek Winery
“We have such great CTE programs because of our great faculty!”

Larry Barraza  
Business

Bill Bennett  
Computer Information Systems

Bill Bergin  
Computer Information Systems

Ron Bowman  
Business & Accounting

David Candelaria  
Business & Accounting

Dwight Duffie  
Computer Information Systems

Keith Hanz  
Photography

Michelle Harper  
Child Development

Dewey Heinsma  
Economics

Dr. Caren Hennessy  
Business

Donna Holts  
Business

Don Jenkins  
Computer Information Systems

Richard LeGarra  
Administration of Justice

Linda Middleton  
Child Development

Career Technical Education Overview

10
“We have such great CTE programs because of our great faculty!”

Dr. Cindy Nance
Geographic Information Systems

Rhonda Nishimoto
Multimedia

Belinda Heiden Scott
Business

Dr. Wendy Orcajo
Child Development

Dave Parrott
Audio & Video Technology

Roddy Rampersad
Automotive Transportation Technology

Guy Reams
Computer Information Systems

Gloria Sanchez
Business & Accounting

Lorraine Slattery-Farrell
Child Development

Donald Smith
Multimedia

Dr. Glenn Stevenson
Computer Information Systems

Samson Wakjira
Economics

Thank you for your leadership and dedication!
CTE Transitions, formerly Tech Prep, is a federal initiative developed to address the demand for a highly skilled workforce. The program provides a means for students to begin a program of study in high school which continues to a community college. These programs combine academic courses needed for success in college AND technical courses needed to prepare students for a high skilled, high demand career. This process helps to build seamless career pathways that help students to transition easily from high school to college. Mt. San Jacinto College awards college credit to high school students who successfully complete a career-related “articulated” high school course.

An articulated course is one in which the high school teacher and the Mt. San Jacinto faculty have “formally agreed” that the high school course outline, syllabus, textbook, midterm and/or final exam are comparable to those in a course of the same major at Mt. San Jacinto College and that the final exam score will be used as a credit-by-exam for the comparable Mt. San Jacinto College course. Mt. San Jacinto College currently has articulation agreements for many of our CTE Programs including Administration of Justice, Allied Health, Audio and Video Technology, Automotive, Biotechnology, Business, Child Development, Engineering, GIS, Horticulture and Multimedia.

Only currently approved courses can be articulated for credit. For a current list of articulated classes visit: http://www.msjc.edu/CTETransitions/Pages/Students.aspx

1. Approved high school/ROP coursework must be completed with a “B” grade or better; The credit exam grade must be 70% or higher
2. The student must complete a MSJC application in order to receive a student ID number
3. A “CR” will be added to the student’s transcript indicating credit has been earned through the credit-by-exam process

How can articulated credit help students?
• Students get a jump start by earning college credit while still in a high school or ROP program
• Students do not repeat coursework
• Students will obtain basic skills and knowledge making them “career and college ready”
• Students save money on the cost of college tuition and textbooks
• Connect their learning to career pathways

For questions about articulation at Mt. San Jacinto College, please contact Susanne Mata at 951-487-3435 or smata@msjc.edu

For more information about Articulation and career pathways you may visit our the following websites:
http://www.msjc.edu/CTETransitions/Pages/default.aspx
http://www.statewidepathways.org/
CTE Outreach Specialists are now available to promote MSJC’s CTE programs and services. Below are some of the activities they participate in:

- High School Career/Job Fairs
- MSJC College Hour
- MSJC Career/Job Fairs
- CTE Advisory Committee Meetings
- Community Career/Job Fairs
- High School Classroom Visits
- Business Summits
- Special CTE Program Events Like GIS Day, Engineering Day, and FAVE

To schedule an activity with the CTE Outreach Specialists, contact the CTE, Special Programs Office:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Email</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susanne Mata</td>
<td><a href="mailto:smata@msjc.edu">smata@msjc.edu</a></td>
<td>951-487-3435</td>
<td>951-654-9366</td>
</tr>
<tr>
<td>Rafaela Palacios</td>
<td><a href="mailto:rpalacios@msjc.edu">rpalacios@msjc.edu</a></td>
<td>951-487-3437</td>
<td>951-654-9366</td>
</tr>
<tr>
<td>Jeri Siqueiros</td>
<td><a href="mailto:jerisiqueiros@gmail.com">jerisiqueiros@gmail.com</a></td>
<td>951-487-3437</td>
<td>951-654-9366</td>
</tr>
</tbody>
</table>

For more information you can also visit the following websites at:

- http://www.msjc.edu/cte/Pages/default.aspx
- http://www.msjc.edu/CTETransitions/Pages/default.aspx
Turf & Landscape Management: The non-transfer Certificate/Associate degree (AS) in Turf & Landscape Management is primarily designed to prepare the student for entry into careers associated with golf course management and turf management. This program specifically provides students with a strong foundation in turf management, water usage, fertility, soils, horticulture and human resource management for golf courses, recreational parks, sports fields and general landscape areas. This program also prepares students to enter the job market as a golf course superintendent, field crew supervisor, irrigation technician, equipment manager, grounds person for parks, cities, and school districts, or field crew foreman for landscape contractors. The Certificate/Associate degree (AS) program in Turf & Landscape Management prepares students with the technical and analytical skills necessary for managing a golf course or turf/horticultural area. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

CERTIFICATE

The Turf & Landscape Management certificate includes 9 units of foundational courses and 9 units of elective courses per employment concentration.

Certificate in Turf & Landscape Management (18 units)

Required Core Courses (9 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT-101</td>
<td>Horticulture Science</td>
<td>3</td>
</tr>
<tr>
<td>HORT-102</td>
<td>Introduction to Turfgrass Management</td>
<td>3</td>
</tr>
<tr>
<td>HORT-104</td>
<td>Soil Science and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

EMPLOYMENT CONCENTRATIONS

Golf and Grounds Concentration (9 units)

Choose 9 units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>HORT-103</td>
<td>Advanced Turfgrass Management</td>
<td>3</td>
</tr>
<tr>
<td>HORT-105</td>
<td>Golf Course/Landscape Irrigation</td>
<td>3</td>
</tr>
<tr>
<td>HORT-106</td>
<td>Pesticide Law &amp; Regulations: - Turf &amp; Landscape</td>
<td>3</td>
</tr>
<tr>
<td>HORT-107</td>
<td>Arboriculture</td>
<td>3</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H Honors Introduction to Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Irrigation Technician Concentration (9 units)

Choose 9 units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM-103</td>
<td>Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>HORT-103</td>
<td>Advanced Turfgrass Management</td>
<td>3</td>
</tr>
<tr>
<td>HORT-105</td>
<td>Golf Course/Landscape Irrigation</td>
<td>3</td>
</tr>
<tr>
<td>HORT-107</td>
<td>Arboriculture</td>
<td>3</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H Honors Introduction to Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Landscaping Operation Concentration (9 units)

Choose 9 units from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>HORT-107</td>
<td>Arboriculture</td>
<td>3</td>
</tr>
<tr>
<td>HORT-109</td>
<td>Landscape Design</td>
<td>3</td>
</tr>
<tr>
<td>HORT-110</td>
<td>Laws and Regulations an Integrated Pest Management Approach</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>HORT-106 Pesticide Law &amp; Regulations: - Turf &amp; Landscape</td>
<td>3</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H Honors Introduction to Management</td>
<td>3</td>
</tr>
</tbody>
</table>

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- First-Line Supervisor/Manager of Landscaping
- Grounds Maintenance Worker
- Lawn Service
- Pesticide Handler, Sprayer and Applicator

DEGREE

An Associate of Science (AS) degree may be earned by completing the 18 unit certificate requirements in Turf & Landscape Management and all MSJC General Education Option A requirements.
Audio & Video Technology: The Audio & Video Technology Program is a non-transfer program offering two A.A. degrees and two certificates. Many courses do, however, transfer; however, this program is not usually associated with a four-year degree. The program features a radio station, television station and studio, and three recording studios. This program prepares students for a “hands on” and theoretical applications in audio and video. Students will become familiar with devices used in television, radio, film, recording studios, and educational institutions. Some Protools certifications may be available. Most audio classes are cross-listed under music. For many individuals currently working within these fields, there may be potential for salary and/or career advancement.

CERTIFICATES

Certificate in Audio Technology (18 units)

Required Courses (12 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUD-140/MUS-140</td>
<td>Beginning Studio Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-141/AMUS-141</td>
<td>Intermediate Studio Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-142/MUS-142</td>
<td>Advanced Studio Recording I</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-143/MUS-143</td>
<td>Computer Audio Editing</td>
<td>3 units</td>
</tr>
</tbody>
</table>

Elective Courses (6 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUD-145/MUS-145</td>
<td>Midi &amp; Computer Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-146/MUS-146</td>
<td>Recording Music and Live Sound</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-147/BADM-147/MUS-147</td>
<td>The Music &amp; Audio Business</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-148/MUS-148</td>
<td>Radio Production</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-152/MUL-123</td>
<td>Video Production I</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-153/MUL-223</td>
<td>Video Production II</td>
<td>3 units</td>
</tr>
<tr>
<td>MUS-100</td>
<td>Introduction and Appreciation of Music</td>
<td>3 units</td>
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or

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MUS-100H</td>
<td>Honors Introduction and Appreciation of Music</td>
<td>3 units</td>
</tr>
<tr>
<td>MUS-101</td>
<td>Music Fundamentals</td>
<td>3 units</td>
</tr>
<tr>
<td>MUS-107</td>
<td>Introduction and Appreciation of American Music</td>
<td>3 units</td>
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<tbody>
<tr>
<td>MUS-107H</td>
<td>Honors Introduction and Appreciation of American Music</td>
<td>3 units</td>
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</table>

Certificate in Advanced Audio Technology (27 units)

Required Courses (18 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>AUD-140/MUS-140</td>
<td>Beginning Studio Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-141/MUS-141</td>
<td>Intermediate Studio Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-142/MUS-142</td>
<td>Advanced Studio Recording I</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-143/MUS-143</td>
<td>Advanced Studio Recording II</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-145/MUS-145</td>
<td>Midi &amp; Computer Recording</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-146/MUS-146</td>
<td>Recording Music and Live Sound</td>
<td>3 units</td>
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<tr>
<td>AUD-147/BADM-147/MUS-147</td>
<td>The Music &amp; Audio Business</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-148/MUS-148</td>
<td>Radio Production</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-152/MUL-123</td>
<td>Video Production I</td>
<td>3 units</td>
</tr>
<tr>
<td>AUD-153/MUL-223</td>
<td>Video Production II</td>
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<tr>
<td>MUS-107H</td>
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<td>3 units</td>
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</table>

Elective Courses (9 units from the following)

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>AUD-147/BADM-147/MUS-147</td>
<td>The Music &amp; Audio Business</td>
<td>3 units</td>
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<td>AUD-148/MUS-148</td>
<td>Radio Production</td>
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<tr>
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<td>3 units</td>
</tr>
</tbody>
</table>

DEGREES

A.A. in Audio Technology (18 units)

In addition to the 18 units of the Audio Technology Certificate Program, students may complete MSJC General Education Option A requirements for the Associate of Arts (AA) degree in Audio Technology.

A.A. in Advanced Audio Technology (27 units)

In addition to the 27 units of the Advanced Audio Technology Certificate Program, students may complete MSJC’s General Education Option A requirements for the Associate of Arts (AA) degree in Advanced Audio Technology.

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Audio-Visual Specialist
• Broadcast Technician
• Sound Engineer
**Multimedia:** The non-transfer Certificate/Associate degree (AS) in Multimedia is designed to prepare students for entry into careers associated with web design, animation and video production. This program specifically provides students with a strong foundation in information and graphic design applications and concepts, professional production skills, verbal and visual creativity, and individual and team accountability and interaction. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

**Certified in Multimedia (24 units)**

**Required Courses** (12 units)
- ART-120 2D Design 3 units
- MUL-110 Introduction to Multimedia 3 units
- MUL-112 Interactive Media Design I 3 units
- MUL-114 Multimedia Project Management 3 units

**Elective Courses** (12 units)
- ART-108 Beginning Drawing 3 units
- ART-130A Digital Art - Imaging 2 units
- AUD-145/MUS-145 Midi & Computer Recording 3 units
- CSIS-115A Web Development - Level 1 3 units
- CSIS-125A Web Development - Level 2 3 units
- MUL-110 Introduction to Multimedia 3 units
- MUL-112 Interactive Media Design I 3 units
- MUL-114 Multimedia Project Management 3 units
- MUL-125 Interactive Motion Media 3 units
- MUL-131 3D Animation I 3 units
- MUL-133 Production Management - Entertainment 3 units
- MUL-137 3D Animation II 3 units
- MUL-139 Advanced Animation 3 units
- MUL-140/ART-130B Digital Art - Illustration 2 units
- MUL-149 Occupational Internship: Multimedia 1-3 units
- MUL-218 Dynamic Web Design 3 units
- MUL-299 Special Projects: Multimedia 1-3 units
- THA-135 Introduction to Film 3 units

**DEGREE**

The major requirement for an Associate of Science degree (AS) in Multimedia may be met by completing 24 units of those required for the Multimedia certificate. Students planning to transfer should major in General Education and consult with instructors and counselors; since some Multimedia courses may satisfy MSJC General Education Option A requirements.

**Employment Concentrations**

**Animation Production (15 units)**

- MUL-131 3D Animation I 3 units
- MUL-133 Production Management-Entertainment 3 units
- MUL-137 3D Animation II 3 units
- MUL-139 Advanced Animation 3 units
- THA-135 Introduction to Film 3 units

**Video Production (15 units)**

- MUL-110 Introduction to Multimedia 3 units
- MUL-123/AUD-152 Video Production I 3 units
- MUL-223/AUD-153 Video Production II 3 units
- THA-135 Introduction to Film 3 units

**Web Design (15 units)**

- CSIS-125A Web Production - Level 2 3 units
- MUL-110 Introduction to Multimedia 3 units
- MUL-112 Interactive Media Design I 3 units
- MUL-125 Interactive Motion Media 3 units
- MUL-218 Dynamic Web Design 3 units
Photography: The MSJC Photography program offers non-transfer certificate and Associate degree opportunities that respond to new-media industry standards in the digital paradigm. This immersive path of study includes extensive technical and creative production guidance and skill sets. The career-oriented student will study the ubiquitous nature of photographic visual communication while gaining a comprehensive understanding of digital photography workflow and digital asset management. The digital fixing of the photographic image with electronic light sensors and computer software rivals milestones in history like the invention of paper, the printing press, or chemistry-based image fixing. Extinct is hand calligraphy in advertising, illuminated manuscripts in printing or the emulsion-based image on tin, for example. Emulsion-based photography has methodically given way to a digital era in image production — an evolution akin to dinosaurs evolving into birds — only faster. For these reasons a versatile and truly state-of-the-art digital studio, light room, and imaging lab has been designed and constructed to facilitate the photography department’s industry-responsive digital curriculum. Beginning through advanced students will avail themselves of a 1,325 square foot digital imaging studio with high ceilings and versatile photographic environments — all networked to a digital light room and other adjoining learning facilities. Students will benefit from hands-on exposure to real-world tools. These tools are fast, high-resolution capture, manipulation and output devices that will allow students to fully explore the photographic realm. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

CERTIFICATE

Certificate in Photography (18 units)

Required (15 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-120</td>
<td>2D Design</td>
<td>3</td>
</tr>
<tr>
<td>MUL-110</td>
<td>Introduction to Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>PHOT-125</td>
<td>Digital Photography Production I</td>
<td>3</td>
</tr>
<tr>
<td>PHOT-224</td>
<td>Digital Photography Production II</td>
<td>3</td>
</tr>
<tr>
<td>PHOT-225</td>
<td>Digital Photography Production III</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (3 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-130B/MUL-140</td>
<td>Digital Art - Illustration</td>
<td>2</td>
</tr>
<tr>
<td>AUD-152/MUL-123</td>
<td>Video Production I</td>
<td>3</td>
</tr>
<tr>
<td>BADM-104/ENGL-104</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BADM-104H/ENGL-104H</td>
<td>Honors Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>HIST-136/THA-136</td>
<td>Cultural History of American Motion Pictures</td>
<td>3</td>
</tr>
<tr>
<td>MUL-112</td>
<td>Interactive Media Design I</td>
<td>3</td>
</tr>
<tr>
<td>MUL-114</td>
<td>Multimedia Project Management</td>
<td>3</td>
</tr>
<tr>
<td>MUL-131</td>
<td>3D Animation I</td>
<td>3</td>
</tr>
<tr>
<td>MUL-149</td>
<td>Occupational Internship: Multimedia</td>
<td>1-3</td>
</tr>
<tr>
<td>PHOT-090</td>
<td>Digital Imaging Studio Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHOT-091</td>
<td>Professional Production Studio Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHOT-130</td>
<td>History of Still Photography</td>
<td>3</td>
</tr>
<tr>
<td>PHOT-299</td>
<td>Special Projects: Photography</td>
<td>1-3</td>
</tr>
</tbody>
</table>

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Free Lance Photographer
• Studio and Location Photographer

DEGREE

The major requirement for an Associate of Science degree in Photography may be met by completing the core photography curriculum and any electives totaling 18 units and meeting all other MSJC General Education Option A requirements.
**Child Development and Education (CDE):** The Child Development and Education (CDE) Program offers a non-transfer degree and Certificate in Child Development and Education as well as Early Intervention and Inclusion. The CDE major includes required courses in child development and general education electives. Child Development Education is the study of the physical, psychosocial and cognitive growth and development of the child from conception through adolescence. The purpose of this major is to provide a sound academic program in Child Development and to prepare students to work with and advocate for children and families in a variety of school and community settings.

**CERTIFICATES**

**Certificate in Child Development and Education (43 units)**

* Indicates that these courses are recommended for the 12-unit Title XXII licensing requirement for employment in privately owned early childhood education programs.

** Indicates that prior TB and criminal record clearance must be shown. (It is recommended that students begin this clearance process while enrolled in CDE-101).

**Required Courses (27 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDE-101</td>
<td>Principles of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>CDE-102</td>
<td>Language and Literacy Experiences for Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CDE-103</td>
<td>Appropriate Curricula for Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CDE-110*</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>CDE-110H*</td>
<td>Honors Child Development</td>
</tr>
<tr>
<td>CDE-111</td>
<td>Child Health, Safety and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>CDE-125*</td>
<td>Child, Family and Community</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>CDE-125H*</td>
<td>Honors Child, Family and Community</td>
</tr>
<tr>
<td>CDE-140</td>
<td>Children and Youth with Exceptional Needs</td>
<td>3</td>
</tr>
<tr>
<td>CDE-147**</td>
<td>Supervised Field Experience in Observation and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>CDE-148**</td>
<td>Supervised Field Experience II: Student Teaching</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Courses (16 units)**

The Child Development and Education - Early Intervention and Inclusion Certificate Program requires that students complete a total of 16 units. These units must include one or more courses from each of the following areas: 1) English (101 or above), 2) Social Sciences, 3) Math (96 or above) OR Science, and 4) Humanities.

It is recommended that students consult with either an MSJC Counselor or CDE Faculty member when making their education plan.

**DEGREE**

An Associate Degree of Science (AS) degree may be earned by completing the 43 units required by the MSJC Child Development and Education Certificate, and all MSJC General Education Option A requirements.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Preschool Teacher
- CDE Permit: Teacher
- CDE Permit: Site Supervisor
- CDE Permit: Master Teacher
- CDE Permit: Assistant Teacher
- CDE Permit: Associate Teacher

**CHILD DEVELOPMENT PERMIT**

Upon completion of requirements for the certificate program, including the 16 units of general education, the student has fulfilled the course requirements for the Teacher Level of the Child Development Permit and some of the work experience requirements. See the State of California guidelines for more information on the experience qualifications and talk to your CDE instructors regarding new permit requirements.

**EMPLOYMENT CONCENTRATIONS**

** Indicates that prior TB and criminal record clearance must be shown. (It is recommended that students begin this clearance process while enrolled in CDE-101).

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>6</td>
</tr>
<tr>
<td>Art</td>
<td>5</td>
</tr>
<tr>
<td>Assistant Teacher</td>
<td>6</td>
</tr>
<tr>
<td>Associate Teacher</td>
<td>12</td>
</tr>
<tr>
<td>Communication</td>
<td>6</td>
</tr>
<tr>
<td>Deaf Culture</td>
<td>6-7</td>
</tr>
<tr>
<td>Early Childhood</td>
<td>6</td>
</tr>
<tr>
<td>Special Education</td>
<td>9</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>6</td>
</tr>
</tbody>
</table>
**Energy and Utilities**

**Water Technology:** This is a career oriented non-transfer vocational program offering courses leading to a certificate and/or an Associate degree. The Water Technology program at MSJC emphasizes a real world approach to diagnostic skill building and a thorough understanding of system theory and operations. Professionalism, workplace skills and responsibilities are stressed along with safety and an awareness of hazardous materials control. Graduates are primarily employed by cities, counties, federal agencies and industries that operate and maintain water treatment, water distribution, wastewater collection and/or wastewater treatment systems. They may also find employment in support roles such as equipment sales. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

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**CERTIFICATE**

**Certificate in Water Technology (18 units)**

**Required Core Courses (3 units)**
- WATR-100 Introduction to Water/Wastewater Operations 1 unit
- WATR-102 Basic Waterworks Mathematics 2 units

**Elective Courses (any 15 units)**
- WATR-103 Water Treatment Plant Operations I & II 3 units
- WATR-105 Water Treatment Plant Operations III, IV & V 3 units
- WATR-107 Water Distribution I & II 3 units
- WATR-109 Water Distribution III, IV & V 3 units
- WATR-120 Wastewater Treatment Plant Operations I & II 3 units
- WATR-122 Wastewater Plant Operations III, IV & V 3 units
- WATR-125 Laboratory Procedures for Water and Wastewater 3 units
- WATR-130 Environmental Laws and Regulations 3 units
- WATR-140 Wells, Pumps and Motors 3 units

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**DEGREE**

The 18 units in the certificate plus all MSJC General Education Option requirements for a total of 60 units is required to earn an Associate of Science degree in Water Technology. See counselor for recommended vocational and academic courses.

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**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Customer Service Representative
- Conservation Technician
- Mechanics
- Meter Reader
- Utility Personnel
- Wastewater Distribution Operator
- Wastewater Treatment Operator
- Water Distribution Operator
Engineering: The Engineering: Drafting Technology Program is a non-transfer program offering an A.S. degree, one certificate, and six employment concentration certificates. Many courses do, however, transfer to four year college and universities. The program will prepare students for a career in civil engineering, architecture, surveying, and manufacturing processing. Students become familiar with computer hardware and software programs which will assist in the aerospace industry to construction. The manufacturing courses allow students to step into jobs which concentrate in Small Wind Energy Technology, Solar Photovoltaic Technology, Solar Thermal Technology, Green Collar Manufacturing and Manufacturing Quality Assurance. For individuals currently working within these fields, there may be potential for salary and/or career advancement.

**CERTIFICATE**

**Certificate in Engineering: Drafting Technology (19 units)**
Competency in English and math is required prior to completing a certificate. This may be accomplished by testing or completion of ENGL-101 and MATH-096.

**Required Courses (14 units)**
- ENGR-154 Computer Aided Drafting I 3 units
- ENGR-155 Computer Aided Drafting II 3 units
- ENGR-164 Plane Surveying I 4 units
- ENGR-181 Statics 3 units
- GEOG-115 Introduction to Geographic Information Systems 4 units
- PHOT-125 Digital Photography Production I 3 units

**Elective Courses (3 units)**
- ENGR-156 SolidWorks I 3 units
- ENGR-157 Microstation I 3 units
- ENGR-167 Global Positioning Systems 4 units
- ENGR-180 Introduction to Engineering 3 units
- ENGR-181 Statics 3 units
- ENGR-182 Strength and Materials 4 units

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- CAD Technician
- Surveying and Mapping Technician
- Geographic Information Systems (GIS) Technician

**ENGINEERING DEGREE**

An Associate of Science degree in Engineering: Drafting Technology is available to students completing the certificate in Engineering: Drafting Technology and meeting all other MSJC General Education Option A requirements.

**EMPLOYMENT CONCENTRATIONS**

**Green Collar Manufacturing (15 units)**
- ENGR-106 M.S.S.C. High Performance Manufacturing 3 units
- ENGR-107 Total Quality Management 3 units
- ENGR-114 Machine Tool Technology 3 units
- ENGR-116 Energy Efficiency and Construction Methods 3 units
- SEMA-100 Our Sustainable Future 3 units

**Manufacturing Quality Assurance (12 units)**
- ENGR-106 M.S.S.C. High Performance Manufacturing 3 units
- ENGR-107 Total Quality Management 3 units
- ENGR-108/MGT-108 Organizational Behavior 3 units
- ENGR-109 Manufacturing Inspection Techniques and Applications 3 units

**Small Wind Energy Technology (15 units)**
- ENGR-107 Total Quality Management 3 units
- ENGR-114 Machine Tool Technology 3 units
- ENGR-116 Energy Efficiency and Construction Methods 3 units
- ENGR-119 Small Wind Energy Installation 3 units
- SEMA-100 Our Sustainable Future 3 units

**Solar Photovoltaic Technology (15 units)**
- ENGR-107 Total Quality Management 3 units
- ENGR-114 Machine Tool Technology 3 units
- ENGR-116 Energy Efficiency and Construction Methods 3 units
- ENGR-117 Solar Photovoltaic Installation 3 units
- SEMA-100 Our Sustainable Future 3 units

**Solar Thermal Technology (15 units)**
- ENGR-107 Total Quality Management 3 units
- ENGR-114 Machine Tool Technology 3 units
- ENGR-116 Energy Efficiency and Construction Methods 3 units
- ENGR-118 Solar Thermal Installation 3 units
- SEMA-100 Our Sustainable Future 3 units

**Surveying (14-15 units)**
- ENGR-164 Plane Surveying I 4 units
- ENGR-165 Plane Surveying II 4 units
- ENGR-166 Legal Aspects of Surveying 3 units
- ENGR-167 Global Positioning Systems 4 units
- or GEOG-115 Introduction to Geographic Information Systems 3 units
Engineering and Design

**Geographic Information Systems (GIS):** GIS is both an analytical tool and a research method for identifying spatial and temporal patterns, trends and relationships. GIS have the potential to create new knowledge about our world from existing maps and databases. GIS can predict and simulate change on earth, as well as other planets. Statistical GIS models are able to determine the probability of specific events and display them in three-dimensional, animated or virtual scenarios. GIS courses are taught in a computer laboratory with the most recent releases of hardware and software. The Geographic Information Systems (GIS) Certificate and AS degree prepare students for GIS related careers (in many disciplines) which are enhanced by completion of a bachelor or graduate program. For students currently working within these fields there may be potential for courses are taught in a computer laboratory with the most recent releases of hardware and software. The Geographic Information Systems (GIS) Certificate and AS degree prepare students for GIS related careers (in many disciplines) which are enhanced by completion of a bachelor or graduate program. For students currently working within these fields there may be potential for

**CERTIFICATES**

**Certificate in Geographic Information Systems (18 units)**

**Required Courses (12 units)**
- GEOG-105 Map Interpretation and Spatial Analysis 3 units
- GEOG-115 Introduction to Geographic Information Systems 3 units
- GEOG-120 Intermediate Geographic Information Systems 3 units
- GEOG-125 Advanced Geographic Information Systems 3 units

**Elective Courses (minimum 6 units)**
Elective courses are identified under the following employment concentration areas. Students must complete 6 units (any combination) under one concentration area to earn a Certificate in GIS. Once a Certificate in GIS has been earned, additional Certificates in GIS may be awarded for completion of 6 units in other concentration areas.

**DEGREES**

The Associate of Science (AS) degree program in GIS is designed to prepare students for entry into a career with generalized or specialized applications of GIS. An AS degree in GIS may be earned by completing four required GIS courses (12 units) and one employment concentration (two 3 unit courses) for a combined minimum of 18 units, as well as all MSJC General Education Option A requirements.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Cad Technician
- Cartographic Drafter
- Cartographic Technician
- Computer Graphics Specialist
- Creative Director (Multimedia)
- Database Manager
- Engineering Technician
- GIS Analyst
- GIS Manager
- GIS Programmer
- GIS Technician
- GIS Specialist
- Lead Designer (Multimedia)
- Mapping Technician
- Multimedia Artist
- Multimedia Designer
- Multimedia Developer
- Multimedia Producer
- Multimedia Software Developer
- Multimedia Specialist
- Surveying Technician
- Video Game Designer
- Writer (Multimedia)
- Web Designer

**EMPLOYMENT CONCENTRATIONS**

**Engineering (6 units)**
- ENGR-157 Microstation I 3 units
- ENGR-164 Plane Surveying I 4 units
- ENGR-166 Legal Aspects of Surveying 3 units
- ENGR-167 Global Positioning Systems 4 units

**Geographic Information Systems (6 units)**
- GEOG-081 Spatial Awareness 0.5 unit
- GEOG-149 Occupational Internship: Geographic Information Systems 1-4 units
- GEOG-298A-Z Special Topics in Geographic Information Systems 0.5-3 units
- GEOG-299 Special Projects: Geographic Information Systems 1-3 units

**Multimedia (6 units)**
- ART-130B/MUL-140 Digital Art - Illustration 2 units
- MUL-110 Introduction to Multimedia 3 units
- MUL-131 3D Animation I 3 units
- MUL-299 Special Projects: Multimedia 1-3 units

**Programming (6 units)**
- CSIS-111B Fundamentals of Computer Programming 3 units
- CSIS-112A Visual Basic Programming - Level 1 3 units
- CSIS-122A Visual Basic Programming - Level 2 3 units
- CSIS-214 Principles of Database Management Systems 3 units

**Visual Design (6 units)**
- ART-120 2D Design 3 units
- ART-123 Graphic Design I 3 units
- ART-130A Digital Art - Imaging 2 units
- ART-130B/MUL-140 Digital Art - Illustration 2 units
**Business - Microsoft Application Specialist:** This program provides for the study of a wide range of subjects related to positions and careers in the modern office. The program includes the training necessary to successfully perform in the many and varied Application Specialists and Administrative Assistant positions available throughout the job market.

### CERTIFICATE

**Certificate in Microsoft Applications Specialist** (18 units)

<table>
<thead>
<tr>
<th>Required Courses (18 units)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPP-122 Using Microsoft Excel</td>
<td>3 units</td>
</tr>
<tr>
<td>CAPP-123 Using Microsoft Access - Level 1</td>
<td>3 units</td>
</tr>
<tr>
<td>CAPP-124 Using Microsoft PowerPoint</td>
<td>3 units</td>
</tr>
<tr>
<td>CAPP-127 Using Microsoft Word</td>
<td>3 units</td>
</tr>
<tr>
<td>CAPP-131 Using Microsoft Outlook</td>
<td>1 unit</td>
</tr>
<tr>
<td>OTEC-144 Keyboarding and Document Formatting</td>
<td>3 units</td>
</tr>
<tr>
<td>OTEC-146 Keyboarding Speed and Accuracy</td>
<td>2 units</td>
</tr>
</tbody>
</table>

### DEGREE

Completion of the Business Administration Major plus all MSJC General Education Option A requirements for a total of 60 units is required to earn an Associate of Science Degree in Business Administration. Please refer to the current Mt. San Jacinto catalog for details on the major requirements.

### CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Administrative Professional
- Administrative Manager
- Bookkeeper
- Computer Applications Specialist
- Executive Secretary
- Medical Office Assistant
- Receptionist
- Records Manager
- Word Processor
**Business Administration:** Business Administration studies introduces the student to the world of commercial transactions, which occur in the distribution of resources in our American economic system. These courses offer students opportunities to acquire practical skills, technical knowledge and experience and improved conceptual abilities and theory in the areas of Accounting, Business Law, Finance, Marketing and Management. A core concentration in this area, in conjunction with the MSJC General Education Option A requirements, leads to a major in Business Administration. There are also certificate programs in Accounting and Tax Preparation, Business Administration and Small Business Operations.

### DEGREE

The 18 units in the major plus all MSJC General Education Option A requirements for a total of 60 units is required to earn a non-transfer Associate of Science degree in Business Administration.

### CERTIFICATES

Competency in English and math is required prior to completing either certificate. This may be accomplished by testing or completion of ENGL-098 (English Fundamentals) and MATH-090 (Elementary Algebra).

#### Certificate in Business Administration (24 units)

**Required Courses** (15 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-124</td>
<td>Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-124H</td>
<td>Honors Financial Accounting - Principles of Accounting I</td>
</tr>
<tr>
<td>BADM-103</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>BADM-103H</td>
<td>Honors Introduction to Business</td>
</tr>
<tr>
<td>BADM-201</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H</td>
<td>Honors Introduction to Management</td>
</tr>
<tr>
<td>MGT-205</td>
<td>Principles of Marketing Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Courses** *(Take 3 units from this list)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-201</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>or</td>
<td>ECON-201H</td>
<td>Honors Principles of Macroeconomics</td>
</tr>
</tbody>
</table>

**Elective Courses** *(Take 6 units from this list)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-125</td>
<td>Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-125H</td>
<td>Honors Managerial Accounting - Principles of Accounting II</td>
</tr>
<tr>
<td>ACCT-126</td>
<td>Beginning Computer Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCT-127</td>
<td>Federal and California Income Tax Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BADM-104/ENGL-104</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>BADM-104H/ENGL-104H</td>
<td>Honors Business Communications</td>
</tr>
<tr>
<td>BADM-150</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-157</td>
<td>Principles of Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-170</td>
<td>Introduction to International Business</td>
<td>3</td>
</tr>
<tr>
<td>BADM-210</td>
<td>Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>ECON-202</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-202H</td>
<td>Honors Principles of Microeconomics</td>
</tr>
<tr>
<td>ENGR-108/MGT-108</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MGT-132</td>
<td>Labor Management Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT-133</td>
<td>Productivity Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT-138</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Certificate in Small Business Operations** *(24 units)*

**Required Courses** *(15 units)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-124</td>
<td>Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-124H</td>
<td>Honors Financial Accounting - Principles of Accounting I</td>
</tr>
<tr>
<td>BADM-150</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-201</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON-201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-201H</td>
<td>Honors Principles of Macroeconomics</td>
</tr>
<tr>
<td>MGT-205</td>
<td>Principles of Marketing Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses** *(9 units)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-125</td>
<td>Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-125H</td>
<td>Honors Managerial Accounting - Principles of Accounting II</td>
</tr>
<tr>
<td>ACCT-126</td>
<td>Beginning Computer Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BADM-157</td>
<td>Principles of Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-170</td>
<td>Introduction to International Business</td>
<td>3</td>
</tr>
<tr>
<td>BADM-210</td>
<td>Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-202</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>or</td>
<td>ECON-202H</td>
<td>Honors Principles of Microeconomics</td>
</tr>
<tr>
<td>or</td>
<td>ENGR-108/MGT-108</td>
<td>Organizational Behavior</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H</td>
<td>Honors Introduction to Management</td>
</tr>
<tr>
<td>MGT-132</td>
<td>Labor Management Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT-138</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- **Administrative Assistant**
- **Executive Secretary**
- **Clerical Assistant**
- **Office Manager**

### EMPLOYMENT CONCENTRATIONS *

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Applications</td>
<td>9</td>
</tr>
<tr>
<td>Accounting and Tax Preparation</td>
<td>16</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>16</td>
</tr>
<tr>
<td>Event Operations Management</td>
<td>13</td>
</tr>
<tr>
<td>Management Communication Concentration</td>
<td>9</td>
</tr>
<tr>
<td>Professional Development Concentration</td>
<td>9</td>
</tr>
<tr>
<td>Project Management Concentration</td>
<td>9</td>
</tr>
<tr>
<td>Sustainable Energy Management for Business</td>
<td>15</td>
</tr>
</tbody>
</table>

*Please see the Mt. San Jacinto College Catalog for course descriptions and course requirements.*
Business - Clerical: This program provides for the study of a wide range of subjects related to positions and careers in the modern office. The program includes the training necessary to successfully perform in the many and varied Application Specialists and Administrative Assistant positions available throughout the job market.

CERTIFICATE
Certificate in Business, Clerical (25 units)

Required Courses (16 units)
BADM-085 Business Math 3 units
BADM-104/ENGL-104 Business Communications 3 units
or
BADM-104H/ENGL-104H Honors Business Communications 3 units
CAPP-127 Using Microsoft Word 3 units
OTEC-131 Filing Techniques 1 unit
OTEC-144 Keyboarding and Document Formatting 3 units
OTEC-178 Office Procedures and Systems 3 units

Elective Courses (9 units)
ACCT-076 Bookkeeping Part 1 - Accounting Theory 3 units
ACCT-077 Bookkeeping Part 2 - QuickBooks Pro 3 units
CAPP-120 Using Microsoft Office - Level 1 3 units
CAPP-122 Using Microsoft Excel 3 units
CAPP-123 Using Microsoft Access - Level 1 3 units
CAPP-124 Using Microsoft PowerPoint 3 units
OTEC-095/ENGL-095 Business English 3 units
OTEC-146 Keyboarding Speed and Accuracy 2 units
OTEC-150 Records and Information Management 2 units
OTEC-160 Creating and Managing the Virtual Office 3 units
OTEC-163 Operating and Marketing the Virtual Office 3 units
OTEC-180 Research Analysis and Presentation 3 units

DEGREE
Completion of the Business Administration Major plus all MSJC General Education Option A requirements for a total of 60 units is required to earn an Associate of Science Degree in Business Administration. Please refer to the current Mt. San Jacinto catalog for details on the major requirements.

EMPLOYMENT CONCENTRATIONS

Office Communications Concentration (12 units)
BADM-104/ENGL-104 Business Communications 3 units
or
BADM-104H/ENGL-104H Honors Business Communications 3 units
CAPP-127 Using Microsoft Word 3 units
OTEC-095/ENGL-095 Business English 3 units
OTEC-180 Research Analysis and Presentation 3 units

Records Management Concentration (10 units)
BADM 104/ENGL 104 Business Communications 3 units
or
BADM 104 H/ENGL 104 H Honors Business Communications 3 units
CAPP 123 Using Microsoft Access - Level 1 3 units
OTEC 150 Records and Information Management 2 units
OTEC 153 Electronic Records Management 2 units

Virtual Office Professional Concentration
BADM 098A Developing Effective Time Management Techniques 0.5 units
BADM 098B Reducing Stress and Improving Performance 0.5 units
BADM 098F Developing Customer Relations and Rapport 0.5 units
BADMG Business Ethics 0.5 units
BADM 104/ENGL 104 Business Communications 0.5 units
or
BADM 104H/ENGL 104H Honors Business Communications 3 units
CAPP 120 Using Microsoft Office - Level 1 3 units
OTEC 160 Creating and Managing the Virtual Office 3 units
OTEC 163 Operating and Marketing the Virtual Office 3 units

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Administrative Professional
- Administrative Manager
- Bookkeeper
- Computer Applications Specialist
- Executive Secretary
- Medical Office Assistant
- Receptionist
- Records Manager
- Secretary
- Office Manager
Economics: Economics is the science that studies how people and societies make decisions that allow them to get the most out of their limited resources. Economics is literally everywhere and affects all people, businesses, and societies. Therefore, it is important that we study economics and how the constraints and limitations may affect our lives. The Economics program at MSJC includes the study of the U.S. economics system, globalization and international impacts, and environmental economics. There is an emphasis on developing the skill set needed to evaluate and analyze government, domestic and international policy issues.

TRANSFER PREPARATION

The Economics program is intended for students who are planning to transfer to a four-year college or for a business occupational area of his/her own choice. Transfer students may earn an Associate degree in Liberal Arts with an area of emphasis that includes either Business and Technology, or Social and Behavioral Sciences. These degree paths are designed to accommodate the differing requirements for a wide variety of transfer institutions and provide an efficient means to achieve transfer goals and career success.

For Transfer students, the following degrees are available:
• AS-T in Business Administration
• A.S. in Environmental Studies
• A.A. in Liberal Arts, with area of emphasis: Social & Behavioral Sciences; Business & Technology

For non-transfer students, the following degrees are available:
• A.A. in Social/Behavioral Science
• A.S. in Business Administration
• A.S. in Management/Supervision

The following certificates are available:
• Certificate in Business Administration
• Certificate in Management/Supervision

These degrees and educational paths are designed to accommodate the differing requirements for a wide variety of transfer institutions and provide a means to achieve career success.

Prospective transfer students are advised to research careers, degrees and majors in the Career/Transfer Center, access www.assist.org, review the MSJC catalog and meet with a counselor to expedite their transfer plan.

CAREER OPPORTUNITIES

Economic majors may pursue diverse career paths. Popular undergraduate majors related to the field of Economics include: Accounting, Banking and Financial Services, Business Administration, Business Economics, Business Law, Entrepreneurship, Environmental Economics, Environmental Studies, International Business, Management, Marketing, Public Administration, along with an array of career opportunities, both in government, private and international sectors. For individuals currently working within these fields, there may be a potential for salary and/or career advancement. Economics ranks 12th in the United States for the most profitable majors.

Earning a Bachelor’s degree in Economics earns starting median salary of $47,300. Mid-career earnings are $94,700. A master’s or Ph.D. degree in economics is required for many private sector economist jobs and for advancement to higher-level positions. Median annual salaries for private sector economists range from $59,390 to $149,110. The average annual salary for economists employed by the federal government is $108,010.

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Academic Economist
• Business Analyst
• Demographic Economist
• Environmental Economist
• Financial Analyst
• Industrial Economist
• International Economist
• Labor Economist
• Monetary Economist
• Organizational Economist
• Public Finance Economist
• Research Economist
Hospitality/Tourism Industry: The Hospitality/Tourism industry offers exciting career opportunities in a variety of occupations. Students will gain skills and knowledge to prepare for employment in the fast growing Temecula Valley region in destination tourism accommodating guests at both hotels and wineries. This employment concentration introduces the student to the departments responsible for guest servicing in the sales, marketing, and meeting coordination areas to ensure event success. Completion of these courses and work experience will successfully prepare a student for fulfilling careers in the travel tourism industry worldwide!

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Banquet or Catering Coordinator
- Convention Services Manager
- Dining Room Supervisor
- Food and Beverage Manager
- Hotel Sales Manager
- Special Events Supervisor

EMPLOYMENT CONCENTRATIONS

**Event Operations Management (13 units)**

- BADM 120/HORT 120 Sales and Marketing in Hospitality 3 units
- BADM 124 Introduction to Lodging Operations 1 unit
- BADM 125 Hotel Convention Services & Operations 2 units
- BADM 126 Destination Management for Conventions & Visitors 2 units
- BADM 127 Event/Meeting Planning and Management 2 units
- MGT 103 Introduction to Management 3 units
- MGT 103H Honors Introduction to Management 3 units
**Management/Supervision:** This program is designed to prepare students to direct the work of others. Course work includes the study of lower division manager functions, systems and the critical success factors of: analyses, evaluation, selection, communicating, producing and follow-up. Management studies introduce the student to dynamic processes of goals/objectives setting, planning, doing and achieving successful results for the individual or organization. Although emphasis is on business and economic organizations, the learning is relevant to our daily living. The main issue is recognition of changing environments, relationships, and leadership.

**CERTIFICATE**

Competency in English and Math is required prior to completing a certificate. This may be accomplished with testing or by completing ENGL-098 (English Fundamentals) and MATH-090 (Elementary Algebra).

**Certificate in Management/Supervision (24 units)**

<table>
<thead>
<tr>
<th>Required Courses (15 units)</th>
</tr>
</thead>
</table>
| BADM-103 Introduction to Business | 3 units  
| or |  
| BADM-103H Honors Introduction to Business | 3 units  
| BADM-201 Legal Environment of Business | 3 units  
| ECON-201 Principles of Macroeconomics | 3 units  
| or |  
| ECON-201H Honors Principles of Macroeconomics | 3 units  
| MGT-103 Introduction to Management | 3 units  
| or |  
| MGT-103H Honors Introduction to Management | 3 units  
| MGT-108/ENGR-108 Organizational Behavior | 3 units  

**Recommended Elective Courses**

(3 units from this list)

<table>
<thead>
<tr>
<th>Required Courses</th>
</tr>
</thead>
</table>
| ACCT-124 Financial Accounting - Principles of Accounting I | 3 units  
| or |  
| ACCT-124H Honors Financial Accounting - Principles of Accounting I | 3 units  
| CSIS-101 Introduction to Computers and Data Processing | 3 units  

**Other Elective Courses** (6 units from this list)

<table>
<thead>
<tr>
<th>Required Courses</th>
</tr>
</thead>
</table>
| ACCT-125 Managerial Accounting-Principles of Accounting II | 3 units  
| or |  
| ACCT-125H Honors Managerial Accounting-Principles of Accounting II | 3 units  
| BADM-150 Small Business Entrepreneurship | 3 units  
| BADM-157 Principles of Salesmanship | 3 units  
| BADM-170 Introduction to International Business | 3 units  
| ECON-202 Principles of Microeconomics | 3 units  
| or |  
| ECON-202H Honors Principles of Microeconomics | 3 units  
| MGT-132 Labor Management Relations | 3 units  
| MGT-133 Productivity Management | 3 units  
| MGT-138 Personnel Management | 3 units  
| MGT-205 Principles of Marketing Management | 3 units  
| MGT-299 Special Projects: Management | 1-3 units  

**DEGREE**

An Associate of Science (AS) degree with a major in Management/Supervision is available to students completing the certificate requirements in Management/Supervision, and completing all other MSJC General Education Option A requirements.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Administrative Services Manager
- Advertising and Promotions Manager
- Compensation and Benefits Manager
- Construction Manager
- Industrial Production Manager
- Leasing and Property Management
- Marketing Manager
- Retail Management and Supervision
- Public Relations Manager
- Purchasing Manager
- Sales Manager
- Small Business Management
- Storage and Distribution Manager
- Training and Development Manager
- Transportation Manager
**Finance and Business**

**Business - Office Administration:** This program provides for the study of a wide range of subjects related to positions and careers in the modern office. The program includes the training necessary to successfully perform in the many and varied Application Specialists and Administrative Assistant positions available throughout the job market.

**DEGREE**

The 18 units in the major plus all MSJC General Education Option A requirements for a total of 60 units is required to earn an Associate of Science degree in Office Administration.

**A.S. in Office Administration (18 units)**

**Required Courses (12 units)**

- BADM/ENGL-104  Business Communications  3 units
- or
- BADM/ENGL-104H  Honors Business Communications  3 units
- CAPP-127  Using Microsoft Word  3 units
- OTEC-178  Office Procedures and Systems  3 units
- OTEC-180  Research Analysis and Presentation  3 units

**Elective Courses (6 units)**

- ACCT-076  Bookkeeping Part 1 - Accounting Theory  3 units
- ACCT-077  Bookkeeping Part 2 - QuickBooks Pro  3 units
- CAPP-120  Using Microsoft Office - Level 1  3 units
- CAPP-122  Using Microsoft Excel  3 units
- CAPP-123  Using Microsoft Access - Level 1  3 units
- CAPP-124  Using Microsoft PowerPoint  3 units
- CAPP-131  Using Microsoft Outlook  1 unit
- CAPP-140  Using Microsoft Office - Level 2  3 units
- CSIS-101  Introduction to the Internet  3 units
- MGT-103  Introduction to Management  3 units
- or
- MGT-103H  Honors Introduction to Management  3 units

**Certificate in Microsoft Applications Specialist (18 units)**

**Required Courses (18 units)**

- CAPP-122  Using Microsoft Excel  3 units
- CAPP-123  Using Microsoft Access - Level 1  3 units
- CAPP-124  Using Microsoft PowerPoint  3 units
- CAPP-127  Using Microsoft Word  3 units
- CAPP-131  Using Microsoft Outlook  1 unit
- OTEC-144  Keyboarding and Document Formatting  3 units

**CERTIFICATES**

**Certificate in Business, Office Administration Technician (24 units)**

**Required Courses (24 units)**

- BADM-085  Business Math  3 units
- BADM-103  Introduction to Business  3 units
- or
- BADM-103H  Honors Introduction to Business  3 units
- BADM-104/ENGL-104  Business Communications  3 units
- or
- BADM-104H/ENGL-104H  Honors Business Communications  3 units
- CAPP-122  Using Microsoft Excel  3 units
- CAPP-127  Using Microsoft Word  3 units
- CSIS-101  Introduction to Computers and Data Processing  3 units
- OTEC-178  Office Procedures and Systems  3 units
- OTEC-180  Research Analysis and Presentation  3 units

**EMPLOYMENT CONCENTRATIONS**

**Office Communications Concentration (12 units)**

**Records Management Concentration (10 units)**

**Virtual Office Professional (14 units)**

Please see Mt. San Jacinto College Catalog for course descriptions and requirements.
**Real Estate:** The MSJC Real Estate program offers the opportunity to earn a non-transfer certificate and a degree. This program also provides the educational requirements for the real estate broker’s license and salesperson’s license (issued by the State of California Department of Real Estate). Coursework prepares students for work in this dynamic profession. Essential success skills are emphasized including: ethics, professionalism, sales, financing, property valuation, law, and economics.

### CERTIFICATE

**Certificate in Real Estate** (24 units)

**Required Courses** (12 units)

- RE-140 Real Estate Principles 3 units
- RE-141 Real Estate Practice 3 units
- RE-142 Legal Aspects of Real Estate 3 units
- RE-143 Real Estate Finance 3 units

**Elective Courses** (12 units)

- ACCT-124 Financial Accounting - Principles of Accounting I 3 units
- or
- ACCT-124H Honors Financial Accounting - Principles of Accounting I 3 units
- BADM-201 Legal Environment of Business 3 units
- RE-144 Basic Appraisal Principles and Procedures 3.5 units
- RE-145 Real Estate Economics 3 units
- RE-146 Mortgage Loan Brokering and Lending 3 units
- RE-149 Occupational Internship: Real Estate 1-4 units
- RE-150 Escrow I 3 units
- RE-154 Property Management 3 units

### DEGREE

An Associate of Science degree in Real Estate is available to students completing the 24 unit certificate in Real Estate and completing all other MSJC General Education Option A requirements for a total of 60 units. See a counselor for recommended vocational and academic courses.

### EMPLOYMENT CONCENTRATION

**Real Estate Appraisal** (9 units)

- RE-144 Basic Appraisal Principles and Procedures 3.5 units
- RE-155 Residential Real Estate Appraisal 3.5 units
- RE-156 Residential Appraisal Report Writing 1 unit
- RE-157 Uniform Standards of Professional Appraisal Practice (USPAP) 1 unit

Completion of these courses meets the Appraiser Qualifications Board (AQB) 2008 basic education requirements for the OREA Trainee (AT) or Residential (AL) license.

### CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Appraiser
- Escrow Officer
- Land Developer
- Loan Officer
- Property Manager
- Real Estate Salesperson
- Rental Agent
- Sales Agent

For individuals currently working in Real Estate related fields, there may be potential for salary and/or career advancement.
Business - Small Business Administration: The Business Administration program introduces the student to the world of commercial transactions, which occur in the distribution of resources in our American economic system. These courses offer students the opportunities to acquire practical skills, technical knowledge and experience, and improved conceptual abilities and theory in the areas of Accounting, Business Law, Finance, Marketing and Management. A core concentration in this area, in conjunction with the MSJC General Education Option A requirements leads to a major in Business Administration. The certificate program provides a focus on practical small business operation skills and techniques.

### Certificate

**Certificate in Small Business Operations (24 units)**

**Required Courses (15 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-124</td>
<td>Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-124H Honors Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BADM-150</td>
<td>Small Business Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-201</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>ECON-201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-201H Honors Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MGT-205</td>
<td>Principles of Marketing Management</td>
<td>3</td>
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</table>

**Elective Courses (9 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT-125</td>
<td>Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT-125H Honors Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT-126</td>
<td>Beginning Computer Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BADM-157</td>
<td>Principles of Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>BADM-170</td>
<td>Introduction to International Business</td>
<td>3</td>
</tr>
<tr>
<td>BADM-210</td>
<td>Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>CSIS-101</td>
<td>Introduction to Computers and Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>ECON-202</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ECON-202H Honors Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR-108/MGT-108</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MGT-103</td>
<td>Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT-103H Honors Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT-132</td>
<td>Labor Management Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT-138</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Employment Concentrations

#### Accounting and Tax Preparation (16 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>Acct 124</td>
<td>Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>Acct 124 H Honors Financial Accounting - Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 125</td>
<td>Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>ACCT 125 H Honors Managerial Accounting - Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 127</td>
<td>Federal and California Income Tax Accounting</td>
<td>4</td>
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<tr>
<td>CAPP 122</td>
<td>Using Microsoft Excel</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>CAPP 125 C Excel for Business and Accounting</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>CAPP 125 C1 Excel 1 Basics for Business and Accounting And</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td>CAPP 125 C2 Excel 2 For Business Users And</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td>CAPP 125 C3 Excel 3 for Accounting Users And</td>
<td>1</td>
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</tbody>
</table>

#### Management Communications Concentration (12 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BADM-104/ENGL-104</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>BADM-104H/ENGL-104H Honors Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CAPP-127</td>
<td>Using Microsoft Word</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT 103 Introduction to Management</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MGT 103H Honors Introduction to Management</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Virtual Office Professional Concentration (14 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BADM-098A</td>
<td>Developing Effective Time Management Techniques</td>
<td>.5</td>
</tr>
<tr>
<td>BADM-098B</td>
<td>Reducing Stress and Improving Performance</td>
<td>.5</td>
</tr>
<tr>
<td>BADM-098F</td>
<td>Developing Customer Relations and Rapport</td>
<td>.5</td>
</tr>
<tr>
<td>BADM-098G</td>
<td>Business Ethics</td>
<td>.5</td>
</tr>
<tr>
<td>BADM-104/ENGL-104</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>BADM-104H/ENGL-104H Honors Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>CAPP-120</td>
<td>Using Microsoft Office - Level 1</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>OTEC-160 Creating and Managing the Virtual Office</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>OTEC-163 Operating and Marketing the Virtual Office</td>
<td>3</td>
</tr>
</tbody>
</table>

### Career Opportunities

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Accountant
- Tax Preparer
- Health Administrator
- Financier
- Manager
- Inspector
- Public Administrator
- Purchasing Manager
- Resort Operations Manager
- Marketing Manager

### Degree

Completion of the Business Administration Major plus all MSJC General Education Option A requirements for a total of 60 units is required to earn an Associate of Science Degree in Business Administration. Please refer to the current Mt. San Jacinto catalog for details on the major requirements.
Alcohol & Drug Studies: The Alcohol/Drug studies non-transfer certificate and degree program is designed to prepare people to serve as professionals in the expanding profession of counseling to those individuals who suffer from addictions from alcohol or other drugs.

The MSJC Alcohol/Drug program is a certificate program consisting of 40 units, drawing from a course list which provides a thorough grounding in medical and social origins of addiction. The successful student will be well prepared for the qualifying examination offered by California Board for Alcohol and Drug Abuse Counselors (CBADAC), a statewide certification organization.

CERTIFICATE

Certificate in Alcohol/Drug Studies (40 units)
In addition to the course work below, certificate recipients must demonstrate English proficiency by passing ENGL-098 or higher or achieve an equivalent APT score and pass MATH-051 or higher or achieve an equivalent APT score.

Required Courses (40 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-090</td>
<td>Survey of Alcohol/Drug Studies Program</td>
<td>1</td>
</tr>
<tr>
<td>ADS-101</td>
<td>Introduction and Overview of Alcohol and Drug Studies</td>
<td>3</td>
</tr>
<tr>
<td>ADS-102</td>
<td>Pharmacology and Biomedical Aspects of Alcohol and Other Drugs</td>
<td>3</td>
</tr>
<tr>
<td>ADS-103</td>
<td>Law and Ethics, Community Prevention, Education, Outreach and Referral</td>
<td>3</td>
</tr>
<tr>
<td>ADS-104</td>
<td>Case Management: Assessment, Orientation, Treatment, Planning and Relapse Prevention</td>
<td>3</td>
</tr>
<tr>
<td>ADS-110/PSYC-110</td>
<td>Introduction to Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ADS-115/PSYC-115</td>
<td>Individual, Family and Group Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ADS-120</td>
<td>Personal and Professional Growth for Alcohol and Drug Counselors</td>
<td>3</td>
</tr>
<tr>
<td>ADS-149</td>
<td>Occupational Internship: Alcohol and Drug Studies</td>
<td>1-4</td>
</tr>
<tr>
<td>ADS-150</td>
<td>Practicum Seminar</td>
<td>3</td>
</tr>
<tr>
<td>HS-121</td>
<td>Fundamentals of Healthful Living</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC-101H</td>
<td>Honors Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-102</td>
<td>Personal Growth</td>
<td>3</td>
</tr>
<tr>
<td>SOCI-106</td>
<td>Intercultural Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

DEGREE

In addition to the 40 units of the certificate program, students must complete all MSJC General Education Option A requirements for the Associate of Science degree in Alcohol/Drug Studies.

EMPLOYMENT CONCENTRATION

Dual Diagnosis (13-16 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS-116</td>
<td>Introduction to Dual Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>ADS-118</td>
<td>Dual Diagnosis: Counseling &amp; Case Management</td>
<td>3</td>
</tr>
<tr>
<td>ADS-149</td>
<td>Occupational Internship: Alcohol and Drug Studies</td>
<td>1-4</td>
</tr>
<tr>
<td>or PSYC-101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC-101H</td>
<td>Honors Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC-108</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

To become a counselor a master’s degree is required. Students are advised to speak with a counselor regarding career opportunities.

Entry Level Positions:
- Alcohol/Drug Intern
- Alcohol/Drug Technician

Professional Positions (for those who follow through with state certification):
- Alcohol/Drug Advisor
- Alcohol/Drug Recovery Center Director
- Inpatient/Outpatient Alcohol/Drug Advisor/Staff
- Case Manager
**Certified Nursing Assistant (CNA):** This non-transfer program introduces students to the basic information and nursing skills needed to pass the state exam required for Nurse Aide Certification. There are no Certificate or Degree options available for this program.

**Emergency Medical Technician (EMT):** This non-transfer program provides the knowledge and skills required to care for the ill or injured person(s) in the pre-hospital care setting. It is also a first step for those individuals who would prefer to work in an emergency room as an emergency room technician. Students are taught how to perform a complete patient assessment and provide multiple lifesaving interventions based on their assessment of the ill or injured patient. This course is primarily taken by individuals who intend to work in the field of pre-hospital emergency medicine and with critically ill or injured patients. This course can also be taken by individuals currently working in a similar medical employment within the medical field and there may be potential for salary and/or career advancement. Individuals who wish to take this course must have a criminal free background due to licensing restrictions imposed by national, state and local licensing agencies. The potential student must be 18 years of age. Hospital clinical and field internship hours are required. This course is a positive attendance course due to national, state and local mandates.

### EMPLOYMENT CONCENTRATIONS

<table>
<thead>
<tr>
<th>Program</th>
<th>Certification</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Nursing Assistant/Home Health Aide</td>
<td>7.5 units</td>
<td></td>
</tr>
<tr>
<td>NURS-085</td>
<td>Certified Nursing Assistant and Home Health Aide</td>
<td>7.5 units</td>
</tr>
<tr>
<td><strong>Emergency Medical Technician (EMT)</strong></td>
<td>12.5 units</td>
<td></td>
</tr>
<tr>
<td>AH-120</td>
<td>Emergency Medical Technician I</td>
<td>5 units</td>
</tr>
<tr>
<td>AH-121</td>
<td>Emergency Medical Technician I Basic (Refresher)</td>
<td>2.5 units</td>
</tr>
<tr>
<td>AH-125</td>
<td>EMT-I Basic Challenge Exam</td>
<td>5 units</td>
</tr>
<tr>
<td><strong>Emergency Medical Technician (EMT) Advanced</strong></td>
<td>8 units</td>
<td></td>
</tr>
<tr>
<td>AH-120B</td>
<td>Advanced Emergency Medical Technician</td>
<td>5 units</td>
</tr>
<tr>
<td>AH-127</td>
<td>Infant to Adult Basic and Advanced Life Support</td>
<td>3 units</td>
</tr>
</tbody>
</table>

### CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Ambulance Service
- Emergency Room Technician
- Fire Service
- Hospital Attendant
- Nursing Assistant
- Nurse’s Aide
- Orderly
- State of California Volunteer EMT
- Special Event EMT
Health Science and Medical Technology

Diagnostic Medical Sonography: The Diagnostic Medical Sonography Program is a non-transfer program. This certificate program provides an opportunity for students to be educated and trained in the healthcare career of Diagnostic Medical Sonography. The objective of the program is to graduate students who are competent and confident in providing excellent patient care in the field of sonography.

The goal of our DMS program is to graduate students who demonstrate a high competency in anatomy and pathology, as seen on the ultrasound exam and the skills necessary to perform the ultrasound exam. Students will be evaluated on didactic learning in Ultrasound Physics and Instrumentation, hands on scanning skills, communication skills, patient care and critical thinking ability. Students will practice ultrasound scanning skills with ultrasound equipment in the campus lab. Those skills will be carried out and enhanced in an affiliated medical center by training on the job, scanning patients.

The didactic education will prepare the student for taking the American Registry of Diagnostic Medical Sonography Physics and Instrumentation examination. After graduation the student will be required to work an additional year in the sonography field before taking the ARDMS specialty examination.

With completion of Associate of Science required course work the student will receive an Associate of Science in Diagnostic Medical Sonography

CERTIFICATE

Program Prerequisites: 20 units
ANAT-101 Human Anatomy & Physiology I 5 units
or
ANAT-101H Honors Human Anatomy & Physiology I 5 units
ANAT-102 Human Anatomy & Physiology II 5 units
or
ANAT-102H* Honors Human Anatomy and Physiology II 5 units
COMM-103 Interpersonal Communication 3 units
MATH-090 Elementary Algebra (or higher) 4 units
PHY-100 Conceptual Physics 3 units

DMS Program Courses (60 units)

Semester One: 13 units
DMS-095 Sonography Medical Terminology 3 units
DMS-100 Fundamentals of Diagnostic Medical Sonography 2 units
DMS-101 Pathophysiology 3 units
DMS-103 Patient Care Techniques for Sonographers 3 units
DMS-125 Ultrasound Physics and Instrumentation I 2 units

Semester Two: 13.5 units
DMS-102 Sonography Medical Ethics 3 units
DMS-110 Sectional Imaging 2 units
DMS-120 Abdomen Scanning 3 units
DMS-122 Ultrasound Pathology I 1.5 units
DMS-135 Ultrasound Physics and Instrumentation II 2 units
DMS-104 Clinical Observation 2 units

Summer: 5 units
DMS-114 Clinical Experience I 5 units

Semester Three: 16.5 units
DMS-124 Clinical Experience II 10 units
DMS-130 Obstetric/Gynecology Scanning 3 units
DMS-132 Ultrasound Pathology II 1.5 units
DMS-140 Introduction to Vascular Scanning 2 units

Semester Four: 12 units
DMS-134 Ultrasound Seminar 2 units
DMS-136 Clinical Experience III 10 units

The sonography courses must be taken in a specific sequence, students must attain a minimum grade of “C” or above in all required courses in order to obtain the certificate.

DEGREE

The 60 units in the certificate plus all MSJC General Education Option A requirements is required to earn an Associate of Science degree in Diagnostic Medical Sonography. See counselor for recommended vocational and academic courses.

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Diagnostic Medical Sonographer

Treat the Patient, not the X-ray
~James M. Hunter
Nursing - Associate Degree Nursing (ADN, RN): The Associate of Science degree in Registered Nursing provides courses that are transferable to four year colleges and universities. The program is accredited by the California State Board of Registered Nursing. Graduates are eligible to take the National Council Licensure Examination (NCLEX). The program pass rates are consistently above the state and national averages.

The Associate of Science degree in Nursing is a 78-unit degree program which requires four semesters (40 units in nursing) of study beyond completion of prerequisite courses.

Nursing is based upon the knowledge of natural and behavioral sciences in addition to ethics and legal mandates. The nursing process is used as a framework for providing independent or dependent interventions to persons from diverse groups while encouraging personal, family, and community participation to attain optimal health throughout the life span.

<table>
<thead>
<tr>
<th>DEGREE</th>
</tr>
</thead>
</table>

**Associate of Science Degree in Nursing (78 units)**

Minimum cumulative college level GPA of 2.5 on 4.0 scale with a grade of “C” or better in the following courses:

**Admission Requirements:**
- Pre-Nursing Information Workshop Certificate
- High School graduate (or equivalency)

**Prerequisites: 24 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT-101</td>
<td>Human Anatomy &amp; Physiology I (A)</td>
<td>5</td>
</tr>
<tr>
<td>or ANAT-101H</td>
<td>Honors Human Anatomy &amp; Physiology I (A)</td>
<td>5</td>
</tr>
<tr>
<td>ANAT-102</td>
<td>Human Anatomy &amp; Physiology II (A)</td>
<td>5</td>
</tr>
<tr>
<td>or ANAT-102H</td>
<td>Honors Human Anatomy and Physiology II (A)</td>
<td>5</td>
</tr>
<tr>
<td>BIOL-125</td>
<td>Microbiology (A)</td>
<td>5</td>
</tr>
<tr>
<td>or BIOL-125H</td>
<td>Honors Microbiology (A)</td>
<td>5</td>
</tr>
<tr>
<td>ENGL-101</td>
<td>Freshman Composition (D1)</td>
<td>4</td>
</tr>
<tr>
<td>or ENGL-101H</td>
<td>Honors Freshman Composition (D1)</td>
<td>4</td>
</tr>
<tr>
<td>MATH-096</td>
<td>Intermediate Algebra (G)</td>
<td>5</td>
</tr>
</tbody>
</table>

**Semester One: 12 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS-084C</td>
<td>Nursing Skills Lab - Registered Nurse</td>
<td>0.5</td>
</tr>
<tr>
<td>NURS-194</td>
<td>Pharmacology &amp; Dosage Calculations for Nurses</td>
<td>3.5</td>
</tr>
<tr>
<td>NURS-212</td>
<td>Foundations of Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NURS-214</td>
<td>Introduction to Medical-Surgical Nursing I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Semester Two: 12.5 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS-084C</td>
<td>Nursing Skills Lab - Registered Nurse</td>
<td>0.5</td>
</tr>
<tr>
<td>NURS-222</td>
<td>Nursing Care of Children &amp; Families</td>
<td>3.5</td>
</tr>
<tr>
<td>NURS-224</td>
<td>Beginning Medical-Surgical Nursing II</td>
<td>5</td>
</tr>
<tr>
<td>NURS-226</td>
<td>Nursing of Childbearing &amp; Families</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Semester Three: 10.5 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS-084C</td>
<td>Nursing Skills Lab - Registered Nurse</td>
<td>0.5</td>
</tr>
<tr>
<td>NURS-234</td>
<td>Intermediate Medical-Surgical Nursing III</td>
<td>5</td>
</tr>
<tr>
<td>NURS-236</td>
<td>Mental Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS-238</td>
<td>Gerontology and Community Nursing</td>
<td>2</td>
</tr>
</tbody>
</table>

**Semester Four: 7 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS-084C</td>
<td>Nursing Skills Lab - Registered Nurse</td>
<td>0.5</td>
</tr>
<tr>
<td>NURS-244</td>
<td>Advanced Medical-Surgical Nursing IV</td>
<td>4</td>
</tr>
<tr>
<td>NURS-248</td>
<td>Preceptorship (5 wks)</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Additional Associate Degree and Requirements: 12 units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>101 (must be taken prior to 3rd semester)</td>
<td>3</td>
</tr>
<tr>
<td>Communication</td>
<td>100 or 103 (D2)</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>Multicultural Gender Studies (Area C)</td>
<td>3</td>
</tr>
</tbody>
</table>

Many courses will satisfy both requirements: 3 units

(See the MSJC General Education Breadth Pattern)

**Career Opportunities**

Registered Nursing graduates find there are employment opportunities in diverse settings. The Associate of Science degree in Nursing allows the graduate to transfer into a Bachelor of Science in Nursing (BSN) program. The student is strongly encouraged to inquire about specific course requirements at the four-year college of their choice.
Viticulture, Enology and Winery Technology: The Viticulture, Enology and Winery Technology is a program that introduces the student to a variety of disciplines included in the winemaking industry. From basic winemaking (enology), grape cultivation (viticulture), event organization and service (hospitality) to marketing and selling of wine (business principles). This program seeks to inform the student at an introductory level to the many fields encompassing the winery industry.

EMPLOYMENT CONCENTRATION

Viticulture, Enology and Winery Technology (12 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEW-100</td>
<td>Introduction to Viticulture</td>
<td>3</td>
</tr>
<tr>
<td>VEW-102</td>
<td>Introduction to Enology</td>
<td>3</td>
</tr>
<tr>
<td>VEW-106</td>
<td>Hospitality in the Winemaking Industry</td>
<td>3</td>
</tr>
<tr>
<td>VEW-108</td>
<td>Introduction to Winery Business Principles</td>
<td>3</td>
</tr>
</tbody>
</table>

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Formal Waiter/Waitress
- Head Waiter/Waitress
- Host/Hostess
- Restaurant Host/Hostess
- Wine Steward
- Wine Sommelier
- Winery Production Worker
Information Technology

Computer Information Systems (CIS): Computer Information Systems are the tools that facilitate the effective and efficient transformation of data into information. Careers in today’s information systems require knowledge and hands-on-experience in microcomputer applications, programming, operating systems, and networking. The program in Computer Information Systems offers students an opportunity to earn a CIS Associate’s degree or State Approved Certificate. Students completing an employment concentration will be awarded a locally approved certificate of completion. The program also offers general CIS electives for students in programs college-wide.

CERTIFICATE

Upon successful completion of any of the Employment Concentrations listed in this section, and completing of the CIS Core Requirements listed below, a student can earn a CIS State Certificate.

CIS Core Requirements (9 units)
- CSIS-101 Introduction to Computers and Data Processing 3 units
- CSIS-201 Systems Analysis and Design 3 units
- CSIS-202 Networks and Data Communications 3 units

Computer Forensics (16 units)
- AJ-103 Criminal Evidence 3 units
- AJ-105 Public Safety Report Writing 3 units
- AJ-108 Criminal Investigation 3 units
- CSIS-181 Computer Hardware - Level 1 4 units
- CSIS-182 Computer Forensics 3 units

Computer Hardware Specialist Certification (12 units)
This program of study prepares students for A+ industry certification. In order to obtain that certificate students must take the CompTIA exam. Students can register for these exams at http://www.2test.com and testing facilities are available on campus.
- CSIS-151 Using the OS Command Line Interface 3 units
- CSIS-154 Using and Configuring Windows Operating Systems 3 units
- CSIS-181 Computer Hardware - Level 1 4 units
- CSIS-183 Green Computing 2 units

Data Analysis and Modeling (9 units)
- CAPP-122 Using Microsoft Excel 3 units
- CAPP-123 Using Microsoft Access - Level 1 3 units
- CAPP-143 Using Microsoft Access - Level 2 3 units

Microsoft Office Applications Developer (9 units)
- CAPP-120 Using Microsoft Office - Level 1 3 units
- CAPP-140 Using Microsoft Office - Level 2 3 units
- CAPP-160 Using Microsoft Office - Level 3 3 units

Networking Technologies Apprentice (10 units)
This program of study prepares students for Network+ industry certification. In order to obtain that certificate students must take the CompTIA exam. Students can register for these exams at http://www.2test.com and testing facilities are available on campus.
- CSIS-190 Network Media 3 units
- CSIS-191 Network Hardware - Level 1 4 units
- CSIS-202 Networks and Data Communications 3 units

Open Office Specialist Certification (6 units)
- CAPP-120M Using OpenOffice - Level 1 3 units
- CAPP-140M Using OpenOffice - Level 2 3 units

Service Desk Hardware Support (15 units)
- CSIS-154 Using and Configuring Windows Operating Systems 3 units
- CSIS-171 Service Desk Concepts 3 units
- CSIS-171L Service Desk Lab 1 unit
- CSIS-181 Computer Hardware - Level 1 4 units
- CSIS-191 Computer Hardware - Level 1 4 units

Service Desk Software Support (16 units)

<table>
<thead>
<tr>
<th>Required Courses (4 units)</th>
<th>Elective Courses (12 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSIS-171 Service Desk Concepts 3 units</td>
<td>CAPP-120 Using Microsoft Office - Level 1 3 units</td>
</tr>
<tr>
<td>CSIS-171L Service Desk Lab 1 unit</td>
<td>CAPP-120M Using OpenOffice - Level 1 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-122 Using Microsoft Excel 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-123 Using Microsoft Access - Level 1 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-124 Using Microsoft PowerPoint 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-126G Using Adobe InDesign 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-127 Using Microsoft Word 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-135 Using Microsoft Project 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-140 Using Microsoft Office - Level 2 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-140M Using OpenOffice - Level 2 3 units</td>
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<tr>
<td></td>
<td>CAPP-143 Using Microsoft Access - Level 2 3 units</td>
</tr>
<tr>
<td></td>
<td>CAPP-160 Using Microsoft Office - Level 3 3 units</td>
</tr>
<tr>
<td></td>
<td>CSIS-150 Using Microsoft Windows 3 units</td>
</tr>
</tbody>
</table>

DEGREE

An Associate degree in CIS may be earned by completing one Employment Concentration plus the CIS Core requirements (for a combined minimum of 18 units) as well as all MSJC General Education Option A requirements.

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Computer Information Systems Manager
- Office and Administrative Support Supervisors
- Networking Technologies Apprentice
- Service Desk Hardware Support
- Computer Forensics Investigators
- Network Control Technician
- Computer Hardware Specialist
- Computer Systems Analyst
- Computer Support Technician
- Database Developer and Managers
CIS - Internet Authoring: Computer Information Systems are the tools that facilitate the effective and efficient transformation of data into information. Careers in today’s information systems require knowledge and hands-on-experience in microcomputer applications, programming, operating systems, and networking. The program in Computer Information Systems offers students an opportunity to earn a CIS Associate’s degree or State Approved Certificate. Students completing an employment concentration will be awarded a locally approved certificate of completion. The program also offers general CIS electives for students in programs college-wide.

CERTIFICATE
Upon successful completion of any of the Employment Concentrations and completion of the CIS Core Requirements (CSIS 101, CSIS 201, and CSIS 202), a student can earn a CIS State Certificate.

DEGREE
An Associate degree in CIS may be earned by completing one Employment Concentration plus the CIS Core requirements (for a combined minimum of 18 units) as well as all MSJC General Education Option A requirements.

EMPLOYMENT CONCENTRATIONS

Internet Authoring Apprentice (9 units)
Note: A cumulative GPA of 2.0 or higher is required for these courses.

Foundation Layer (3 units)
CSIS-103 Introduction to the Internet 3 units

Presentation Layer (3 units)
CSIS-115A Web Development - Level 1 3 units
or
CSIS-117D Using Microsoft Expression Web - Level 1 3 units

Interactive Layer (3 units)
CSIS-116G Ruby Programming - Level 1 3 units
or
CSIS-119A Action Script Programming - Level 1 3 units
or
CSIS-125A Web Development - Level 2 3 units

Internet Authoring Journeyman (15 units)
Note: A cumulative GPA of 2.0 or higher is required for these courses.

Foundation Layer (3 units)
CSIS-103 Introduction to the Internet 3 units

Presentation Layer (3 units)
CSIS-115A Web Development - Level 1 3 units
or
CSIS-117D Using Microsoft Expression Web - Level 1 3 units

Interactive Layer (3 units)
CSIS-116G Ruby Programming - Level 1 3 units
or
CSIS-119A Action Script Programming - Level 1 3 units
or
CSIS-125A Web Development - Level 2 3 units

Database Layer (3 units)
CSIS-114A SQL Programming - Level 1 3 units
or
CSIS-115B XML Design - Level 1 3 units

Internet and Web Technologies (15 units)
This program of study prepares students for internet industry certification. In order to obtain that certificate students must take the CompTIA exams. Students can register for these exams at http://www.2test.com and testing facilities are available on campus.

CSIS-103 Introduction to the Internet 3 units
CSIS-104 Introduction to E-Commerce Infrastructure 3 units
CSIS-115A Web Development - Level 1 3 units
CSIS-125A Web Development - Level 2 3 units
CSIS-202 Networks and Data Communications 3 units

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Electronic Publishing
• Internet Developer
• Web Designer
• Web Developer
• Web Publisher
• Web Technologies
**CIS - Networking:** Computer Information Systems are the tools that facilitate the effective and efficient transformation of data into information. Careers in today’s information systems require knowledge and hands-on-experience in microcomputer applications, programming, operating systems, and networking. The program in Computer Information Systems offers students an opportunity to earn a CIS Associate’s degree or State Approved Certificate. Students completing an employment concentration will be awarded a locally approved certificate of completion. The program also offers general CIS electives for students in programs college-wide.

**EMPLOYMENT CONCENTRATIONS**

**LAN/WAN Administration CCNA**

*Cisco Certified Network Administrator* (12 units)

- CSIS-202 Networks and Data Communications 3 units
- NET-100 Local Area Network Design and Switch Management 3 units
- NET-101 Layer 3 Routing and Router Management 3 units
- NET-102 Wide Area Network Design and Protocol Configuration 3 units

**Linux System Administrator (9 units)**

- CSIS-153 Using Unix-Based Operating System 3 units
- CSIS-223A Linux System Administration - Level 1 3 units
- CSIS-233A Linux System Administration - Level 2 3 units

**Microsoft Certified Systems Administrator (MCSA) (12 units)**

- CSIS-202 Networks and Data Communications 3 units
- NET-120 Installing, Configuring, and Administering a Windows Client Operating System 3 units
- NET-121 Managing and Maintaining a Windows Server Environment 3 units
- NET-122 Implementing, Managing, and Maintaining a Windows Network Infrastructure 3 units

**Security Certified Network Professional (SCNP) (12 units)**

- CSIS-202 Networks and Data Communications 3 units
- NET-140 Network Security Fundamentals 3 units
- NET-141 Hardening the Infrastructure 3 units
- NET-142 Network Defense and Countermeasures 3 units

**DEGREE**

An Associate degree in CIS may be earned by completing one Employment Concentration plus the CIS Core requirements (for a combined minimum of 18 units) as well as all MSJC General Education Option A requirements.

**CERTIFICATE**

Upon successful completion of any of the Employment Concentrations and completion of the CIS Core Requirements (CSIS 101, CSIS 201, and CSIS 202), a student can earn a CIS State Certificate.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Network Administrator
- Network Manager
- Network Specialist
- System Administrator
CIS - Programming: Computer Information Systems are the tools that facilitate the effective and efficient transformation of data into information. Careers in today’s information systems require knowledge and hands-on-experience in microcomputer applications, programming, operating systems, and networking. The program in Computer Information Systems offers students an opportunity to earn a CIS Associate’s degree or State Approved Certificate. Students completing an employment concentration will be awarded a locally approved certificate of completion. The program also offers general CIS electives for students in programs college-wide.

CERTIFICATE

Upon successful completion of any of the Employment Concentrations and completion of the CIS Core Requirements (CSIS 101, CSIS 201, and CSIS 202), a student can earn a CIS State Certificate.

EMPLOYMENT CONCENTRATIONS

C++ Programming (6 units)
- CSIS-113A: C++ Programming - Level 1 3 units
- CSIS-123A: C++ Programming - Level 2 3 units

Database Administration (15 units)
- CSIS-114A: SQL Programming - Level 1 3 units
- CSIS-114C: Database Programming - Level 1 3 units
- CSIS-214: Principles of Database Management Systems 3 units
- CSIS-241A: Database Server Administration - Level 1 3 units
- CSIS-261A: Database Server Administration - Level 2 3 units

Database Developer (12 units)
- CSIS-124A: SQL Programming - Level 2 3 units
- CSIS-124C: Database Programming - Level 2 3 units
- CSIS-134A: SQL Programming - Level 3 3 units
- CSIS-214: Principles of Database Management Systems 3 units

Database Operator (9 units)
- CSIS-214: Principles of Database Management Systems 3 units
- CSIS-241A: Database Server Administration - Level 1 3 units
- CSIS-261A: Database Server Administration - Level 2 3 units

Database Programming (9 units)
- CSIS-114C: Database Programming - Level 1 3 units
- CSIS-124C: Database Programming - Level 2 3 units

*Embedded Systems Programming (9 units)*
- CSIS-118A: Embedded Systems Programming 3 units
- CSIS-118B: Computer Organization & Assembly Language 3 units
- CSIS-188: Introduction to Digital Circuits 3 units
*Note: The Embedded Systems Programming ECC cannot be used towards a degree or certificate in CIS.

Java Programming (6 units)
- CSIS-113B: Java Programming - Level 1 3 units
- CSIS-123B: Java Programming - Level 2 3 units

Python Programming (6 units)
- CSIS-116E: Python Programming - Level 1 3 units
- CSIS-126E: Python Programming - Level 2 3 units

SQL Programming (6 units)
- CSIS-114A: SQL Programming - Level 1 3 units
- CSIS-124A: SQL Programming - Level 2 3 units

Visual Basic Programming (9 units)
- CSIS-112A: Visual Basic Programming - Level 1 3 units
- CSIS-122A: Visual Basic Programming - Level 2 3 units
- CSIS-132: Creating Visual Basic Database Applications 3 units

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

• Applications Programmer
• Applications Specialist
• Computing Applications Specialist
• Data Administrator
• Database Administrator
• Database Developer
• Database Operator
• Programmer Analyst
• Project Manager
• Python Programmer
• Software Engineer
• Systems Analyst
• Systems Integrator
• Systems Programmer

DEGREE

An Associate degree in CIS may be earned by completing one Employment Concentration plus the CIS Core requirements (for a combined minimum of 18 units) as well as all MSJC General Education Option A requirements.
**Administration of Justice:** The scope of the non-transfer or certificate program in administration of justice and corrections is designed to prepare the student for entry into careers in criminal justice and law enforcement. The program provides the student with a basic understanding of a variety of criminal justice positions at the federal, state, county and municipal level. The course of study involves an introduction to law enforcement, criminal law and evidence, juvenile and criminal procedures, public safety report writing, traffic control, community relations, criminal investigations, correctional courses, vice and narcotics control. These courses provide the student with a base of knowledge that will serve them well regardless of the criminal justice field they choose, i.e., police officer, deputy sheriff, corrections, FBI and civilian support.

**CERTIFICATE**

**Certificate in Administration of Justice** (24 units)

**Required Courses** (15 units)

- AJ-101 Criminal Law 3 units
- AJ-102 Introduction to Law Enforcement 3 units
- AJ-106 Juvenile Procedures 3 units
- AJ-111 Criminal Procedures 3 units
- AJ-118 Police Community Relations 3 units

**Elective Courses** (9 units)

- AJ-103 Criminal Evidence 3 units
- AJ-104 Patrol Procedures 3 units
- AJ-105 Public Safety Report Writing 3 units
- AJ-108 Criminal Investigation 3 units
- AJ-109 Interview and Interrogation Techniques 1.5 units
- AJ-110 Crime Scene Sketching and Note Taking 1.5 units
- AJ-112 Introduction to Criminology 3 units
- AJ-115 Introduction to Probation and Parole 3 units
- AJ-125 Vice and Narcotics Control 3 units
- AJ-128 Traffic Control, Enforcement and Investigation 3 units
- AJ-149 Occupational Internship: Administration of Justice 1-4 units
- AJ-299 Special Projects: Administration of Justice 1-3 units
- CORR-101 Introduction to Correctional Science 3 units

**EMPLOYMENT CONCENTRATIONS**

**Computer Forensics** (16 units)

- AJ-103 Criminal Evidence 3 units
- AJ-105 Public Safety Report Writing 3 units
- AJ-108 Criminal Investigation 3 units
- CSIS-181 Computer Hardware - Level 1 4 units
- CSIS-182 Computer Forensics 3 units

**Corrections** (15 units)

CPOST (Correctional Peace Officer Standards and Training) has developed a recommended pattern of classes that would benefit correctional peace officer apprentices. Students completing these classes may receive a higher application score when applying for positions within the Department of Corrections.

**Required Courses** (12 units)

- AJ-105 Public Safety Report Writing 3 units
- CORR-101 Introduction to Correctional Science 3 units
- CORR-102 Control and Supervision in Corrections 3 units
- CORR-103 Correctional Interviewing and Counseling 3 units

**Elective Courses** (3 units)

- AJ-101 Criminal Law 3 units
- CORR-104 Legal Aspects of Corrections 3 units

**DEGREE**

In addition to completing the certificate program, students MUST complete all other MSJC General Education Option A requirements for the Associate of Science degree in Administration of Justice.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- **Public Services**
  - Air Marshal
  - Animal Control Officer
  - Bailiff
  - Customers Inspector
  - Custom Canine Specialist
  - Deportation Officer
  - Detective
  - FBI Agent
  - Fingerprint Classifier
  - Fish and Game Warden
  - Fugitive Recovery Agent
  - Highway Patrol Officer

- **Corrections**
  - Immigration Inspector
  - Insurance Adjuster
  - Investigator
  - Law Enforcement Officer
  - Polygraph Examiner
  - Private Investigator
  - Security Guard
  - Security Screener
  - Treasury Enforcement Agents/AFT Special Agent
  - US Marshal

[Image: Police佩带手铐和场景]
Fire Technology: The non-transfer Certificate/Associate degree (AS) in Fire Technology involves the study of fire behavior, protection and control techniques which for individuals currently working within these fields, there may be potential for salary and/or career advancement. This program prepares the student for an entry-level career in the fire service by providing a foundation of core concepts, practices, vocabulary, culture, safety and requirements for the fire service. This program is designed to prepare students for the entry-level career in public or private fire protection agencies, to survey career options, and to upgrade fire personnel. This program follows the Fire and Emergency Services Higher Education (FESHE) model from the National Fire Academy in Emmetsburg, Maryland and is a component of accreditation from the California State Fire Training.

CERTIFICATE
Certificate in Fire Technology (24 units)

Required Core Courses (18 units)
- FIRE-101 Introduction to Fire Technology 3 units
- FIRE-102 Fundamentals of Fire Prevention 3 units
- FIRE-106 Fundamentals of Fire Behavior and Combustion 3 units
- FIRE-109 Fundamentals of Fire Protection and Equipment 3 units
- FIRE-115 Building Construction for Fire Protection 3 units
- FIRE-122 Principles of Fire and Emergency Services Safety and Survival 3 units

Elective Courses (6 units)
- AH-120 Emergency Medical Technician I 5 units
- FIRE-103 Fire Hydraulics 3 units
- FIRE-107 Fire Apparatus and Equipment 3 units
- FIRE-108 Fundamentals of Fire Investigation 3 units
- FIRE-117 Hazardous Materials First Responder Operational 1 unit
- FIRE-121 Fundamentals of Wild Land Fire Fighting 3 units
- FIRE-149 Occupational Internship: Fire Technology 1-4 units
- FIRE-299 Special Projects: Fire Technology 1-3 units

DEGREE

Students wishing to obtain the Associate of Science (AS) degree should complete the required core courses (18 units) and two additional elective courses (6 units) in the Fire Technology program to establish a major (24 units total). In addition to the 24 units of the certificate program, students must complete all the MSJC General Education Option A requirements for the Associate of Science (AS) degree in Fire Technology.

EMPLOYMENT CONCENTRATIONS

Fire Academy Preparation (8 units)
Students completing this certificate will have completed the material required to apply for entrance into a Fire Academy. Some Academies may have additional requirements such as passing a physical abilities test. For specific requirements and further information, contact the Fire Academy you wish to attend.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH-120</td>
<td>Emergency Medical Technician I</td>
<td>5</td>
</tr>
<tr>
<td>FIRE-101</td>
<td>Introduction to Fire Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

Fire Apparatus Operator Preparation (9 units)
Students completing this certificate will have completed the courses to prepare them to operate fire apparatus.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE-101</td>
<td>Introduction to Fire Technology</td>
<td>3</td>
</tr>
<tr>
<td>FIRE-103</td>
<td>Fire Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>FIRE-107</td>
<td>Fire Apparatus and Equipment</td>
<td>3</td>
</tr>
</tbody>
</table>

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Firefighter
Legal Assistant: The non-transfer Certificate/Associate of Science (AS) degree program in Legal Assistant studies is designed to prepare students for a paraprofessional career in generalized or specialized areas of paralegal services. This program provides the student with the theoretical knowledge and practical skills necessary to enter the job market as a legal assistant in private law offices, government agencies or corporations. A legal assistant works under the direction of an attorney in performing legal services to meet the client’s needs. The Associate of Science degree provides students with the educational foundation helpful for transfer to a baccalaureate pre-law program or related field of study.

Although most employers do not require certification, earning a voluntary certification from a professional society may offer advantages in the labor market. The National Association of Legal Assistants (NALA), for example, has established standards for certification requiring a combination of education and experience. Paralegals who meet those standards are eligible to take a two-day examination given by NALA. Those who pass the exam will earn a Paralegal Certification.

CERTIFICATE

Certificate in Legal Assistant (27 units)

Core Courses (18 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEG-100</td>
<td>Foundations of the Legal System</td>
<td>3</td>
</tr>
<tr>
<td>LEG-104</td>
<td>Law Office Management</td>
<td>3</td>
</tr>
<tr>
<td>LEG-105</td>
<td>California Civil Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LEG-107</td>
<td>Research and Writing for Legal Assistant</td>
<td>3</td>
</tr>
<tr>
<td>LEG-112</td>
<td>Administrative Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-160</td>
<td>Business Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (9 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJ-101</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-103</td>
<td>Elder Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-120</td>
<td>Immigration Law I</td>
<td>3</td>
</tr>
<tr>
<td>LEG-122</td>
<td>Immigration Law II</td>
<td>3</td>
</tr>
<tr>
<td>LEG-134</td>
<td>Family Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-140</td>
<td>Bankruptcy Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-149</td>
<td>Occupational Internship: Legal Assistant</td>
<td>3</td>
</tr>
<tr>
<td>LEG-150</td>
<td>Probate Law and Procedures</td>
<td>3</td>
</tr>
</tbody>
</table>

DEGREE

In addition to the 27 units of the certificate program, students must complete all of the MSJC General Education Option A requirements for the Associate of Science (AS) Legal Assistant degree.

EMPLOYMENT CONCENTRATION

Legal Office Support (12 units)

Required Courses (9 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPP-127</td>
<td>Using Microsoft Word</td>
<td>3</td>
</tr>
<tr>
<td>LEG-100</td>
<td>Foundations of the Legal System</td>
<td>3</td>
</tr>
<tr>
<td>LEG-104</td>
<td>Law Office Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (3 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BADM-201</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>LEG-103</td>
<td>Elder Law</td>
<td>3</td>
</tr>
<tr>
<td>LEG-105</td>
<td>California Civil Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LEG-134</td>
<td>Family Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Obedience of the law is demanded; not asked as a favor.
~Theodore Roosevelt

CAREER OPPORTUNITIES

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Legal Assistant
- Legal Secretary
- Paralegal
Automotive/Transportation Technology: This is a career oriented non-transfer occupational program that prepares students to work in today’s highly automated repair shops, and provides the background for career advancement in the automotive industry. Students get hands-on training and instruction in automotive repair and maintenance. Our Automotive Technology program prepares students for employment in many areas of the automotive field including dealerships, independent garages, fleet shops, service stations, and specialty shops.

**CERTIFICATE**

Certificate in Automotive/Transportation Technology (20 units)

**Required Courses (20 units)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME-100</td>
<td>Basic Auto Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>AUME-119</td>
<td>Automotive Brake Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUME-120</td>
<td>Automotive Suspension, Steering and Alignment Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUME-122</td>
<td>Engine Performance I</td>
<td>4</td>
</tr>
<tr>
<td>AUME-126</td>
<td>Automotive Electrical/Electronics I</td>
<td>4</td>
</tr>
</tbody>
</table>

**EMPLOYMENT CONCENTRATIONS**

Automotive Emission Technician (13 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME-110</td>
<td>Basic and Advanced Clean Air Car Course</td>
<td>6</td>
</tr>
<tr>
<td>AUME-111</td>
<td>Emission Controls A6/A8/L1</td>
<td>6</td>
</tr>
<tr>
<td>AUME-112</td>
<td>Bureau of Auto Repair (State of California) Update Training Course</td>
<td>1</td>
</tr>
</tbody>
</table>

Automotive Service Advisor/ 
Automotive Service Shop Management (4 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME 132</td>
<td>Automotive Service Advisor</td>
<td>2</td>
</tr>
<tr>
<td>AUME 133</td>
<td>Auto Service Shop Management</td>
<td>2</td>
</tr>
</tbody>
</table>

Engine Performance Technician (14 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME 111</td>
<td>Emission Controls, A6/A8/L1</td>
<td>6</td>
</tr>
<tr>
<td>AUME 123</td>
<td>Engine Performance II</td>
<td>4</td>
</tr>
<tr>
<td>AUME 127</td>
<td>Automotive Electrical/Electronics II</td>
<td>4</td>
</tr>
</tbody>
</table>

General Technician (17 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME 118</td>
<td>Heating/Air Conditioning Systems</td>
<td>4</td>
</tr>
<tr>
<td>AUME 124</td>
<td>Engine Theory and Repair</td>
<td>5</td>
</tr>
<tr>
<td>AUME 175</td>
<td>Automotive Transmissions &amp; Transaxels</td>
<td>4</td>
</tr>
<tr>
<td>AUME 185</td>
<td>Manual Transmissions &amp; Transaxels</td>
<td>4</td>
</tr>
</tbody>
</table>

Honda Fast Track (6 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUME 101</td>
<td>Maintenance Light Repair I</td>
<td>2</td>
</tr>
<tr>
<td>AUME 109</td>
<td>Basic Maintenance Light Repair II</td>
<td>4</td>
</tr>
</tbody>
</table>

**DEGREE**

The major for an Associate of Science (AS) degree in Automotive/Transportation Technology may be met by completing the certificate in the Automotive/Transportation program. In addition, students must complete all MSJC General Education Option A requirements for the Associate of Science degree in Automotive/Transportation Technology.

**CAREER OPPORTUNITIES**

All career opportunities listed are representative careers in each field. There are no guaranteed positions for students completing these programs. (See: www.onetonline.org)

- Automotive Service Technician and Mechanic
- Electrical and Electronics Installer and Repairer
- Express Technician
- First Line Supervisor
- Heating and Air Conditioning, Refrigeration Mechanic
- Light Repair Tech
- Manager of Mechanics
- Porter