I. APPROVAL OF ORDER OF AGENDA

II. APPROVAL OF MINUTES

December 06, 2011

III. NOTIFICATION

<table>
<thead>
<tr>
<th>Units</th>
<th>Page</th>
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<tbody>
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<td>1</td>
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</tbody>
</table>

THETR 129 Jazz 2
PEC 129 Expedited
Effective: Summer 2012

Rationale:
On 12/06/2011, this course was first adopted as THETR 181/PEC 129. However, N. Marcelino discovered during the implementation process that the course ID “THETR 181” already existed (Advanced Scenic Techniques), but was inactivated in 1989. For this reason, implementation under THETR 181 could not take place, so Instruction Office will use THETR 129 as an alternative. This notification item is for documentation/historical purposes.

IV. CONSENT

V. DISCUSSION

INACTIVATIONS
None

UPDATES (including modifications/reactivations)

ART 125 Color and 3-D Foundation Design 3 Expedited
Effective: Spring 2012 (Request overridden by Office of Instruction) Fall 2012
Rationale for Expedited Approval: Department is developing a TMC AA in Art. We wish to have all courses approved by curriculum as we move forward with an accelerated plan.
Note: Because scheduling deadlines have passed for SP 2012 and processes are in motion, it is not feasible to implement expedited changes to this course without complications for staff and students, so the Instruction Office is denying the request for expedition.
MODIFY Title, description, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment
Enrollment Restrictions: Maintaining: (P) Satisfactory completion of ART 124 with a minimum grade of C or better
Distance Education Status: None
Materials Fee Status: None
Articulation Status: Transfer to CSU and UC
General Education Status: Approved for MJC Activities
Rationale: Updating course for course compliance.
Program Impact:
1. Art A.A. Degree
2. Graphic Design Certificate of Achievement
3. Graphic Design A.S. Degree

ART 189AB

Photo Laboratory Technology

Effective: Fall 2012 Expedited

Rationale for Expedited Approval: Expedited approval is being requested to comply with changes to Title 5 and TBA hours.

MODIFY: Number, units, description, repetitions, grading, hours/face to face modalities, content, methods of instruction, typical assignments, course goal, learning goals, methods of assessment

Enrollment Restrictions: Maintaining; (A) Before enrolling in this course, students are strongly advised to satisfactorily complete ART 170 with a minimum grade of C or better

Distance Education Status: None

Materials Fee Status: None

Articulation Status: Transfer to CSU

General Education Status: Approved for MJC Activities

Rationale: Updating for course compliance.

Program Impact:
Stand Alone

FSCI 302

Fire Prevention Technology

Effective: Summer 2013

MODIFY: Content, typical assignments, textbooks, learning goals

Enrollment Restrictions: None

Distance Education Status: None

Materials Fee Status: None

Articulation Status: Does not transfer

General Education Status: Not approved for GE

Rationale: Course is being modified to adhere to scheduled curriculum review matrix, Fall 2011.

Program Impact:
1. Fire Science A.S. Degree
2. Fire Science Certificate of Achievement

FSCI 303

Fire Protection Equipment & Systems

Effective: Summer 2013

MODIFY: Title, enrollment restrictions, requisite skills, content, methods of instruction, typical assignments, textbooks, course goal, methods of assessment

Enrollment Restrictions: Requesting; (A) before enrolling in this course, students are strongly advised to satisfactorily complete FSCI 301

Distance Education Status: None

Materials Fee Status: None

Articulation Status: Does not transfer

General Education Status: Not approved for GE

Rationale: Course is being modified to adhere to scheduled curriculum review matrix, Fall 2011.

Program Impact:
1. Fire Science A.S. Degree
2. Fire Science Certificate of Achievement

FSCI 327

Fire Apparatus and Equipment

Effective: Summer 2013

MODIFY: Hours/face to face modalities, enrollment restrictions, requisite skills, content, methods of instruction, typical assignments, learning goals

Enrollment Restrictions: Requesting (LOE) Enrollment limited to student who can provide State Fire Training Certificate for Firefighter 1

Distance Education Status: None
Materials Fee Status: None
Araticulation Status: Does not transfer
General Education Status: Not approved for GE
Rationale: Course is being modified to adhere to scheduled curriculum review matrix, Fall 2011.
Program Impact:
1. Fire Science A.S. Degree
2. Fire Science Certificate of Achievement

FSCI 328  Investigation of Fires  3
Effective: Summer 2013
MODIFY: Units, hours/face to face modalities, enrollment restrictions, content, methods of assessment
Enrollment Restrictions: Removing (P) Satisfactory completion of FSCI 301 with a minimum grade of C or better; Requesting: (A) before enrolling in this course, students are strongly advised to satisfactorily complete FSCI 301
Distance Education Status: None
Materials Fee Status: None
Araticulation Status: Does not transfer
General Education Status: Not approved for GE
Rationale: Change unit value, from 4 to 3 units.
Program Impact:
1. Fire Science A.S. Degree
2. Fire Science Certificate of Achievement

HIST 112  20th Century America  3
Effective: Summer 2013
MODIFY: Description, enrollment restrictions, content, typical assignments, textbooks, course goal, learning goals, methods of assessment
Enrollment Restrictions: Requesting: (A) before enrolling in this course, students are strongly advised to successfully complete ENGL 101
Distance Education Status: Maintaining Mixed Modalities/Hybrid, Online course
Materials Fee Status: None
Araticulation Status: Transfer to CSU and UC
General Education Status: Approved for (MJC-GE: B) (CSU-GE: D6) (IGETC: 4F)
Rationale: Course due for periodic review
Program Impact:
1. CSU General Education Pattern Certificate of Achievement
2. General Studies, Emphasis in Social and Behavioral Sciences A.A. Degree
3. MJC-GE Pattern A.A. Degree Major

HUMSR 101  Introduction to Human Services  3
Effective: Summer 2012 (Request overridden by Office of Instruction) Fall 2012 Expedited!
Rationale for Expedited Approval: This introductory course is required for all students, and critical to their progression and success within the Human Service’s programs.
Note: Because scheduling deadlines have passed for SP 2012 and processes are in motion, it is not feasible to implement expedited changes to this course without complications for staff and students, so the Instruction Office is denying the request for expedition.
MODIFY: Description, enrollment restrictions, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment
Enrollment Restrictions: Requesting: (A) before enrolling in this course, students are strongly advised to successfully complete ENGL 50 with a C or better
Distance Education Status: Maintaining Online, Mixed Modalities/Hybrid course
Materials Fee Status: None
Articulation Status: Transfer to CSU
General Education Status: Approved for (MJC-GE: B); Requesting for (CSU-GE: D7)
Rationale: The course is out of compliance and must be updated.
Program Impact:
1. Chemical Dependency Counseling Certificate of Achievement
2. General Studies, Emphasis in Social and Behavioral Sciences A.A. Degree
3. Human Services Certificate of Achievement
4. Human Services A.A. Degree
5. Human Services/ Chemical Dependency Counseling A.A. Degree Major

**NURSE 266  **

Nursing Process: Mental Health  
**Effective:** Summer 2013  
**MODIFY:** Hours/face to face modalities, enrollment restrictions, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** Removing: (P) Satisfactory completion of NURSE 260, NURSE 261, NURSE 262, NURSE 263, NURSE 264, NURSE 265, or (C) concurrent enrollment in NURSK 800. Requesting: (LOE) Enrollment limited to students who have been accepted into the Associate Degree Nursing Program  
**Distance Education Status:** Maintaining Teleclass  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU  
**General Education Status:** Not approved for GE  
**Rationale:** Periodic Review to make course in compliance  
**Program Impact:**  
1. Associate Degree Nursing Program Curriculum (for RN) A.S. Degree  
2. Nursing: LVN to ADN Upgrade A.S. Degree

**PLSC 205  **

Field Crops  
**Effective:** Summer 2013  
**MODIFY:** Field trips, content, typical assignments, textbooks, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** None  
**Distance Education Status:** None  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU  
**General Education Status:** Not approved for GE  
**Rationale:** Updating for curriculum review matrix  
**Program Impact:**  
1. Crop Science A.S. Degree  
2. Soil Science A.S. Degree  
3. University Preparation, Emphasis in Agricultural Sciences A.A. Univ Prep - Area of Emphasis

**PLSC 215  **

Vegetable Crops  
**Effective:** Summer 2013  
**MODIFY:** Content, typical assignments, textbooks, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** None  
**Distance Education Status:** None  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU and UC  
**General Education Status:** Not approved for GE  
**Rationale:** Periodic review  
**Program Impact:**  
1. Crop Science A.S. Degree  
2. University Preparation, Emphasis in Agricultural Sciences A.A. Univ Prep - Area of Emphasis
PLSC 230  Fruit Science  3  
**Effective:** Summer 2013
**MODIFY** Content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment
**Enrollment Restrictions:** None
**Distance Education Status:** None
**Materials Fee Status:** None
**Articulation Status:** Transfer to CSU and UC
**General Education Status:** Approved for (MJC-GE: A)
**Rationale:** Periodic review
**Program Impact:**
1. Agricultural Science A.S. Degree
2. Fruit Science A.S. Degree
3. General Studies, Emphasis in Natural Sciences A.A. Degree
4. MJC-GE Pattern A.A. Degree Major
5. Soil Science A.S. Degree
6. University Preparation, Emphasis in Agricultural Sciences A.A. Univ Prep - Area of Emphasis

PLSC 241  Viticulture  3  
**Effective:** Summer 2013
**MODIFY** Requisite skills, content, typical assignments, course goal, learning goals, methods of assessment
**Enrollment Restrictions:** Maintaining: (A) before enrolling in this course, students are strongly advised to satisfactorily complete NR 200 and satisfactorily complete PLSC 200
**Distance Education Status:** None
**Materials Fee Status:** None
**Articulation Status:** Transfer to CSU and UC
**General Education Status:** Not approved for GE
**Rationale:** Periodic review
**Program Impact:**
1. Fruit Science A.S. Degree
2. Soil Science A.S. Degree

PLSC 250  Plant Nutrition and Fertilizer  3  
**Effective:** Summer 2013
**MODIFY** Hours/face to face modalities, content, typical assignments, textbooks, course goal, methods of assessment
**Enrollment Restrictions:** Removing: (A) before enrolling in this course, students are strongly advised to satisfactorily complete NR 200
**Distance Education Status:** None
**Materials Fee Status:** None
**Articulation Status:** Transfer to CSU
**General Education Status:** Not approved for GE
**Rationale:** Periodic review
**Program Impact:**
1. Crop Science A.S. Degree
2. Environmental Horticultural Science A.S. Degree
3. Fruit Science A.S. Degree
4. Landscape and Park Maintenance Certificate of Achievement
5. Nursery Production Certificate of Achievement
6. Soil Science A.S. Degree
7. University Preparation, Emphasis in Agricultural Sciences A.A. Univ Prep - Area of Emphasis
**PLSC 255  Plant Pest Control**

**Effective:** Summer 2013

**MODIFY:** Content, methods of instruction, typical assignments, course goal, learning goals, methods of assessment

**Enrollment Restrictions:** None

**Distance Education Status:** None

**Materials Fee Status:** None

**Articulation Status:** Transfer to CSU

**General Education Status:** Not approved for GE

**Rationale:** Periodic review

**Program Impact:**

1. Commercial Floristry Technician Certificate of Achievement
2. Crop Science A.S. Degree
3. Environmental Horticultural Science A.S. Degree
4. Fruit Science A.S. Degree
5. Landscape and Park Maintenance Certificate of Achievement
6. Nursery Production Certificate of Achievement
7. Soil Science A.S. Degree

**SOCSC 105  Women's Studies**

**Effective:** Summer 2013

**MODIFY:** Description, hours/face to face modalities, requisite skills, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment

**Enrollment Restrictions:** Maintaining: (A) before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.

**Distance Education Status:** None

**Materials Fee Status:** None

**Articulation Status:** Transfer to CSU and UC

**General Education Status:** Approved for (MJC-GE: B) (CSU-GE: D4) (IGETC: 4J); Requesting for (IGETC: 4D)

**Rationale:** This course is due for periodic review

**Program Impact:**

1. CSU General Education Pattern Certificate of Achievement
2. Ethnic Studies Skills Recognition Award
3. General Studies, Emphasis in Humanities A.A. Degree
4. General Studies, Emphasis in Social and Behavioral Sciences A.A. Degree
5. MJC-GE Pattern A.A. Degree Major

**SOCSC 109  Introduction to Education – Practicum in Tutoring**

**Effective:** Summer 2013

**MODIFY:** Units, hours/face to face modalities, content, typical assignments, textbooks, course goal, learning goals, methods of assessment

**Enrollment Restrictions:** None

**Distance Education Status:** None

**Materials Fee Status:** None

**Articulation Status:** Transfer to CSU; Requesting UC

**General Education Status:** Not approved for GE

**Rationale:** This course needs to be modified to meet criteria for articulation to transfer institutions.

**Program Impact:**

1. University Preparation, Emphasis in Liberal Studies A.A. Univ Prep - Area of Emphasis

**NEW COURSES**

None
VI. PROGRAM NOTIFICATION AGENDA

Program Learning Outcomes

Program Learning Outcomes (PLOs) for 2012-2013 Catalog (attachment)

Chancellor’s Office Approvals: PROGRAMS: CCC-501, CCC510, CCC-511, CCC-300 Application Approvals
(None)

Chancellor’s Office Denials: PROGRAMS

Chancellor’s Office Updates

CCC-510 Update: Agriculture Science/Agriculture Education

In September, L. Miller received feedback (below) on the CCC-510 Application for “AS: Agricultural Science/Agricultural Education.” Myriad changes were requested in variety of areas.

At this time, the department has not yet taken action to revise the application or respond to the requested changes. For this reason, the application, originally slated for approval and implementation in the 2012-2013 catalog, cannot take effect at this time, and the degree as published in the 2011-2012 catalog will remain.

<table>
<thead>
<tr>
<th>Review &amp; Recommended Action 2 (required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Lieu</td>
</tr>
<tr>
<td>Action Date: 09/26/2011</td>
</tr>
<tr>
<td>Action: Request Changes</td>
</tr>
<tr>
<td>There are several issues that you need to address before we can move your application forward for approval.</td>
</tr>
<tr>
<td>1) In section 2, the catalog description should mention the transfer function of the degree.</td>
</tr>
<tr>
<td>2) In section 3, you need to indicate the number of units of GE required for the AS as well as the potential number of elective units needed to reach the degree total of 60. As a transfer oriented degree, the expectation is that you will use IGETC/CSU GE for your GE pattern.</td>
</tr>
<tr>
<td>3) To be granted approval for a degree with the goal of transfer, 75% of the major coursework must be articulated as lower division preparation at three receiving institutions. Since your major comprises 30 units, 23 units must be articulated as lower division preparation. I have reviewed your ASSIST information, and none of your receiving institutions meet this 75% threshold. San Luis Obispo comes closest with 19 units, then Fresno with 18 units, and UC Davis with 15 units. Both Chico and Stanislaus articulate only 9 units. Joanne Vorhies</td>
</tr>
<tr>
<td>Action Date: 09/21/2011</td>
</tr>
<tr>
<td>Action: Request Changes</td>
</tr>
<tr>
<td>Hi Letitia,</td>
</tr>
<tr>
<td>I am returning to you per your email.</td>
</tr>
<tr>
<td>Sincerely,</td>
</tr>
</tbody>
</table>
| Joanne
VII. PROGRAM CONSENT AGENDA

VIII. PROGRAM DISCUSSION AGENDA

Program Changes that do not require Chancellor’s Office Notification/Application

MODIFY:

A.S: Crop Science  30 units
Effective Term: Summer 2012 Expedited
Modify: Agriculture Major courses and Agriculture Major Electives courses

Crop Science A.S. Degree (proposed 2012-2013)
(Note: Maintaining Catalog description and PLOs as published in 2011-2012 Catalog. Information is also included in CurricUNET, but proposal is unable to be forwarded to committee level for review.

I. Agriculture Career Core: Complete 5 Units
   AG      115  Introduction to Agriculture Education & Careers ...........................................1
   AG     349A-D  Work Experience (total of 4 units)** ................................………………4 OR
   AG     249  Agriculture Internship ..................................................................................4

II. Agriculture Science Breadth Core: Complete 9 Units
   ANSC   200  Introduction to Animal Science .................................................................3
   NR      200  Soils ...........................................................................................................4
   AGM     200  Introduction to Mechanical Technology .....................................................3
   AGEC   225  Agriculture Computer Applications ............................................................3 OR
   AGEC   210  Elements of Agriculture Economics ..........................................................3 OR
   AGEC   200  Agriculture Accounting and Analysis ..........................................................3

III. Agriculture Major Courses: Complete 9 Units
   PLSC   200  Introduction to Plant Science .................................................................3
   PLSC   205  Field Crop .................................................................................................3
   PLSC   215  Vegetable Crops .......................................................................................3
   PLSC   250  Plant Nutrition and Fertilizers .................................................................3

IV. Agriculture Major Electives: Complete 7 Units
   AG     280  Agriculture Computations ...........................................................................3
   PLSC   255  Plant Pest Control ..................................................................................3
   AGM     235  Irrigation and Drainage .................................................................3
   PLSC   260  Plant Disease Control ..............................................................................3

Any course not already taken in Area III above
MINIMUM UNITS IN MAJOR ........................................................................................................30

*Required
Fruit Science A.S. Degree (proposed 2012-2013)
(Note: Maintaining Catalog description and PLOs as published in 2011-2012 Catalog. Information is also included in CurricUNET, but proposal is unable to be forwarded to committee level for review.

I. Agriculture Career Core: Complete 5 Units
   - AG 115 Introduction to Agriculture Education & Careers ...................................................... 1
   - AG 349A-D Work Experience (total of 4 units)** ................................................................. 4 OR
   - AG 249 Agriculture Internship .............................................................................................. 4

II. Agriculture Science Breadth Core: Complete 9 Units
   - ANSC 200 Introduction to Animal Science ............................................................................. 3
   - NR 200 Soils ............................................................................................................................ 4
   - AGM 200 Introduction to Mechanical Technology ................................................................. 3 OR
   - AGEC 225 Agriculture Computer Applications ...................................................................... 3 OR
   - AGEC 210 Elements of Agriculture Economics ..................................................................... 3 OR
   - AGEC 200 Agriculture Accounting and Analysis .................................................................... 3

III. Agriculture Major Courses: Complete 9 Units
   Complete 3 Units
   - PLSC 230 Fruit Science ........................................................................................................ 3

   Complete 6 Units
   - PLSC 241 Viticulture .............................................................................................................. 3
   - PLSC 255 Plant Pest Control ................................................................................................. 3
   - PLSC 200 Introduction to Plant Science ............................................................................... 3

IV. Agriculture Major Electives: Complete 7 Units
   - PLSC 235 Plant Propagation/Production Planting & Varieties ........................................... 3
   - PLSC 250 Plant Nutrition and Fertilizers ................................................................................ 3
   - AGM 235 Irrigation and Drainage ......................................................................................... 3
   - PLSC 260 Plant Disease Control ......................................................................................... 3

Any class not already taken in area III

MINIMUM UNITS IN MAJOR ........................................................................................................... 30

** Required

CCC-501: Application for Approval - New Credit Programs
(No)

CCC-510: Substantial Changes to an Approved Credit Program
(No)

CCC-511: Non-Substantial Changes to Approved Program or Change of Active–Inactive Status

IX. UNFINISHED BUSINESS

Action Items
1. Course Substitutions for Academic Awards  M. Robles / B. Adams
2. Placing Courses within Disciplines  M. Adams/B. Adams

Informational Items

1. Equating Courses and Repetitions  L. Miller
   Postponed Indefinitely
2. Independent Study and Work Experience Course Outlines  B. Adams
   No Report

X. NEW BUSINESS

Action Items

1. Prerequisite/Corequisite/Advisory/Limitation on Enrollment Language Standardization  L. Miller
   No Report
2. Revisions to CurricUNET Course Proposal Fields and Word Report  B. Adams
3. Catalog proofing  L. Miller
   A. Programs
   B. Courses

Informational Items

STATE OF CALIFORNIA  JACK SCOTT,  CHANCELLOR
CALIFORNIA COMMUNITY COLLEGES  CHANCELLOR’S OFFICE
1102 Q STREET
SACRAMENTO, CA  95811-6549
(916) 445-8752
http://www.cccco.edu

DATE:  December 14, 2011
TO:  Chief Instructional Officers
     Association of Community and Continuing Education

FROM:  Barry A. Russell
        Vice Chancellor of Academic Affairs
SUBJECT: NONCREDIT REGULATIONS

Below, please find the link to Noncredit Regulations regarding noncredit curriculum and instruction from Chapter 6, division 6 of title 5, sections 55150 through 55155. These regulations were adopted by the Board of Governors in September 2011, were recently approved by the Department of Finance, and filed today with the Secretary of State.

These revised regulations clarify certain noncredit sections and repeal others, yet at the same time, the approval process remains the same.

- All noncredit courses and programs including High School noncredit courses must still be approved by the Chancellor’s Office.
- The delegated authority to the colleges remains the same.
- Noncredit funding is not affected.
- Noncredit funding is still based on positive attendance.
- Noncredit enhanced funding for programs that result in certificates of completion or certificates of competency remain the same.

To access the Noncredit Regulations, please click the following link: http://www.cccco.edu/ChancellorsOffice/Divisions/Legal/RegulationNotices/tabid/411/Default.aspx

Please contact Joanne Vorhies at 916.322.9048 or by email at jvorhies@cccco.edu, should you need further information.

XI. WORKGROUPS

1. Operations Workgroup
   No Report

   J. Zamora / B. Adams / L. Miller

XII. TASK FORCES

1. CurricUNET Implementation Task Force Update

   B. Adams/L. Miller

XIII. PUBLIC COMMENT
I. APPROVAL OF ORDER OF AGENDA

Hearing no objections, the order of the agenda was approved.

II. APPROVAL OF MINUTES

November 22, 2011

Hearing no objections, the minutes of November 22, 2011 were approved.

III. NOTIFICATION

IV. CONSENT

It was asked during the meeting why some inactivations appeared under the Consent agenda, and some under discussion. B. Adams explained that the intent of the separation was to make it clear that the inactivation of some courses fell under the special circumstance of the program discontinuances. The expedited inactivations appearing under Consent were courses affiliated with programs that were discontinued by Board Action in Spring of 2011, and consequently inactivated by the committee. B. Adams hopes that this distinction will make it clear in future years, when researching agendas, why so many inactivations came through after established deadlines. M. Lynch asked how difficult it would be to reactivate the courses in the future. B. Adams explained that, in the event that programs are reinstated, measures will be taken to quickly and easily reactivate courses, with the exception of course outlines that are non-compliant, which will require review by the curriculum committee prior to reactivation. R. Cranley informed the committee that articulation will need to be re-established for inactivated courses as well. E. Maki, later in the meeting, asked why these proposals did not appear in CurricUNET with requests for expedited approval. B. Adams explained that CurricUNET currently does not allow users to expedite course inactivation proposals, even though the college does need to have this feature in the system.

**FILM 150  Film Production**

**Effective:** Summer 2012 [Expedited]

**INACTIVATE**

Program Impact:
1. Film Skills Recognition Award
2. Television Production A.A. Degree

M/S/C (P. UPTON, E. MAKI) to INACTIVATE FILM 150 IN RESPONSE TO PROGRAM DISCONTINUANCES
AYES: 9
NAYS: 1
ABSTENTIONS: 1

M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of FILM 150

AYES: 9
NAYS: 1
ABSTENTIONS: 1

FILM 198  Special Topics  3
Effective: Summer 2012 Expedited
INACTIVATE

Program Impact:
Stand Alone

M/S/C (P. UPTON, E. MAKI) to INACTIVATE FILM 198 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of FILM 198.

FILM 199  Independent Study/Special Problems  1-3
Effective: Summer 2012 Expedited
INACTIVATE

Program Impact:
1. Film Skills Recognition Award

M/S/C (P. UPTON, E. MAKI) to INACTIVATE FILM 199 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of FILM 199.

JRNAL 100  Reporting and Writing for the Media  3
Effective: Summer 2012 Expedited
INACTIVATE

Program Impact:
1. Journalism A.A. Degree
2. Print Journalism Skills Recognition Award

M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL 100 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL 100.

JRNAL120 BC  Multimedia News Production Staff  2-3
Effective: Summer 2012 Expedited
INACTIVATE

Program Impact:
1. Journalism A.A. Degree
2. Print Journalism Skills Recognition Award

M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL 120BC IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL 120 BC.

JRNAL 146  Pirates' Log Photo Staff  2-3
Effective: Summer 2012 Expedited
INACTIVATE

Program Impact:
1. Photography A.A. Degree

M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL 146 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL 146.
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<th>Action</th>
<th>Program Impact</th>
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<tr>
<td>JRNAL 179</td>
<td>Photojournalism</td>
<td>3</td>
<td>Summer 2012 Expedited</td>
<td>INACTIVATE</td>
<td>1. Journalism A.A. Degree</td>
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<td>M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL/ART 179 IN RESPONSE TO PROGRAM DISCONTINUANCES</td>
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<td>M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL/ART 179.</td>
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<td>JRNAL 199</td>
<td>Independent Study/Special Problems</td>
<td>1-3</td>
<td>Summer 2012 Expedited</td>
<td>INACTIVATE</td>
<td>Stand Alone</td>
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<td>M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL 199 IN RESPONSE TO PROGRAM DISCONTINUANCES</td>
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<td>M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL 199.</td>
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<tr>
<td>JRNAL 349</td>
<td>Work Experience</td>
<td>1-4</td>
<td>Summer 2012 Expedited</td>
<td>INACTIVATE</td>
<td>Stand Alone</td>
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<td>M/S/C (P. UPTON, E. MAKI) to INACTIVATE JRNAL 349 IN RESPONSE TO PROGRAM DISCONTINUANCES</td>
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<td>M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of JRNAL 349.</td>
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<td>RATV 101</td>
<td>Basic Voice &amp; Articulation</td>
<td>3</td>
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<td>INACTIVATE</td>
<td>1. Radio Broadcasting A.A. Degree</td>
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<td>2. Radio Broadcasting Skills Recognition Award</td>
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<td>Introduction to Radio Production</td>
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<td>2. Radio Broadcasting Skills Recognition Award</td>
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<td>3. Recording Arts Skills Recognition Award</td>
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<td>4. Television Production A.A. Degree</td>
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<td>RATV 132</td>
<td>Advanced Radio Production 1</td>
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<td>2. Radio Broadcasting A.A. Degree</td>
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M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 132 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 132.

RATV 133  Advanced Radio Production 2  
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
1. Radio Broadcasting Skills Recognition Award
2. Radio Broadcasting A.A. Degree
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 133 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 133.

RATV 134  Television Studio Production  
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
2. Computer Graphics Applications A.S. Degree
3. Radio Broadcasting Skills Recognition Award
4. Recording Arts Skills Recognition Award
5. Television Production Skills Recognition Award
6. Television Production A.A. Degree
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 134 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 134.

RATV 135  Advanced Television Production 1  
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
1. Television Production Skills Recognition Award
2. Television Production A.A. Degree
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 135 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 135.

RATV 136  Advanced Television Production 2  
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
1. Television Production A.A. Degree
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 136 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 136.

RATV 137  Radio Programming & Broadcast Announcing  
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
1. Radio Broadcasting A.A. Degree
2. Radio Broadcasting Skills Recognition Award
3. Television Production A.A. Degree
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 137 IN RESPONSE TO PROGRAM DISCONTINUANCES
**RATV 138:** Writing for Radio, TV, & and New Media  
**Effective:** Summer 2012  
**INACTIVATE**  
**Program Impact:**
1. Journalism A.A. Degree  
2. Print Journalism Skills Recognition Award  
3. Radio Broadcasting A.A. Degree  
4. Radio Broadcasting Skills Recognition Award  
5. Television Production Skills Recognition Award  
6. Television Production A.A. Degree  

**M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 138 IN RESPONSE TO PROGRAM DISCONTINUANCES**  
**M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 138.**

**RATV 141:** Documentary Production  
**Effective:** Summer 2012  
**INACTIVATE**  
**Program Impact:**
1. Television Production Skills Recognition Award  
2. Television Production A.A. Degree  

**M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 141 IN RESPONSE TO PROGRAM DISCONTINUANCES**  
**M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 141.**

**RATV 142:** Light, Sound, Camera and Editing Workshop  
**Effective:** Summer 2012  
**INACTIVATE**  
**Program Impact:**
1. Film Skills Recognition Award  
2. Television Production A.A. Degree  
3. Television Production Skills Recognition Award  

**M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 142 IN RESPONSE TO PROGRAM DISCONTINUANCES**  
**M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 142.**

**RATV 143:** Non-Linear Video Editing  
**Effective:** Summer 2012  
**INACTIVATE**  
**Program Impact:**
1. Film Skills Recognition Award  
2. Television Production A.A. Degree  
3. Television Production Skills Recognition Award  

**M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 143 IN RESPONSE TO PROGRAM DISCONTINUANCES**  
**M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 143.**

**RATV 150:** Introduction to the Media Arts  
**Effective:** Summer 2012  
**INACTIVATE**  
**Program Impact:**
1. Film Skills Recognition Award  
2. General Studies, Emphasis in Humanities A.A. Degree  
3. Journalism A.A. Degree  
4. Print Journalism Skills Recognition Award
5. Radio Broadcasting Skills Recognition Award
6. Radio Broadcasting A.A. Degree
7. Television Production A.A. Degree
8. Television Production Skills Recognition Award

M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 150 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 150.

RATV 168
Music Production for Multimedia
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
Stand Alone
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 168 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 168.

RATV 172
Recording Arts 1
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
Stand Alone
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 172 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 172.

RATV 178
Recording Arts 2
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
Stand Alone
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 178 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 178.

RATV 198
Special Topics and Problems
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
Stand Alone
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 198 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 198.

RATV 199
Independent Study/Special Problems
Effective: Summer 2012 Expedited
INACTIVATE
Program Impact:
1. Film Skills Recognition Award
2. Radio Broadcasting Skills Recognition Award
3. Television Production Skills Recognition Award
M/S/C (P. UPTON, E. MAKI) to INACTIVATE RATV 199 IN RESPONSE TO PROGRAM DISCONTINUANCES
M/S/C (M. ROBLES, M. GARCIA) to EXPEDITE INACTIVATION of RATV 199.

RATV 349
Work Experience
Effective: Summer 2012
INACTIVATE
Program Impact:
2
V. DISCUSSION

INACTIVATIONS

EHS 61  Preparatory Ornamental Plant Identification  3
Effective: Summer 2013
INACTIVATE
Program Impact:
Stand Alone
M/S/U (K. ENNIS, M. LYNCH) to INACTIVATE EHS 61

PLSC 50  Preparatory Plant Science  3
Effective: Summer 2013
INACTIVATE
Program Impact:
Stand Alone
M/S/U (K. ENNIS, M. LYNCH) to INACTIVATE PLSC 50
### ART 168  History of Photography  3

**Effective:** Summer 2013  
**MODIFY:** Title, description, requisite skills, content, methods of instruction, typical assignments, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** Maintaining: (A) Before enrolling in this course, students are strongly advised to satisfactorily complete ART 170 or ART 181  
**Distance Education Status:** Requesting Online, Mixed Modalities/Hybrid course  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU and UC  
**General Education Status:** Approved for (MJC-GE: C) (CSU-GE: C1) Requesting: (IGETC: 3A)  
**Rationale:** Periodic review and revision of class title  
**Program Impact:**  
1. Art A.A. Degree  
2. CSU General Education Pattern Certificate of Achievement  
3. General Studies, Emphasis in Humanities A.A. Degree  
4. MJC-GE Pattern A.A. Degree Major  
5. Photography A.A. Degree  

M/S/U (K. ENNIS, M. LYNCH) to MODIFY ART 168  
M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for ART 168  
M/S/U (M. GARCIA, R. CRANLEY) to APPROVE DE MODALITIES for ART 168  

B. Adams informed the committee that she had overlooked to provide them information on the percentage of DE in programs for the purpose of Substantive Change, in the meeting actions grid, but that Art and Humanities degrees have been reported as having over 50% of the course requirements offered in a DE modality  

M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for ART 168

### ART 169  Survey of Asian Art  3

**Effective:** Summer 2013  
**MODIFY:** Title, description, field trip, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** None  
**Distance Education Status:** Maintaining Online, Mixed Modalities/Hybrid course  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU and UC  
**General Education Status:** Approved for (MJC-GE: C) (CSU-GE: C1) (IGETC: 3A)  
**Rationale:** This course is being modified in scope and content to meet the new C-ID descriptor.  
**Program Impact:**  
1. Art A.A. Degree  
2. Art Gallery / Museum Studies Skills Recognition Award  
3. CSU General Education Pattern Certificate of Achievement  
4. Ethnic Studies Skills Recognition Award  
5. General Studies, Emphasis in Humanities A.A. Degree  
6. MJC-GE Pattern A.A. Degree Major  

M/S/U (K. ENNIS, M. LYNCH) to MODIFY ART 169  
M/S/U (M. GARCIA, R. CRANLEY) to MAINTAIN DE MODALITIES for ART 169  
M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for ART 169

### ART 170  Basic Photography  3

**Effective:** Summer 2013  
**MODIFY:** Description, content, methods of instruction, typical assignments, textbooks, course goal, learning goals, methods of assessment  
**Enrollment Restrictions:** None  
**Distance Education Status:** None  
**Materials Fee Status:** Reducing fee from $30 to $28
Articulation Status: Transfer to CSU and UC
General Education Status: Approved for (CSU-GE: C1); Requesting (MJC-GE: C)
Rationale: Updating for course compliance and reclassify GE and transfer areas.
Program Impact:
1. Art A.A. Degree
2. CSU General Education Pattern Certificate of Achievement

Modifications to ART 170 pulled for discussion by R. Cranley who noted that the TYPICAL ASSIGNMENTS section included used of the phrase “or ???” Is that an error? A member commented that it was likely how the assignment is written, and that it should remain.
M/S/U (M. GARCIA, K. ENNIS) to MODIFY ART 170
M/S/U (L. HATCH, K. ENNIS) to REDUCE FEE for ART 170
M/S/U (R. CRANLEY, M. ROBLES) to MAINTAIN CSU-GE PLACEMENT and to PLACE ART 170 ON MJC-GE
M. Garcia asked what happened to the previous placement of ART 170 on MJC Activities. R. Cranley noted that the course was going to be removed from Activities effective 2012-13 as a result of the GE Alignment project which took place in April 2011.

EMS 380 Basic ECG Interp/Intro to Cardiac Care 3
Effective: Summer 2013
MODIFY: Field trip, requisite skills, content, methods of instruction, typical assignments, course goal, learning goals, methods of assessment
Enrollment Restrictions: Maintaining: (A) Before enrolling in this course, students are strongly advised to understand basic medical terminology
Distance Education Status: None
Materials Fee Status: None
Articulation Status: Does not transfer
General Education Status: Not approved for GE
Rationale: Course is being modified for course compliance.
Program Impact:
1. Fire Science A.S. Degree
2. Fire Science Certificate of Achievement
M/S/U (K. ENNIS, M. LYNCH) to MODIFY EMS 380
M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for EMS 380

HUMAN 105 Early Humanistic Traditions 3
Effective: Summer 2013
MODIFY: DE Modalities, content, methods of instruction, typical assignments, textbooks, course goal, methods of assessment
Enrollment Restrictions: Maintaining: (A) before enrolling in this course, students are strongly advised to have ENGL 101 eligibility
Distance Education Status: Requesting Online, Mixed Modalities/Hybrid course
Materials Fee Status: None
Articulation Status: Transfer to CSU and UC
General Education Status: Approved for (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)
Rationale: This course is up for periodic review, and is being proposed for distance education.
Program Impact:
1. Art Gallery / Museum Studies Skills Recognition Award
2. CSU General Education Pattern Certificate of Achievement
3. General Studies, Emphasis in Humanities A.A. Degree
4. MJC-GE Pattern A.A. Degree Major
M/S/U (K. ENNIS, M. LYNCH) to MODIFY HUMAN 105
M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for HUMAN 105
M/S/U (K. ENNIS, R. CRANLEY) to APPROVE DE MODALITIES for HUMAN 105
M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for HUMAN 105
HUMAN 106  Humanities in the Modern World  3  
**Effective:** Summer 2013  
**MODIFY:** Description, content, typical assignments, textbooks, course goal, methods of assessment  
**Enrollment Restrictions:** Maintaining: (A) before enrolling in this course, students are strongly advised to have ENGL 101 eligibility  
**Distance Education Status:** Maintaining Online, Mixed Modalities/Hybrid course  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU and UC  
**General Education Status:** Approved for (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)  
**Rationale:** This course is being edited for periodic review.  
**Program Impact:**  
1. Art Gallery / Museum Studies Skills Recognition Award  
2. CSU General Education Pattern Certificate of Achievement  
3. General Studies, Emphasis in Humanities A.A. Degree  
4. MJC-GE Pattern A.A. Degree Major  

**M/S/U (K. ENNIS, M. LYNCH) to MODIFY HUMAN 106**  
**M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for HUMAN 106**  
**M/S/U (M. GARCIA, R. CRANLEY) to MAINTAIN DE MODALITIES for HUMAN 106**  
**M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for HUMAN 106**  

HUMAN 140  Introduction to World Mythology  3  
**Effective:** Summer 2013  
**MODIFY:** DE Modalities, content, methods of instruction, typical assignments, textbooks, course goal, methods of assessment  
**Enrollment Restrictions:** Maintaining: (A) before enrolling in this course, students are strongly advised to have ENGL 101 eligibility  
**Distance Education Status:** Requesting Online, Mixed Modalities/Hybrid course  
**Materials Fee Status:** None  
**Articulation Status:** Transfer to CSU and UC  
**General Education Status:** Approved for (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)  
**Rationale:** This course is being edited for periodic review, and modification for distance education.  
**Program Impact:**  
1. CSU General Education Pattern Certificate of Achievement  
2. General Studies, Emphasis in Humanities A.A. Degree  
3. MJC-GE Pattern A.A. Degree Major  

**M/S/U (K. ENNIS, M. LYNCH) to MODIFY HUMAN 140**  
**M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for HUMAN 140**  
**M/S/U (M. GARCIA, R. CRANLEY) to APPROVE DE MODALITIES for HUMAN 140**  
**M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for HUMAN 140**  

OFADM 311  Business Proofreading and Editing  3  
**Effective:** Summer 2013  
**MODIFY:** Description, enrollment restrictions, requisite skills, content, textbooks, learning goals  
**Enrollment Restrictions:** Maintaining: (A) before enrolling in this course, students are strongly advised to possess keyboarding skills to keyboard assignments.  
**Distance Education Status:** Maintaining Online, Mixed Modalities/Hybrid course  
**Materials Fee Status:** None  
**Articulation Status:** Does not transfer  
**General Education Status:** Not approved for GE  
**Rationale:** Periodic Review  
**Program Impact:**  
1. Office Administration A.A. Degree  
2. Office Administration Certificate of Achievement  
3. Retail Management (WAFC) Certificate of Achievement  
4. Word Processing Certificate of Achievement
M/S/U (K. ENNIS, M. LYNCH) to MODIFY OFADM 311
M/S/U (K. ENNIS, M. GARCIA) to MAINTAIN ENROLLMENT RESTRICTIONS for OFADM 311
M/S/U (M. GARCIA, R. CRANLEY) to MAINTAIN MODALITIES for OFADM 311
M/S/U (K. ENNIS, P. UPTON) to MAINTAIN GE PLACEMENT for OFADM 311

NEW COURSES

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<td>THETR 177</td>
<td>Stage Makeup</td>
<td>3</td>
<td>Summer 2012</td>
<td>Expedited</td>
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<td>PEC 129</td>
<td>Jazz 2</td>
<td>1</td>
<td>Summer 2012</td>
<td>Expedited</td>
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Rationale for Expedited Approval:
The proposal met the submission deadlines for 2012-13 implementation, but due to technical issues with the proposal type, the Instruction Office did not see that it should be placed on the last 2012-13 agenda.

Enrollment Restrictions: Requesting: (A) Before enrolling in this course, students are strongly advised to satisfactorily complete PEC-133 or THETR 189.
Distance Education Status: None
Materials Fee Status: Requesting fee of $70
Articulation Status: Transfer to CSU, Requesting UC
Guidance/Activities Status: Requesting Activities

Rationale:
- For PEC 127/THETR 177:
  - To fill the gap in ballet offerings from beginning to intermediate level.
  - To provide growth and development opportunities in ballet.
- For THETR 174:
  - To bring compliance with the state's Transfer Model Curriculum Process.

Program Impact:
- For PEC 127/THETR 177:
  1. Theatre A.A. Degree (Elective)
  2. Physical Education A.A. Degree (Elective)
- For THETR 174:
  1. Theatre A.A. Degree (Elective)
it should be placed on the last 2012-13 agenda.

**Enrollment Restrictions:** Requesting: (A) Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 188 or PEC 126.

**Distance Education Status:** None

**Materials Fee Status:** None

**Articulation Status:** Transfer to CSU, Requesting UC

**Guidance/Activities Status:** Requesting Activities

**Rationale:** This course is a course that precedes Jazz 1 and is specific to level

**Program Impact:**
1. Theatre A.A. Degree (Elective)
2. Physical Education A.A. Degree (Elective)

**VI. PROGRAM NOTIFICATION AGENDA**

**Chancellor’s Office Approvals:** PROGRAMS: CCC-501, CCC510, CCC-511, CCC-300 Application Approvals (None)

**Chancellor’s Office Denials:** PROGRAMS (None)

**Chancellor’s Office Updates** (None)

**VII. PROGRAM CONSENT AGENDA**

**VIII. PROGRAM DISCUSSION AGENDA**

Program Changes that do not require Chancellor’s Office Notification/Application

**MODIFY:**
**AA: Physical Education**
**Effective Term:** Summer 2012 Expedited
Modify: Add PEC 127 and PEC 129 to the list of electives.

**MODIFY:**
**AA: Theatre**
**Effective Term:** Summer 2012 Expedited
Modify: Add THETR 174, THETR 177, and THETR 181 to the list of electives.
CCC-501: Application for Approval - New Credit Programs
(None)

CCC-510: Substantial Changes to an Approved Credit Program
(None)

CCC-511: Non-Substantial Changes to Approved Program or Change of Active–Inactive Status

IX. UNFINISHED BUSINESS

Action Items

1. Course Substitutions for Academic Awards M. Robles / B. Adams
   M. Robles presented a draft of a college form to be used by all divisions for Course Substitutions. The draft is a first attempt at outlining a more thorough, thoughtful process for course substitutions between students, divisions and the Evaluations office. Lively discussion ensued. The form included prompts such as requiring more than one division to endorse an inter-division course substitution, allowing no more than “30% of a program” to be substituted, requiring the signature of a faculty member, dean, and curriculum representative. Many questions arose about various elements on the form, including but not limited to the appropriateness of a second division endorsing a course, the role of the curriculum representative in a course substitution, and the definition of 30% of a program. Various reasons were provided as to why a second division would need to endorse a substitution. One example was provided by B. Adams, who saw examples of SPCOM 103 being used in substitution for SPCOM 100 or 102 for a nursing degree. The non-SPCOM faculty member had endorsed this substitution, but she, as a Speech instructor, believed it to be inappropriate. M. Garcia noted that the SPCOM course was not required in the major but for the degree, so why is this a problem. B. Adams countered, saying “all the more reason such a substitution should not be allowed since it is a GE course.” Some remarked that substitutions are a way to help move students toward academic goals when obstacles are encountered, like courses that are not being offered. It was noted that careless substitutions can undermine the quality of degrees, and can have implications for transfer students. Discussion revolved around the language stating to the effect that no more than 30% of a program should be substituted. E. Maki asked for clarification as to what is meant by 30% of a program. The intent, according to M. Robles, is to have no more than 30% of the units in the major be substituted. A question arose about the role of the curriculum representative in signing the form. Some members thought it might be excessive. B. Adams explained the discussion at the subcommittee meeting determined that this is a way for curriculum representatives to be more aware of substitutions and the reasons for them, for example, inactive courses or courses no longer being offered. Perhaps curriculum action is needed on the course requiring substitution, such as the degree is requiring a deeper review and appropriate revisions. Some members expressed concern about language and format. L. Miller offered to assist M. Robles with the design, suggesting that many problems noted by the committee may be design problems, easily fixable with “word-smithing” and design changes.

   M. Robles agreed to reflect on the committee’s concerns, incorporate suggested changes, and work with L. Miller to prepare a second draft for consideration.

Informational Items

1. Equating Courses and Repetitions L. Miller
   Postponed Indefinitely

2. Independent Study and Work Experience Course Outlines B. Adams
   No meeting has taken place with K. Walters Dunlap, so it is likely that this issue will not be addressed until Spring 2011. B. Adams has researched this topic at other schools using CurricUSEARCH, and notes that other schools seem to lack model templates as well.

X. NEW BUSINESS
Action Items

1. **Prerequisite/Corequisite/Advisory/Limitation on Enrollment Language Standardization**   L. Miller
   No Report

2. **Placing Courses within Disciplines**   M. Adams/B. Adams
   M. Adams contacted B. Sanders and asked about adding features to the system. B. Sanders explained that additional features are unlikely at this time, so M. Adams and B. Adams are exploring alternatives. M. Adams pointed the committee’s attention to the state Academic Senate “Mustard Copy” (The Course Outline of Record; A Curriculum Reference Guide) showing that, while it is not a required element on the course outline, appropriate disciplines can be conveniently recorded on the course outline. He reported that he is glad to know the MJC is doing the right thing.

Informational Items

XI. **WORKGROUPS**

1. **Operations Workgroup**   J. Zamora / B. Adams / L. Miller
   No meeting. No report.

XII. **TASK FORCES**

1. **CurricUNET Implementation Task Force Update**   B. Adams/L. Miller
   No meeting. No report.

XIII. **PUBLIC COMMENT**

J. Zamora reminded the committee of the Faculty Social from Tuesday, December 13 from 4-7 in the Faculty lounge.

*Meeting adourned: 4:00 PM*
**Agriculture: Sales, Service PROGRAM**

The student will learn step-by-step sales techniques, stage presence, self-evaluation of voice, habits, and understanding of sales career. This program will help students make decisions.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 249*</td>
<td>Agriculture Internship**</td>
<td>4</td>
</tr>
<tr>
<td>AG 285</td>
<td>Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>SPCM 102</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>AG 249</td>
<td>Agriculture Internship**</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 200</td>
<td>Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
<td>4</td>
</tr>
<tr>
<td>AGM 200</td>
<td>Introduction to Mechanical Technology</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td>SPCM 100</td>
<td>3</td>
</tr>
<tr>
<td>AG 215</td>
<td>Agricultural Marketing</td>
<td>3</td>
</tr>
<tr>
<td>AGE 200</td>
<td>Agriculture Accounting &amp; Analysis</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
<td>4</td>
</tr>
<tr>
<td>PLSC 200</td>
<td>Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>AG 349A-D</td>
<td>Work Experience (for a total of 4 units)**</td>
<td>4</td>
</tr>
<tr>
<td>AG 115</td>
<td>Introduction to Agricultural Education and Careers</td>
<td>1</td>
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<tr>
<td>ANSC 214</td>
<td>Livestock, Feeding &amp; Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 207</td>
<td>Equine Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 203</td>
<td>Sheep Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 202</td>
<td>Swine Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 201</td>
<td>Beef Cattle Science</td>
<td>3</td>
</tr>
<tr>
<td>AGE 200</td>
<td>Agriculture Accounting &amp; Analysis</td>
<td>3</td>
</tr>
<tr>
<td>AGE 210</td>
<td>Elements of Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>AGE 225</td>
<td>Agriculture Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>AGE 220</td>
<td>Agricultural Business Management</td>
<td>3</td>
</tr>
<tr>
<td>AG 285</td>
<td>Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>AGE 210</td>
<td>Elements of Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 214</td>
<td>Livestock, Feeding &amp; Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>AGE 210</td>
<td>Elements of Agricultural Economics</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>AGE 200</td>
<td>Agriculture Accounting &amp; Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**PLEASE NOTE:** To earn a Certificate of Achievement, the student must complete the following coursework. Each course is required.

**PROGRAM COMPLETE 5 UNITS**

- [AG 115](#) Introduction to Agricultural Education and Careers - 1
- [AG 249*](#) Agriculture Internship** - 4
- [PLSC 200](#) Introduction to Plant Science - 3
- [NR 200](#) Soils - 4
- [AGM 200](#) Introduction to Mechanical Technology - 3

**PROGRAM COMPLETE 9 UNITS**

- [AG 115](#) Introduction to Agricultural Education and Careers - 1
- [AG 249*](#) Agriculture Internship** - 4
- [PLSC 200](#) Introduction to Plant Science - 3
- [NR 200](#) Soils - 4
- [AGM 200](#) Introduction to Mechanical Technology - 3
- [AGE 200](#) Agriculture Accounting & Analysis - 3

**PROGRAM COMPLETE 12 UNITS**

- [AG 115](#) Introduction to Agricultural Education and Careers - 1
- [AG 249*](#) Agriculture Internship** - 4
- [PLSC 200](#) Introduction to Plant Science - 3
- [NR 200](#) Soils - 4
- [AGM 200](#) Introduction to Mechanical Technology - 3
- [AGE 200](#) Agriculture Accounting & Analysis - 3
- [AGE 210](#) Elements of Agricultural Economics - 3
- [AGE 225](#) Agriculture Computer Applications - 3
- [AGE 220](#) Agricultural Business Management - 3
- [AG 285](#) Agricultural Communications - 3
- [AGE 210](#) Elements of Agricultural Economics - 3
- [ANSC 214](#) Livestock, Feeding & Nutrition - 3
- [AGE 210](#) Elements of Agricultural Economics - 3
- [ANSC 200](#) Introduction to Animal Science - 3
- [AGE 200](#) Agriculture Accounting & Analysis - 3
- [AGE 210](#) Elements of Agricultural Economics - 3

**Animal Science**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>ANSC 214</td>
<td>Livestock, Feeding &amp; Nutrition</td>
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<tr>
<td>ANSC 201</td>
<td>Beef Cattle Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Information (staffing, etc)**

Edits to this document are derived from changes to courses and programs which were approved through the MJC curriculum process. You are encouraged to proof ALL data herein, including data that has rolled - unchanged-from the previous publication.

**PLEASE NOTE:** While pages may have been submitted to proof for revision, no edits have yet been made to Division information (staffing, etc).
Agriculture and Environmental Sciences at MJC

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

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

CERTIFICATE REQUIREMENTS

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

I. MAJOR REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 215</td>
<td>Machinery Management</td>
</tr>
<tr>
<td>AGM 221</td>
<td>Equipment Diagnosis and Repair</td>
</tr>
<tr>
<td>AGM 240</td>
<td>Truck/Tractor Power Trains</td>
</tr>
<tr>
<td>AGM 242</td>
<td>Diesel Engine Overhaul</td>
</tr>
<tr>
<td>AGM 245</td>
<td>Diesel Engine Fuel Systems and Diagnosis</td>
</tr>
<tr>
<td>AUTC 317</td>
<td>Automotive Air Conditioning</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT AWARD .......................... 18½

UNITS CHANGED FROM 18 TO 18 ½ FROM UNIT CHANGE ON AUTC 317 LSM

Educational Programs in

Agriculture & Environmental Sciences

degrees and/or certificates offered:

Advanced Heavy Equipment Technician, C
Agricultural Business, AS
Agriculture Laboratory Technician, AS, C
Agricultural Science, AS
Agriculture - Sales, Service Technician, AS, C
Animal Science, AS
Artificial Insemination Technician, C
Basic Heavy Equipment Technician, C
Commercial Floristry Technician, C
Crop Science, AS
Dairy Industry, AS
Dairy Industry Technician, C
Dairy Science, AS
Environmental Horticultural Science, AS
Food Processing, AS, C
Forestry, AS, C
Fruit Science, AS
Heavy Machinery Management, C

John Macedo, Instr. Support Tech
James Palmer, Instr. Support Tech
Lee Ridge, Instr. Support Tech
Julie Haynes, Program Specialist

SUPPORT STAFF

Gloria Wilson, Admin. Secretary
Don Borges, Director, Tech Prep
Rhonda Wolf, Admin. Technician
Andy Alderson, Agricultural Oper. Mgt.

Advanced Heavy Equipment Technician PROGRAM

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

Certificate of Achievement:
Advanced Heavy Equipment Technician

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a Certificate of Achievement in Basic Heavy Equipment Technician will be able to:

1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.
2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.
3. Select proper tools and equipment for various applications, staying within the desired financial restraints.
4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.
Agricultural Business

PROGRAM

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

A.S. Degree: **Agriculture Business**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Agriculture Business will be able to:

1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.
2. Organize and prepare reports, presentations, and other information pertaining to management procedures.
3. Describe the economic significance of California Agriculture and its relationship to the global economy.
4. Explain supply and demand as it relates to local and regional agriculture business industries.
5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.
6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.
7. Recognize world markets and describe their effect on local agriculture economies.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

### I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

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

### II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

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

### III. MAJOR REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE 200</td>
<td>3</td>
<td>Agriculture Accounting and Analysis</td>
</tr>
<tr>
<td>AGE 210</td>
<td>3</td>
<td>Elements of Agricultural Economics</td>
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<tr>
<td>AGE 220</td>
<td>3</td>
<td>Agricultural Business Management</td>
</tr>
<tr>
<td>AGE 225</td>
<td>3</td>
<td>Agriculture Computer Applications</td>
</tr>
</tbody>
</table>

### IV. ELECTIVE COURSES - COMPLETE 4 UNITS

Any 200 series Agriculture course with a laboratory.

No more than 1 unit in a 300 level Agriculture class.

**MINIMUM UNITS IN A.S. MAJOR** ................................................. 30

**Color Legend:**

**NEW/MODIFIED REQUIREMENT**

**UNCHANGED FROM 2011-2012 CATALOG**

**CHANGE FROM PROG REVISION**

**INACTIVATED**

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT** ................................ 34

**Agricultural Laboratory**

PROGRAM

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

**Certificate of Achievement: Agriculture Laboratory Technician**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a Certificate of Achievement in Agriculture Laboratory Technician will be able to:

1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.
2. Describe the basic workplace readiness skills needed to be successful in agriculture careers today.
3. Describe the importance of the agriculture industry to the local, state, and national economy.

**MAJOR REQUIREMENTS**

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

### I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

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

### II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>3</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>ANSC 200</td>
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<tr>
<td>NR 200</td>
<td>4</td>
<td>Soils</td>
</tr>
<tr>
<td>AGM 200</td>
<td>3</td>
<td>Introduction to Mechanical Technology</td>
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### III. AGRICULTURE MAJOR COURSES - COMPLETE 14 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>AG 376</td>
<td>3</td>
<td>Basic Science and Laboratory Techniques</td>
</tr>
<tr>
<td>AG 280</td>
<td>3 OR</td>
<td>Agricultural Computations</td>
</tr>
<tr>
<td>FDP 376</td>
<td>1</td>
<td>Basic Food Plant Laboratory Procedures</td>
</tr>
<tr>
<td>FDP 378</td>
<td>2</td>
<td>Food Laboratory Instruments</td>
</tr>
<tr>
<td>AG 285</td>
<td>3</td>
<td>Agricultural Communications</td>
</tr>
<tr>
<td>FDP 200</td>
<td>1</td>
<td>Basic Food Processing</td>
</tr>
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</table>

### IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course</th>
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<td>General Chemistry</td>
</tr>
<tr>
<td>CHEM 143</td>
<td>5 OR</td>
<td>Introductory College Chemistry</td>
</tr>
<tr>
<td>CHEM 144</td>
<td>4</td>
<td>Fundamentals of Organic and Biochemistry</td>
</tr>
<tr>
<td>MICRO 101</td>
<td>4</td>
<td>Microbiology</td>
</tr>
<tr>
<td>FDP 379-387</td>
<td>1</td>
<td>Select course in consultation with advisor</td>
</tr>
</tbody>
</table>
A.S. Degree: Agriculture Laboratory Technician

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Agriculture Laboratory Technician will be able to:

1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.
2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.
3. Describe the importance of the agriculture industry to the local, state, and national economy.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

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

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>3 OR</td>
<td>Introduction to Plant Science</td>
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<td>Soils</td>
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<td>Introduction to Mechanical Technology</td>
</tr>
<tr>
<td>AGEC 225</td>
<td>3 OR</td>
<td>Agriculture Computer Applications</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>3 OR</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>3</td>
<td>Agricultural Accounting and Analysis</td>
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</table>

III. AGRICULTURE MAJOR REQUIRED COURSES - COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 376</td>
<td>3,4</td>
<td>Basic Science and Laboratory Techniques</td>
</tr>
<tr>
<td>AG 280</td>
<td>3 OR</td>
<td>Agricultural Computations</td>
</tr>
<tr>
<td>EHS 280</td>
<td>3</td>
<td>Beginning Floral Design</td>
</tr>
<tr>
<td>FDP 376</td>
<td>1</td>
<td>Basic Food Plant Laboratory Procedures</td>
</tr>
<tr>
<td>FDP 378</td>
<td>2</td>
<td>Feed Laboratory Instruments</td>
</tr>
</tbody>
</table>

IV. ELECTIVE COURSES - COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<td>4</td>
<td>Microbiology</td>
</tr>
<tr>
<td>AG 285</td>
<td>3,2</td>
<td>Agricultural Communications</td>
</tr>
<tr>
<td>FDP 200</td>
<td>3</td>
<td>Basic Food Processing</td>
</tr>
<tr>
<td>FDP 379-387</td>
<td>1-2</td>
<td>Select course in consultation with advisor</td>
</tr>
</tbody>
</table>

ANY COURSE NOT TAKEN IN II. AND/OR III. ABOVE MAY BE USED TO COMPLETE N.

MINIMUM UNITS IN A.S. MAJOR .......................................................... 30

**Required

A.S. Degree: Agricultural Science

PROGRAM

DEGREE WAS PROPOSED FOR EXPEDITED SUBSTANTIAL (CCC-510) CHANGE ON 2/15/11. APPLICATION WAS SUBMITTED TO CCCCO WHICH, IN TURN, REQUESTED CHANGES TO THE APPLICATION. AG DEPT. WAS NOTIFIED OF FEEDBACK IN OCTOBER.

CHANGES HAVE NOT YET BEEN PROVIDED BY AG DEPT. APPLICATION IS STILL ON HOLD IN CCCCO INVENTORY. CHANGES, THEREFORE CANNOT BE IMPLEMENTED AS APPROVED BY COMMITTEE. THE REQUIREMENTS BELOW REFLECT THE DEGREE AS CURRENTLY APPROVED AT THE CCCCO.

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Agriculture Science will be able to:

1. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.
2. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.
3. Describe the importance of the agriculture industry to the local, state, and national economy.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

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<th>Description</th>
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</tr>
<tr>
<td>AG 349A-D</td>
<td>4 OR</td>
<td>Work Experience (total of 4 units)**</td>
</tr>
<tr>
<td>AG 249</td>
<td></td>
<td>Agriculture Internship**</td>
</tr>
</tbody>
</table>

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>3</td>
<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>3</td>
<td>Introduction to Animal Science</td>
</tr>
<tr>
<td>NR 200</td>
<td>4</td>
<td>Soils</td>
</tr>
<tr>
<td>AGM 200</td>
<td>3</td>
<td>Introduction to Mechanical Technology</td>
</tr>
<tr>
<td>AGEC 225</td>
<td>3 OR</td>
<td>Agriculture Computer Applications</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>3 OR</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>3</td>
<td>Agricultural Accounting and Analysis</td>
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III. AGRICULTURE MAJOR REQUIRED COURSES - COMPLETE 9 UNITS

<table>
<thead>
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<th>Course</th>
<th>Units</th>
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<tr>
<td>AG 285</td>
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<td>Agricultural Communications</td>
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<tr>
<td>AGM 210</td>
<td>3</td>
<td>Agricultural Accounting and Analysis</td>
</tr>
<tr>
<td>EHS 280</td>
<td>3</td>
<td>Beginning Floral Design</td>
</tr>
<tr>
<td>ANSC 201</td>
<td>3 OR</td>
<td>Beef Cattle Science</td>
</tr>
<tr>
<td>ANSC 202</td>
<td>3 OR</td>
<td>Swine Science</td>
</tr>
<tr>
<td>ANSC 203</td>
<td>3 OR</td>
<td>Sheep Science</td>
</tr>
<tr>
<td>ANSC 230</td>
<td>3 [2,3,4]</td>
<td>Poultry Science</td>
</tr>
<tr>
<td>EHS 210</td>
<td>3</td>
<td>Introduction to Environmental Horticulture</td>
</tr>
<tr>
<td>PLSC 230</td>
<td>3</td>
<td>Fruit Science</td>
</tr>
</tbody>
</table>

IV. AGRICULTURE MAJOR ELECTIVE COURSES - COMPLETE 7 UNITS

ANY CLASS NOT USED IN AREA I & II
ANY 200 LEVEL AGRICULTURE CLASS APPROVED BY ADVISOR
2 UNITS OF 300 LEVEL CLASS

MINIMUM UNITS IN A.S.MAJOR ........................................................................ 30

**Required
A.A. Degree: University Preparation, Emphasis in Agricultural Sciences (p. 169)

Agriculture: Sales, Service PROGRAM

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

Certificate of Achievement: Agriculture: Sales, Service Technician

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a Certificate of Achievement in Agriculture Sales, Service Technician will be able to:

1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.
2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.
3. Describe the economic significance of California Agriculture and its relationship to the global economy.
4. Explain supply and demand as it relates to local and regional agriculture business industries.
5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.

CERTIFICATE REQUIREMENTS

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

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

<table>
<thead>
<tr>
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<tbody>
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<td>Introduction to Agricultural Education and Careers</td>
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<tr>
<td>AG 349A-0</td>
<td>3</td>
<td>Work Experience (for a total of 4 units)**</td>
</tr>
<tr>
<td>AG 249</td>
<td>3</td>
<td>Agriculture Internship**</td>
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II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PLSC 200</td>
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<td>Introduction to Plant Science</td>
</tr>
<tr>
<td>ANSC 200</td>
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<td>NR 200</td>
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<td>Soils</td>
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<td>AGM 200</td>
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III. MAJOR REQUIRED COURSES - COMPLETE 18 UNITS

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<td>Agriculture Accounting &amp; Analysis</td>
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<tr>
<td>AGE 210</td>
<td>3</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>AGE 215</td>
<td>3</td>
<td>Agricultural Marketing</td>
</tr>
<tr>
<td>AGE 280</td>
<td>3</td>
<td>Agricultural Sales and Service</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>3</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>AG 285</td>
<td>3</td>
<td>Agricultural Communications</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ................................................. 32

**Required

A.S. Degree: Agriculture: Sales, Service

EXPECTED STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Agriculture Sales and Service will be able to:

1. Demonstrate proficiency in accounting procedures using a double-entry bookkeeping system.
2. Organize and prepare reports, presentations, and other information pertaining to managerial procedures.
3. Describe the economic significance of California Agriculture and its relationship to the global economy.
4. Explain supply and demand as it relates to local and regional agriculture business industries.
5. Demonstrate the ability to make logical business decisions based on the analysis of business trends locally, regionally, and globally.
6. Demonstrate proficiency using computers, the Internet, and other technology as they relate to agri-business.
7. Recognize world markets and describe their effect on local agriculture economies.

MAJOR REQUIREMENTS

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

<table>
<thead>
<tr>
<th>Course</th>
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<td>AG 115</td>
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<td>Introduction to Agricultural Education and Careers</td>
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<tr>
<td>AG 349A-0</td>
<td>NP</td>
<td>Work Experience (for a total of 4 units)**</td>
</tr>
<tr>
<td>AG 249*</td>
<td>NP</td>
<td>Agriculture Internship**</td>
</tr>
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</table>

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

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
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<tr>
<td>ANSC 200</td>
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<td>Introduction to Animal Science</td>
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<tr>
<td>NR 200</td>
<td>NP</td>
<td>Soils</td>
</tr>
<tr>
<td>PLSC 200</td>
<td>NP</td>
<td>Introduction to Plant Science</td>
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III. MAJOR REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>AGE 200</td>
<td>2-4</td>
<td>Agriculture Accounting &amp; Analysis</td>
</tr>
<tr>
<td>AGE 210</td>
<td>NP</td>
<td>Elements of Agricultural Economics</td>
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<tr>
<td>AGE 215</td>
<td>NP</td>
<td>Agricultural Marketing</td>
</tr>
<tr>
<td>AGE 280</td>
<td>1,2</td>
<td>Agricultural Sales and Service</td>
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IV. ELECTIVE COURSES - COMPLETE 4 UNITS

<table>
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<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 280</td>
<td>NP</td>
<td>Agricultural Computations</td>
</tr>
<tr>
<td>AG 285</td>
<td>NP</td>
<td>Agricultural Communications</td>
</tr>
<tr>
<td>AGE 220</td>
<td>2-4</td>
<td>Agricultural Business Management</td>
</tr>
<tr>
<td>AG 225</td>
<td>NP</td>
<td>Agriculture Computer Applications</td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>NP</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>NP</td>
<td>Introduction to Human Communication</td>
</tr>
</tbody>
</table>

ANY COURSE NOT TAKEN IN CORE MAJOR OR OPTIONS

MINIMUM UNITS IN A.S. MAJOR ................................................................. 30

**Required

Color Legend: CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG
A.S. Degree: Animal Science

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Animal Science will be able to:

1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.
2. Be able to employ safe work habits as prescribed in the “Injury, Illness Prevention Plan” (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.
3. Demonstrate mastery of the technical and soft skills needed for successful employment in the animal science industry and give specific examples of careers in the Animal Agriculture industry.
4. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers.
5. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.
6. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.
7. Describe basic management techniques used by the Animal Science Industry to produce wholesome, safe, environmentally responsible animal products.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS
AG 115 [1] Introduction to Agricultural Education and Careers .......................... 1
AG 349A-D [NP] Work Experience (for a total of 4 units)** ..................................... 4 OR
AG 249 [NP] Agriculture Internship** ................................................................. 4

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS
PLSC 200 [NP] Introduction to Plant Science .................................................. 3
NR 200 [NP] Soils .................................................................................. 4
AGM 200 [NP] Introduction to Mechanical Technology .................................. 3
AGEC 225 [NP] Agriculture Computer Applications ........................................ 3 OR
AGEC 210 [NP] Elements of Agriculture Economics ...................................... 3 OR
AGEC 200 [2-4] Agriculture Accounting and Analysis ..................................... 3

III. AGRICULTURE MAJOR COURSES - COMPLETE 12 UNITS
ANSC 201 [NP] Beef Cattle Science ................................................................. 3
ANSC 202 [NP] Swine Science ........................................................................ 3
ANSC 203 [NP] Sheep Science ................................................................. 3
ANSC 207 [NP] Equine Science ................................................................. 3
ANSC 210 [1] Livestock Selection & Evaluation ............................................. 3
ANSC 211 [3,4] Introduction to Meat Science ................................................. 3
ANSC 214 [NP] Livestock, Feeding & Nutrition .................................................. 3

IV. ELECTIVE COURSES - COMPLETE 4 UNITS
Any 200 level Animal Science class not listed above ................................. [NP]
Any Agriculture class not used in Area II. for breadth core ........................... [NP]
Any Animal Science class not used in Area III. for major core .................. [NP]
No more than two units of 300 level Agriculture classes ......................... [NP]

MINIMUM UNITS IN A.S. MAJOR ................................................................... 30
**Required

Certificate of Achievement: Artificial Insemination Technician

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a Certificate of Achievement in Artificial Insemination Technician will be able to:

1. Give specific examples of careers in the Animal Agriculture Industry and briefly describe the prerequisites for these careers.
2. Describe basic management techniques used by the Animal Science Industry to produce wholesome, safe, environmentally responsible animal products.
3. Utilize a variety of technologies to gain information about the Animal Agriculture Industry and apply these technologies in the analysis of specific situations.
4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.

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

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS
AG 115 [1] Introduction to Agricultural Education and Careers ............... 1
AG 349A-D [NP] Work Experience (for a total of 4 units)** .................................. 4 OR
AG 249 [NP] Agriculture Internship** ................................................................. 4

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS
AG 376 [NP] Basic Science & Lab Techniques ............................................ 3
AGEC 200 [2,3,4] Agricultural Accounting & Analysis ................................ 3
AGEC 280 [NP] Agricultural Sales & Services .................................................. 3

III. MAJOR REQUIRED COURSES - COMPLETE 13 UNITS
ANSC 201 [NP] Beef Cattle Science ................................................................. 3
ANSC 220 [NP] Dairy Industry/Dairy Science .................................................. 3
ANSC 217 [NP] Advanced Breeding & Artificial Insemination ...................... 4
ANSC 226 [NP] Dairy Breeding & Selection .................................................... 3 OR
ANSC 216 [NP] Livestock Breeding & Selection ............................................. 3

IV. ELECTIVE COURSES - COMPLETE 3 UNITS
ANSC 224 [NP] Dairy Feeds & Feeding .......................................................... 3 OR
ANSC 214 [NP] Livestock Feeding & Nutrition .................................................. 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .................................. 30
**Required

PROGRAMS IN AGRICULTURE & ENVIRONMENTAL SCIENCES

Color Legend:
CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG

ACADEMIC PROGRAMS
Basic Heavy Equipment Technician PROGRAM

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

Certificate of Achievement:
Basic Heavy Equipment Technician

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a Certificate of Achievement in Basic Heavy Equipment Technician will be able to:
1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.
2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.
3. Select proper tools and equipment for various applications, staying within the desired financial restraints.
4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.

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

I. MAJOR REQUIRED COURSES
AGM 210 [NP] Agriculture Welding ......................................................... 3
AGM 214 [NP] Equipment Service and Safety ........................................ 1
AGM 241 [NP] Diesel Engine Principles .................................................. 3
AGM 243 [NP] Heavy Machinery Electrical Systems ................................ 3
AGM 280 [NP] Mobile Machinery Hydraulic Systems ........................... 3
AGM 289 [NP] Principles of Power Mechanics/Small Engines ............... 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ............................... 16

Commercial Floristry PROGRAM

The Commercial Floristry Program prepares students to enter the field of Floral Design and Flower Shop Management. The program is designed to provide entry level skills, and further, to prepare students for advancement within this ever-changing and dynamic industry.

Certificate of Achievement:
Commercial Floristry Technician

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a Certificate of Achievement in Commercial Floristry Technician will be able to:
1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.
2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.
3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.
4. Demonstrate good work habits and inter-personal communication skills that employers demand.

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

I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS
AG 115 [1] Introduction to Agricultural Education and Careers .................. 1
AG 349A-D [1] Work Experience (total of 4 units)** ................................ 4 OR
AG 249 Agriculture Internship** ....................................................... 4

II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS
PLSC 200 [1] Introduction to Plant Science ............................................. 3
NR 200 [NP] Soils ................................................................................. 4
AGM 200 [NP] Introduction to Mechanical Technology ......................... 3 OR
AGEC 225 [NP] Agriculture Computer Applications .......................... 3 OR
AGEC 210 [1] Elements of Agriculture Economics .............................. 3 OR
AGEC 200 [2] Agriculture Accounting and Analysis ............................ 3

III. AGRICULTURE MAJOR COURSES - COMPLETE 27 UNITS
EHS 201 [1,2] Plant Identification and Usage ........................................ 3
EHS 210 [1] Introduction to Environmental Horticulture ..................... 3
EHS 212 [2,3,4] Floriculture Crop Production ........................................ 3
EHS 280 [1] Beginning Floral Design ..................................................... 3
EHS 281 [2,3,4] Advanced Floral Design .............................................. 3
EHS 282 [3,4] Floral Shop Management .................................................. 4
EHS 383 [1,2] Commercial Floristry Production .................................... 4
SPCOM 102 [1] Introduction to Human Communication ...................... 3
BUSAD 259 [NP] Small Business Management ................................... 3
PLSC 255 [NP] Plant Pest Control .................................................... 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .......................... 41
**Required
A.S. Degree: **Crop Science**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Crop Science will be able to:

1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.
2. Be able to employ safe work habits as prescribed in the “Injury, Illness Prevention” (IIPP) for the workplace employed, including but not limited to handling and storage of hazardous materials.
3. Demonstrate mastery of the technical and soft skills needed for successful employment in Crop Science (Agroonomy, Pomology, Viticulture, and enology, or olive culture.)
4. Apply the principles of ecology, soil science, and plant science to crop management problems.
5. Develop integrated pest management programs for specific crops.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>AG 115</td>
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</tbody>
</table>
| AG 349A-D | 4 or
| AG 249  | 4      |

**II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>ANSC 200</td>
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<td>NR 200</td>
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<td>AGM 200</td>
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</tr>
<tr>
<td>AGEC 225</td>
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<td>AGEC 210</td>
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<td>AGEC 200</td>
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**III. AGRICULTURE MAJOR COURSES - COMPLETE 9 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
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<tbody>
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<td>PLSC 250</td>
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<td>PLSC 255</td>
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**IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 7 UNITS**

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<th>Course</th>
<th>Units</th>
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<tr>
<td>AG 280</td>
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<td>AGM 220</td>
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<td>AGM 235</td>
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<tr>
<td>PLSC 260</td>
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</table>

**MINIMUM UNITS IN A.S. MAJOR**

30

**Expected Student Learning Outcomes**

Students who earn a Certificate of Achievement in Dairy Industry Technician will be able to:

1. Give specific examples of careers in the Dairy Industry and briefly describe the prerequisites for these careers.
2. Describe basic management techniques used by the Dairy Science industry to produce wholesome, safe, environmentally responsible dairy products.
3. Utilize a variety of technologies to gain information about the Animal Science industry and apply these technologies in the analysis of specific situations.
4. Describe the economic significance of a specific area studied in animal science and explain the social-cultural benefits provided by that industry.

**Certificate Requirements**

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

**I. AGRICULTURE CAREER COURSES - COMPLETE 2 UNITS**

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<tbody>
<tr>
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**II. AGRICULTURE BREADTH COURSES - COMPLETE 12 UNITS**

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<td>DAIND 302</td>
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<td>DAIND 311</td>
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<td>DAIND 312</td>
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**III. AGRICULTURE MAJOR ELECTIVE UNITS - COMPLETE 3 UNITS**

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<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 225</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**

17
A.S. Degree: Dairy Industry

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Dairy Industry will be able to:

1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.
2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.
4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS
AG 115 [1] Introduction to Agricultural Education and Careers ................................ 1
AG 349-A-D [NP] Work Experience .................................................................. 4 OR
AG 249 [NP] Agriculture Internship .................................................................. 4

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS
ANSC 200 [NP] Introduction to Animal Science ................................................ 3
PLSC 200 [NP] Introduction to Plant Science .................................................... 3
NR 200 [NP] Soils .............................................................................................. 4
AGM 200 [NP] Introduction to Mechanical Technology ..................................... 3
AGEC 225 [NP] Agriculture Computer Applications ........................................ 3 OR
AGEC 210 [NP] Elements of Agriculture Economics ........................................ 3 OR
AGEC 200 [2,3,4] Agriculture Accounting & Analysis ....................................... 3

III. AGRICULTURE MAJOR COURSES - COMPLETE 12 UNITS
DAIND 301 [NP] Good Manufacturing Practices and Sanitation .................... 1
DAIND 302 [NP] Fluid Stream .......................................................................... 1
DAIND 303 [NP] Industrial Safety ..................................................................... 1
DAIND 304 [NP] Sensory Evaluation & Grading ............................................... 1
DAIND 305 [NP] Food Safety/HACCP ............................................................... 1
DAIND 306 [NP] Dairy Industry Employability Skills ....................................... 1
DAIND 307 [NP] Process Equipment & Engineering ........................................ 1
DAIND 308 [NP] Laboratory Skills .................................................................. 1
DAIND 309 [NP] Dairy Products & Marketing ................................................ 1
DAIND 310 [NP] Transportation of Dairy Products .......................................... 1
DAIND 311 [NP] Cheese and Whey Processing ............................................... 1
DAIND 312 [NP] Warehousing/Dry & Refrigerated ......................................... 1

IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 4 UNITS
ANSC 222 [NP] Milk Production & Technology ............................................. 3
and any other Agriculture course approved by major advisor .......................... 1

MINIMUM UNITS IN A.S. MAJOR ..................................................................... 30

**Required

Dairy Science

A.S. Degree: Dairy Science

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Dairy Science will be able to:

1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.
2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.
4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS
AG 115 [1] Introduction to Agricultural Education and Careers ..................... 1
AG 349-A-D [NP] Work Experience (total of 4 units)** ................................ 4 OR
AG 249 [NP] Agriculture Internship** .......................................................... 4

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS
PLSC 200 [NP] Introduction to Plant Science ................................................ 3
NR 200 [NP] Soils .............................................................................................. 4
AGM 200 [NP] Introduction to Mechanical Technology ................................. 3
AGEC 225 [NP] Agriculture Computer Applications ........................................ 3 OR
AGEC 210 [NP] Elements of Agriculture Economics ........................................ 3 OR
AGEC 200 [2,3,4] Agriculture Accounting & Analysis ....................................... 3

III. AGRICULTURE MAJOR COURSES - COMPLETE 9 UNITS
ANSC 220 [NP] Dairy Industry/Dairy Science ............................................... 3
ANSC 221 [NP] Dairy Cattle Selection & Evaluation ....................................... 3
ANSC 224 [NP] Dairy Feeds & Feeding ............................................................. 3
ANSC 226 [NP] Dairy Breeding & Selection .................................................... 3

IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 7 UNITS
ANSC 215 [NP] Animal Health and Sanitation .............................................. 3
ANSC 217 [NP] Advanced Breeding & Artificial Insemination ....................... 4
ANSC 222 [NP] Milk Production & Technology ............................................. 3
ANSC 227 [NP] Advanced Dairy Cattle Selection and Evaluation .................. 3
ANSC 228 [NP] Dairy Management ............................................................... 3

ANY 200 SERIES AGRICULTURE COURSE NOT TAKEN ABOVE
1 UNIT MAXIMUM FROM ANY 300 SERIES AGRICULTURE COURSE .............. 1

MINIMUM UNITS IN A.S. MAJOR ..................................................................... 30

**Required
# Environmental Horticultural Science Program

## A.S. Degree: Environmental Horticultural Science

### Expected Student Learning Outcomes

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Environmental Horticultural Science will be able to:

1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.
2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health-related issues, and general horticulture practices necessary to be successful in the horticulture industry.
3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.
4. Demonstrate good work habits and inter-personal communication skills that employers demand.

### Major Requirements

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

#### I. Agriculture Career Courses – Complete 5 Units

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

#### II. Agriculture Science Breadth Core – Complete 6 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 200</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
<td>2</td>
</tr>
<tr>
<td>AGM 200</td>
<td>Introduction to Mechanical Technology</td>
<td>1</td>
</tr>
<tr>
<td>AGEC 225</td>
<td>Agriculture Computer Applications**</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>Elements of Agricultural Economics**</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>Agricultural Accounting and Analysis**</td>
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</table>

#### III. Agriculture Major Courses – Complete 12 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>EHS 201</td>
<td>Plant Identification and Usage 1</td>
<td>3</td>
</tr>
<tr>
<td>EHS 202</td>
<td>Plant Identification and Usage 2</td>
<td>3</td>
</tr>
<tr>
<td>EHS 210</td>
<td>Introduction to Environmental Horticulture</td>
<td>3</td>
</tr>
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</table>

#### IV. Agriculture Major Electives – Complete 7 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>AGM 212</td>
<td>Flexiculture Crop Production**</td>
<td>3</td>
</tr>
<tr>
<td>EHS 215</td>
<td>Landscape Design</td>
<td>3</td>
</tr>
<tr>
<td>EHS 220</td>
<td>Turfgrass Management</td>
<td>3</td>
</tr>
<tr>
<td>EHS 235</td>
<td>Plant Propagation/Production**</td>
<td>3</td>
</tr>
<tr>
<td>EHS 250</td>
<td>Landscape Irrigation</td>
<td>3</td>
</tr>
<tr>
<td>EHS 276</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>EHS 278</td>
<td>Landscape Construction and Installation**</td>
<td>3</td>
</tr>
<tr>
<td>EHS 280</td>
<td>Beginning Floral Design</td>
<td>3</td>
</tr>
<tr>
<td>EHS 281</td>
<td>Advanced Floral Design</td>
<td>2</td>
</tr>
<tr>
<td>NR 222</td>
<td>Native Tree &amp; Shrub Identification</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 250</td>
<td>Plant Nutrition &amp; Fertilizer</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 255</td>
<td>Plant Pest Control</td>
<td>3</td>
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<tr>
<td>PLSC 260</td>
<td>Plant Disease Control</td>
<td>3</td>
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</tbody>
</table>

**Minimum Units in A.S. Major**.................................................................30

### Color Legend:

- **OR** = Optional Courses
- **NP** = Non-Premier Courses
- **** = Required Courses

**Minimum Units in A.S. Major**.................................30

---

## Certificate of Achievement: Food Processing

### I. Agriculture Career Courses – Complete 5 Units

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

*Work experience internship must be associated with food processing industry.*

### II. Agriculture Science Courses – Complete 9 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
<td>2</td>
</tr>
<tr>
<td>AGM 200**</td>
<td>Introduction to Mechanical Technology</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 225*</td>
<td>Agriculture Computer Applications</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>Elements of Agricultural Economics**</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>Agriculture Accounting and Analysis**</td>
<td>3</td>
</tr>
</tbody>
</table>

**OR**

### III. Agriculture Major Courses – Complete 15 Units As Specified

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDP 200</td>
<td>Basic Food Processing</td>
<td>3</td>
</tr>
<tr>
<td>AG 376</td>
<td>Basic Science and Laboratory Techniques</td>
<td>3</td>
</tr>
<tr>
<td>AG 280</td>
<td>Agricultural Computations**</td>
<td>3</td>
</tr>
</tbody>
</table>

**AND Complete a minimum of 6 units from the list below**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDP 300</td>
<td>Certified Professional Food Manager Training</td>
<td>116</td>
</tr>
<tr>
<td>FDP 301</td>
<td>Certified HACCP Manager Training</td>
<td>116</td>
</tr>
<tr>
<td>FDP 342</td>
<td>Introduction to Wine Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>FDP 376</td>
<td>Basic Food Plant Laboratory Procedures</td>
<td>1</td>
</tr>
<tr>
<td>FDP 378</td>
<td>Food Laboratory Instruments</td>
<td>1</td>
</tr>
<tr>
<td>FDP 379</td>
<td>Food Products Grading</td>
<td>1</td>
</tr>
<tr>
<td>FDP 380</td>
<td>Food Products Microanalysis-A</td>
<td>1</td>
</tr>
<tr>
<td>FDP 381</td>
<td>Food Products Microanalysis-B Mold Counting</td>
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</tr>
<tr>
<td>FDP 382</td>
<td>Food Products Microanalysis-C</td>
<td>3</td>
</tr>
<tr>
<td>FDP 383</td>
<td>Enzymes in the Food Industry</td>
<td>1</td>
</tr>
<tr>
<td>FDP 386</td>
<td>Food Laboratory Chemistry Procedures</td>
<td>1</td>
</tr>
<tr>
<td>FDP 387</td>
<td>Food Processing Sanitation &amp; Cleanup</td>
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</table>

### IV. Agriculture Major Electives – Complete 6 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 285</td>
<td>Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>MICRO 101</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>ANSC 316</td>
<td>Farm Processing of Meat Animals</td>
<td>2</td>
</tr>
</tbody>
</table>

Any courses not taken in II and III. may be used to complete IV.

**Total Units for Certificate of Achievement..................35**

*Recommended
**Required
***or higher math strongly recommended
A.S. Degree: Food Processing

To earn an Associate in Science Degree in this major, the student must complete the requirements. To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

AG 115 [1] Introduction to Agricultural Education and Careers............. 1
AG 349 A-D [NP] Work Experience (total of 4 units)*... 4 OR
AG 249* [NP] Agriculture Internship**........... 4

** Work experience internship must be associated with food processing industry.

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

PLSC 200 [1,2] Introduction to Plant Science ............................................ 3 OR
ANSC 200 [1,2] Introduction to Animal Science.............................................. 3
NR 200 [1,2] Soils.............................................. 2
AG 200** [1,2] Introduction to Mechanical Technology.............................. 3 OR
AGEC 225* [1,2] Agriculture Computer Applications.................................. 3 OR
AGEC 210 [1,2] Elements of Agriculture Economics................................... 3 OR
AGEC 200 [1,2] Agriculture Accounting and Analysis......................... 2

III. AGRICULTURE MAJOR COURSES - COMPLETE 10 UNITS

FDP 200 [1] Basic Food Processing.......................................................... 3
AG 376 [2,3] Basic Science and Laboratory Techniques.............................. 3

AND Complete a minimum of 4 units from the list below

FEP 300 [NP] Certified Professional Food Manager Training .................... 1½
FDP 301 [NP] Certified HACCP Manager Training..................................... 1½
FDP 376 [NP] Basic Food Plant Laboratory Procedures............................ 1
FDP 378 [NP] Food Laboratory Instruments............................................. 1
FDP 379 [NP] Food Products Grading....................................................... 1
FDP 380 [NP] Food Products Microanalysis-A........................................... 1
FDP 381 [NP] Food Products Microanalysis-B Mold Counting...................... 2
FDP 382 [NP] Food Products Microanalysis-C............................................ 1
FDP 383 [NP] Enzymes in the Food Industry............................................. 2
FDP 386 [NP] Food Laboratory Chemistry Procedures.............................. 2
FDP 387 [NP] Food Processing Sanitation & Cleanup................................ 1
AG 349 A-D  [NP] Work Experience (total of 4 units)............... 4 OR
AG 249 [NP] Agriculture Internship**............................. 4

IV. AGRICULTURE MAJOR COURSES - COMPLETE 6 UNITS

AG 280*** [1,2] Agricultural Computations.............................................. 3
AG 285 [1,2] Agricultural Communications............................................. 3
MICRO 101 [NP] Microbiology................................................................. 4
ANSC 316 [NP] Food Processing of Meat Animals................................. 2

Any courses not taken in II. and III. may be used to complete IV.

MINIMUM UNITS IN A.S. MAJOR ................................................................ 30

*Recommended
** Required
*** or higher math strongly recommended

 Forestry PROGRAM

This program will develop entry-level job skills and knowledge in natural resources. The student will develop skills in timber cruising, log scaling, fire-fighting, forest inventory, and use of aerial photos sufficient to obtain entry level employment or to transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

Certificate of Achievement: Forestry Technician

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a Certificate of Achievement in Forestry will be able to:
1. Employ the scientific method to solve problems in the laboratory and in the natural environment.
2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.
3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.
4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.
5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.

CERTIFICATE REQUIREMENTS

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

I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS

AG 115 [1] Introduction to Agricultural Education and Careers............... 1
AG 349 A-D [NP] Work Experience ...................... (maximum completions total 4 units) 4 OR
AG 249 [NP] Agriculture Internship**....................... 4

II. AGRICULTURE SCIENCE BREADTH COURSES - COMPLETE 9 UNITS

PLSC 200 [1] Introduction to Plant Science............................................. 3
ANSC 200 [1,2] Introduction to Animal Science.............................................. 3
NR 200 [1,2] Soils.......................................................... 4
AGM 200** [1,2] Introduction to Mechanical Technology.......................... 3 OR
AGEC 225 [1,2] Agriculture Computer Applications.................................. 3 OR
AGEC 210 [1,2] Elements of Agriculture Economics................................... 3 OR
AGEC 200 [1,2] Agriculture Accounting and Analysis......................... 2

III. AGRICULTURE MAJOR COURSES - COMPLETE 15 UNITS

NR 220 [1] Introductory Forestry............................................................... 3
NR 222 [2,3] Native Tree & Shrub Identification.......................................... 3
NR 224 [3] Intro to Forestry Measurement................................................ 3

IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 6 UNITS

Any Natural Resources, Agriculture Economics
or Plant Science courses not listed or used above............................................. 3
AG 280 [NP] Agricultural Computations................................................. 3
AGM 230 [NP] Field Surveying................................................................. 3
AG 285 [NP] Agricultural Communications............................................. 3
AGM 215 [NP] Machinery Management................................................... 3
EHS 276 [NP] Landscape Maintenance.................................................... 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................35
A.S. Degree: **Forestry**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Forestry will be able to:

1. Employ the scientific method to solve problems in the laboratory and in the natural environment.
2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.
3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.
4. Apply the principles of ecology, soil science, silviculture, cartography, and facility maintenance and development to sustainable resources management problems.
5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

<table>
<thead>
<tr>
<th>I. FORESTRY CAREER COURSES - COMPLETE 5 UNITS</th>
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</thead>
<tbody>
<tr>
<td><strong>AG</strong> 115 [1] Introduction to Agricultural Education and Careers</td>
<td>1</td>
</tr>
<tr>
<td><strong>AG</strong> 349A-D [NP] Work Experience (total of 4 units)**</td>
<td>4 OR</td>
</tr>
<tr>
<td><strong>AG</strong> 249 [NP] Agriculture Internship**</td>
<td>4</td>
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<table>
<thead>
<tr>
<th>II. AGRICULTURE SCIENCE BREATH COURSES - COMPLETE 9 UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLSC</strong> 200 [1,2] Introduction to Plant Science</td>
</tr>
<tr>
<td><strong>NR</strong> 200 [1,2] Soils</td>
</tr>
<tr>
<td><strong>AGM</strong> 200 [NP] Introduction to Mechanical Technology</td>
</tr>
<tr>
<td><strong>AGEC</strong> 225 [NP] Agriculture Computer Applications</td>
</tr>
<tr>
<td><strong>AGEC</strong> 210 [NP] Elements of Agricultural Economics</td>
</tr>
<tr>
<td><strong>AG</strong> 240 [NP] Agricultural Accounting and Analysis</td>
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<table>
<thead>
<tr>
<th>III. FORESTRY MAJOR COURSES - COMPLETE 12 UNITS</th>
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</thead>
<tbody>
<tr>
<td><strong>NR</strong> 220 [1] Introduction to Forestry</td>
<td>3</td>
</tr>
<tr>
<td><strong>NR</strong> 222 [2,3] Native Tree &amp; Shrub Identification</td>
<td>3</td>
</tr>
<tr>
<td><strong>ENSC</strong> 109 [4] Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td><strong>NR</strong> 376 [2] Forestry Technology</td>
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</table>

<table>
<thead>
<tr>
<th>IV. FORESTRY MAJOR ELECTIVES - COMPLETE 4 UNITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Any Natural Resources, Agriculture Economics or Plant Science course not listed or used above</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>AG</strong> 280 [NP] Agricultural Computations</td>
<td>3</td>
</tr>
<tr>
<td><strong>AGM</strong> 230 [NP] Field Surveying</td>
<td>2</td>
</tr>
<tr>
<td><strong>AG</strong> 285 [NP] Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td><strong>AGM</strong> 215 [NP] Machinery Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**UNITS IN A.S. MAJOR ......................................................... 30**

**Required**

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**Fruit Science**

**PROGRAM**

The student will develop skills and knowledge in managing a horticultural fruit production operation. Training in this course includes practical horticultural skills such as propagation, pruning, thinning, planting, and management skills, such as supervision of labor, selecting insurance, credit, orchard planning, spray programs, and calendar of operation. The program also prepares students for transfer to a four-year college. Contact the division office in the Agriculture Building for advising assistance.

A.S. Degree: **Fruit Science**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Fruit Science will be able to:

1. Employ the scientific method to solve problems in the laboratory and in the field.
2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials.
3. Demonstrate sufficient mastery of general plant science skills for technical employment in the plant science management industry (agronomy, pomology, viticulture and enology, or oleiculture).
4. Apply the principles of ecology, soil science, and plant science to crop management problems.
5. Develop integrated pest management programs for specific crops.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

<table>
<thead>
<tr>
<th>I. AGRICULTURE CAREER COURSES - COMPLETE 5 UNITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AG</strong> 115 [1] Introduction to Agricultural Education and Careers</td>
<td>1</td>
</tr>
<tr>
<td><strong>AG</strong> 349A-D [NP] Work Experience (total of 4 units)**</td>
<td>4 OR</td>
</tr>
<tr>
<td><strong>AG</strong> 249 [NP] Agriculture Internship**</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. AGRICULTURE SCIENCE BREATH COURSES - COMPLETE 9 UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLSC</strong> 200 [1,2] Introduction to Plant Science</td>
</tr>
<tr>
<td><strong>NR</strong> 200 [1,2] Soils</td>
</tr>
<tr>
<td><strong>AGM</strong> 200 [NP] Introduction to Mechanical Technology</td>
</tr>
<tr>
<td><strong>AGEC</strong> 225 [NP] Agriculture Computer Applications</td>
</tr>
<tr>
<td><strong>AGEC</strong> 210 [NP] Elements of Agricultural Economics</td>
</tr>
<tr>
<td><strong>AG</strong> 240 [NP] Agricultural Accounting and Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. AGRICULTURE MAJOR COURSES - COMPLETE 9 UNITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANSC</strong> 200 [1,2] Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td><strong>NR</strong> 200 [3,4] Soils</td>
<td>4</td>
</tr>
<tr>
<td><strong>AGM</strong> 200 [1,2] Introduction to Mechanical Technology</td>
<td>3</td>
</tr>
<tr>
<td><strong>AGEC</strong> 225 [1,2] Agriculture Computer Applications</td>
<td>3 OR</td>
</tr>
<tr>
<td><strong>AGEC</strong> 210 [1,2] Elements of Agriculture Economics</td>
<td>3 OR</td>
</tr>
<tr>
<td><strong>AG</strong> 200 [1,2] Agriculture Accounting and Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 7 UNITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLSC</strong> 230 [1,2] Fruit Science</td>
<td></td>
</tr>
<tr>
<td><strong>Complete 3 units</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PLSC</strong> 241 [3,4] Viticulture</td>
<td>3</td>
</tr>
<tr>
<td><strong>PLSC</strong> 255 [3,4] Plant Pest Control</td>
<td>3</td>
</tr>
<tr>
<td><strong>PLSC</strong> 240 [1,2] Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td><strong>PLSC</strong> 260 [3,4] Plant Disease Control</td>
<td>3</td>
</tr>
<tr>
<td><strong>Complete 6 units</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PLSC</strong> 235 [3,4] Plant Propagation/Production Planting &amp; Varieties</td>
<td>3</td>
</tr>
<tr>
<td><strong>AG</strong> 220 [3,4] Agricultural Business Management</td>
<td>3</td>
</tr>
<tr>
<td><strong>PLSC</strong> 250 [3,4] Plant Nutrition and Fertilizers</td>
<td>3</td>
</tr>
<tr>
<td><strong>AGM</strong> 235 [3,4] Irrigation and Drainage</td>
<td>3</td>
</tr>
<tr>
<td>Any class not already taken in Area III</td>
<td></td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR ......................................................... 30**

**Required**
**Heavy Machinery Management Program**

In this program, students will develop skills and knowledge for the successful management of heavy equipment. Contact the division office in the Agriculture Building for advising assistance.

**Certificate of Achievement: Heavy Machinery Management**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a Certificate of Achievement in Heavy Machinery Management will be able to:

1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.
2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.
3. Select proper tools and equipment for various applications, staying within the desired financial restraints.
4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.

**EXPECTED STUDENT LEARNING OUTCOMES**

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

Ι. MAJOR REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
<td>Introduction to Mechanical Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AGM 215</td>
<td>Machinery Management</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>AGEC 200</td>
<td>Agriculture Accounting and Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AGEC 220</td>
<td>Agriculture Business Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AGEC 225</td>
<td>Agriculture Computer Applications</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 15**

---

**Landscape and Park Maintenance Program**

In this program, the student will develop skills in identifying, using, propagation, planting and maintenance of ornamental plants and materials used in landscaping. Contact the division office in the Agriculture Building for advising assistance.

**Certificate of Achievement: Landscape and Park Maintenance**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a Certificate of Achievement in Landscape/Park Maintenance will be able to:

1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.
2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.
3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.
4. Demonstrate good work habits and interpersonal communication skills that employers demand.

**CERTIFICATE REQUIREMENTS**

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

Ι. AGRICULTURE CAREER REQUIRED UNITS - COMPLETE 5 UNITS

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

ΙΙ. AGRICULTURE BREADTH CORE UNITS - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
<td>Introduction to Mechanical Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PLSC 200</td>
<td>Introduction to Plant Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AGEC 200</td>
<td>Agricultural Accounting and Analysis</td>
<td>3 OR</td>
<td></td>
</tr>
<tr>
<td>AGEC 225</td>
<td>Agriculture Computer Applications</td>
<td>3</td>
<td></td>
</tr>
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</table>

ΙΙΙ. AGRICULTURE MAJOR COURSES - COMPLETE 20 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>EHS 201</td>
<td>Plant Identification and Usage 1</td>
<td>3</td>
</tr>
<tr>
<td>EHS 202</td>
<td>Plant Identification and Usage 2</td>
<td>3</td>
</tr>
<tr>
<td>EHS 210</td>
<td>Introduction to Environmental Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>EHS 220</td>
<td>Turfgrass Management</td>
<td>2</td>
</tr>
<tr>
<td>EHS 226</td>
<td>Landscape Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>EHS 278</td>
<td>Landscape Construction and Installation</td>
<td>3</td>
</tr>
<tr>
<td>EHS 215</td>
<td>Landscape Design</td>
<td>3</td>
</tr>
</tbody>
</table>

ΙV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 7 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 280</td>
<td>Agricultural Computations</td>
<td>3</td>
</tr>
<tr>
<td>AG 285</td>
<td>Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>NR 222</td>
<td>Native Tree &amp; Shrub Identification</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 280</td>
<td>Agricultural Sales and Service</td>
<td>3</td>
</tr>
<tr>
<td>AGM 230</td>
<td>Field Surveying</td>
<td>2</td>
</tr>
<tr>
<td>NR 230</td>
<td>Outdoor/Forest Recreation</td>
<td>3</td>
</tr>
<tr>
<td>AGM 215</td>
<td>Machinery Management</td>
<td>3</td>
</tr>
<tr>
<td>EHS 250</td>
<td>Landscape Irrigation</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 250</td>
<td>Plant Nutrition and Fertilizer</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 255</td>
<td>Plant Pest Control</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................... 41**

**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**

**REV 01/13/2012 LSM**
Landscape Design
PROGRAM

The Landscape Design technician program prepares students to enter the field of landscape design at the entry level. The program is for students interested in learning the more pragmatic and applications aspect of landscaping and is directed to the application of established scientific and engineering knowledge and methods.

Certificate of Achievement: Landscape Design

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a Certificate of Achievement in Landscape Design will be able to:

1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.
2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health-related issues, and general horticulture practices necessary to be successful in the horticulture industry.
3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.
4. Demonstrate good work habits and inter-personal communication skills that employers demand

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

REQUIRED COURSES - COMPLETE 24 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHS 201 [1,2]</td>
<td>3</td>
</tr>
<tr>
<td>EHS 202 [1,2]</td>
<td>3</td>
</tr>
<tr>
<td>EHS 210 [1]</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 121 [1]</td>
<td>4</td>
</tr>
<tr>
<td>AG 349A-D</td>
<td>4</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 18 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 100 [1]</td>
<td>1</td>
</tr>
<tr>
<td>AG 115 [1]</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 131 [3]</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 222 [3]</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete 15 units from list below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHS 276 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>EHS 278 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 106 [NP]</td>
<td>2</td>
</tr>
<tr>
<td>ARCH 107 [NP]</td>
<td>1</td>
</tr>
<tr>
<td>NR 222 [NP]</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 152 [NP]</td>
<td>4</td>
</tr>
<tr>
<td>AGM 230 [NP]</td>
<td>2</td>
</tr>
<tr>
<td>ENGC 210 [NP]</td>
<td>1</td>
</tr>
<tr>
<td>BOT 110 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>CMPS 201 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGE 225 [NP]</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 42

Mechanized Agriculture
PROGRAM

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

Certificate of Achievement: Mechanized Agriculture Technician

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

I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 115 [1]</td>
<td>1</td>
</tr>
<tr>
<td>AG 249 [NP]</td>
<td>4</td>
</tr>
<tr>
<td>AG 349A-D [NP]</td>
<td>4 OR</td>
</tr>
</tbody>
</table>

II. REQUIRED COURSES FOR CERTIFICATE - COMPLETE 15 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>AGM 200 [1]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 210 [1,2]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 215 [1]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 241 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 262 [NP]</td>
<td>3</td>
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</tbody>
</table>

III. ELECTIVE COURSES FOR CERTIFICATE - COMPLETE 10 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>AG 280 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AG 283 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGEC 280 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 211 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 214 [NP]</td>
<td>2</td>
</tr>
<tr>
<td>AGM 225 [NP]</td>
<td>3</td>
</tr>
<tr>
<td>AGM 230 [NP]</td>
<td>2</td>
</tr>
<tr>
<td>AGM 241 [NP]</td>
<td>2</td>
</tr>
<tr>
<td>AGM 251 [2]</td>
<td>4</td>
</tr>
<tr>
<td>AGM 252 [4]</td>
<td>2</td>
</tr>
<tr>
<td>AGM 289 [NP]</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 30

A.S. Degree: Mechanized Agriculture

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Mechanized Agriculture will be able to:

1. Describe the various employment opportunities available within the mechanized agriculture field and demonstrate the minimum educational requirements for entrance into each.
2. Locate, read, and interpret appropriate plans, manuals and equipment documentation in order to fabricate and/or repair equipment effectively.
3. Select proper tools and equipment for various applications, staying within the desired financial restraints.
4. Maintain tools and equipment and demonstrate the value of preventative maintenance and proper equipment usage.
5. Demonstrate and relate the use of skills developed across various general education disciplines (ex. English, math, physics etc.) to help solve problems within the mechanized agriculture field.
I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS

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

II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>[NP] Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>[NP] Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>[NP] Soils</td>
<td>4</td>
</tr>
<tr>
<td>AGEC 225</td>
<td>[NP] Agriculture Computer Applications</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>[NP] Elements of Agricultural Economics</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>[NP] Agricultural Accounting and Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

III. AGRICULTURE MAJOR COURSES - COMPLETE 12 UNITS IN ONE OPTION

<table>
<thead>
<tr>
<th>Fabrication Option</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
<td>[1] Introduction to Mechanical Technology</td>
<td>3</td>
</tr>
<tr>
<td>AGM 210</td>
<td>[1,2] Agricultural Welding</td>
<td>3</td>
</tr>
<tr>
<td>AGM 251</td>
<td>[2] Farm Construction &amp; Materials</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Option</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 200</td>
<td>[1] Introduction to Mechanical Technology</td>
<td>3</td>
</tr>
<tr>
<td>AGM 210</td>
<td>[1,2] Agricultural Welding</td>
<td>3</td>
</tr>
<tr>
<td>AGM 251</td>
<td>[1] Machinery Management</td>
<td>3</td>
</tr>
<tr>
<td>AGM 240</td>
<td>[NP] Truck and Tractor Power Trains</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGM 262</td>
<td>[NP] Hydraulics/Pneumatics</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGM 280</td>
<td>[NP] Mobile Machinery Hydraulic System</td>
<td>3</td>
</tr>
</tbody>
</table>

IV. AGRICULTURE ELECTIVE COURSES – COMPLETE 4-5 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGM 211</td>
<td>[NP] Advanced Agricultural Welding</td>
<td>3</td>
</tr>
<tr>
<td>AGM 214</td>
<td>[NP] Equipment Service and Safety</td>
<td>2</td>
</tr>
<tr>
<td>AGM 225</td>
<td>[NP] Principles of Electrical Wiring</td>
<td>2</td>
</tr>
<tr>
<td>AGM 230</td>
<td>[NP] Field Surveying</td>
<td>2</td>
</tr>
<tr>
<td>AGM 241</td>
<td>[NP] Diesel Engine Principles</td>
<td>3</td>
</tr>
<tr>
<td>AGM 252</td>
<td>[4] Farm Construction Advanced Lab</td>
<td>2</td>
</tr>
<tr>
<td>AGM 289</td>
<td>[NP] Principles of Power Mechanics/Small Engines</td>
<td>3</td>
</tr>
</tbody>
</table>

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

**MINIMUM UNITS IN A.S. MAJOR .................................................................................................................. 30

**Required

### Nursery Production PROGRAM

In this program, the student will develop skills relating to plant identification, propagation and growing for sale, operations and maintenance of plant nursery equipment and structures. Contact the division office in the Agriculture Building for advising assistance.

#### Certificate of Achievement: Nursery Production

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a Certificate of Achievement in Nursery Production will be able to:

1. List at least five career opportunities in the horticulture industry, both locally and within the State of California and the United States.
2. Demonstrate general nursery practices of the industry, including transplanting, plant identification, identification of health related issues, and general horticulture practices necessary to be successful in the horticulture industry.
3. Identify 300 plants found in the Central Valley of California and describe the cultural characteristics, as well as growth habits, for each.
4. Demonstrate good work habits and interpersonal communication skills that employers demand.

**CERTIFICATE REQUIREMENTS**

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

I. AGRICULTURE CAREER CORE – COMPLETE 5 UNITS

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

II. AGRICULTURE SCIENCE BREADTH CORE – COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200</td>
<td>[NP] Introduction to Plant Science</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>[NP] Introduction to Animal Science</td>
<td>3</td>
</tr>
<tr>
<td>NR 200</td>
<td>[NP] Soils</td>
<td>4</td>
</tr>
<tr>
<td>AGEC 225</td>
<td>[NP] Agriculture Computer Applications</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 210</td>
<td>[1] Elements of Agriculture Economics</td>
<td>3 OR</td>
</tr>
<tr>
<td>AGEC 200</td>
<td>[2,3,4] Agriculture Accounting and Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

III. AGRICULTURE MAJOR COURSES – COMPLETE 21 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 280</td>
<td>[NP] Agricultural Computations</td>
<td>3</td>
</tr>
<tr>
<td>AG 285</td>
<td>[NP] Agricultural Communications</td>
<td>3</td>
</tr>
<tr>
<td>EHS 210</td>
<td>[1] Introduction to Environmental Horticulture</td>
<td>3</td>
</tr>
<tr>
<td>EHS 201</td>
<td>[1,2] Plant Identification and Usage 1</td>
<td>3</td>
</tr>
<tr>
<td>EHS 202</td>
<td>[1,2] Plant Identification and Usage 2</td>
<td>3</td>
</tr>
<tr>
<td>EHS 215</td>
<td>[3,4] Landscape Design</td>
<td>3</td>
</tr>
<tr>
<td>EHS 220</td>
<td>[3,4] Turfgrass Management</td>
<td>3</td>
</tr>
<tr>
<td>EHS 235</td>
<td>[3,4] Plant Propagation/Production</td>
<td>3</td>
</tr>
<tr>
<td>NR 222</td>
<td>[3,4] Native Tree &amp; Shrub Identification</td>
<td>3</td>
</tr>
</tbody>
</table>

IV. AGRICULTURE MAJOR ELECTIVES – COMPLETE 6 UNITS

Any course in Plant Science, Agriculture Economics, or Agricultural Economics | 3 |

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHS 272</td>
<td>[2,3,4] Floriculture Crop Production</td>
<td>3 OR</td>
</tr>
<tr>
<td>EHS 276</td>
<td>[1,2] Landscape Maintenance</td>
<td>3 OR</td>
</tr>
<tr>
<td>EHS 278</td>
<td>[2,3] Landscape Construction and Installation</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 250</td>
<td>[3,4] Plant Nutrition and Fertilizer</td>
<td>3</td>
</tr>
<tr>
<td>PLSC 255</td>
<td>[3,4] Plant Pest Control</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................41

**Required
In this program the student will develop skills and knowledge sufficient to enter the poultry industry or to transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

A.S. Degree: **Poultry Science**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in Poultry Science will be able to:

1. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.
2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
3. Demonstrate proficiency in agricultural sciences/engineering by employing the scientific method to solve agricultural problems.
4. Employ safe work habits as prescribed in the "Injury, Illness Prevention Plan" (IIPP) for the program area completed.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 115 [T]</td>
<td>1</td>
<td>Introduction to Agricultural Education and Careers</td>
<td>I</td>
</tr>
<tr>
<td>AG 349A-D [NP]</td>
<td>1</td>
<td>Work Experience (total of 4 units)**</td>
<td>II</td>
</tr>
<tr>
<td>AG 249 [NP]</td>
<td>4</td>
<td>Agriculture Internship**</td>
<td>II</td>
</tr>
</tbody>
</table>

II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200 [NP]</td>
<td>3</td>
<td>Introduction to Plant Science</td>
<td>III</td>
</tr>
<tr>
<td>ANSC 200 [NP]</td>
<td>3</td>
<td>Introduction to Animal Science</td>
<td>III</td>
</tr>
<tr>
<td>NR 200 [NP]</td>
<td>4</td>
<td>Soils</td>
<td>III</td>
</tr>
<tr>
<td>AGM 200 [NP]</td>
<td>3</td>
<td>Introduction to Mechanical Technology</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 225 [NP]</td>
<td>3</td>
<td>Agriculture Computer Applications</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 210 [NP]</td>
<td>3</td>
<td>Elements of Agriculture Economics</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 200 [2,3,4]</td>
<td>3</td>
<td>Agriculture Accounting and Analysis</td>
<td>III</td>
</tr>
</tbody>
</table>

III. AGRICULTURE MAJOR COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 230 [T]</td>
<td>3</td>
<td>Poultry Science</td>
<td>IV</td>
</tr>
<tr>
<td>ANSC 214 [NP]</td>
<td>3</td>
<td>Livestock Feeding and Nutrition</td>
<td>IV</td>
</tr>
<tr>
<td>ANSC 231 [NP]</td>
<td>3</td>
<td>Poultry Feeding</td>
<td>IV</td>
</tr>
<tr>
<td>ANSC 235 [2]</td>
<td>3</td>
<td>Poultry Diseases &amp; Housing</td>
<td>IV</td>
</tr>
<tr>
<td>AGEC 220 [3,4]</td>
<td>3</td>
<td>Agricultural Business Management</td>
<td>IV</td>
</tr>
<tr>
<td>ANSC 232 [NP]</td>
<td>3</td>
<td>Asian Practices</td>
<td>IV</td>
</tr>
<tr>
<td>ANSC 236 [2]</td>
<td>3</td>
<td>Poultry Breeding and Selection</td>
<td>IV</td>
</tr>
</tbody>
</table>

IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 4 UNITS

Any 200 Level Animal Science class that is not listed above. Any 200 Level Agriculture Economics class not listed above. Any agriculture class not used in area II for breadth core. No more than two units of 300 level agriculture classes.

**MINIMUM UNITS IN A.S. MAJOR ................................................................. 30

**Required

---

**Recreational Land Management**

**Certificate of Achievement: Recreational Land Management**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a Certificate of Achievement in Recreational Land Management will be able to:

1. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.
2. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management field.
3. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.
4. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.

**MAJOR REQUIREMENTS**

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

I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 115 [T]</td>
<td>1</td>
<td>Introduction to Agricultural Education and Careers</td>
<td>I</td>
</tr>
<tr>
<td>AG 349A-D [NP]</td>
<td>1</td>
<td>Work Experience (total of 4 units)**</td>
<td>II</td>
</tr>
<tr>
<td>AG 249 [NP]</td>
<td>4</td>
<td>Agriculture Internship**</td>
<td>II</td>
</tr>
</tbody>
</table>

II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLSC 200 [1,2]</td>
<td>3</td>
<td>Introduction to Plant Science</td>
<td>III</td>
</tr>
<tr>
<td>ANSC 200 [1,2]</td>
<td>3</td>
<td>Introduction to Animal Science</td>
<td>III</td>
</tr>
<tr>
<td>NR 200 [1,2]</td>
<td>3</td>
<td>Soils</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 225 [NP]</td>
<td>3</td>
<td>Agriculture Computer Applications</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 210 [NP]</td>
<td>3</td>
<td>Elements of Agriculture Economics</td>
<td>III</td>
</tr>
<tr>
<td>AGEC 200 [NP]</td>
<td>3</td>
<td>Agricultural Accounting and Analysis</td>
<td>III</td>
</tr>
</tbody>
</table>

III. MAJOR REQUIRED COURSES FOR CERTIFICATE - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR 230 [2]</td>
<td>3</td>
<td>Outdoor Forest Recreation</td>
<td>IV</td>
</tr>
<tr>
<td>NR 222 [2,3]</td>
<td>3</td>
<td>Native Tree &amp; Shrub Identification</td>
<td>IV</td>
</tr>
<tr>
<td>NR 215 [1]</td>
<td>3</td>
<td>Wildlife Production</td>
<td>IV</td>
</tr>
<tr>
<td>NR 220 [1]</td>
<td>3</td>
<td>Introductory Forestry</td>
<td>IV</td>
</tr>
<tr>
<td>NR 379 [NP]</td>
<td>1</td>
<td>Wildland Fire Control</td>
<td>IV</td>
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</tbody>
</table>

IV. ELECTIVE COURSES FOR CERTIFICATE - COMPLETE 12 UNITS

Any Natural Resources class not listed or used above.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Core/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG 280 [NP]</td>
<td>3</td>
<td>Agricultural Computations</td>
<td>V</td>
</tr>
<tr>
<td>AGM 230 [NP]</td>
<td>3</td>
<td>Field Surveying</td>
<td>V</td>
</tr>
<tr>
<td>AG 285 [NP]</td>
<td>3</td>
<td>Agricultural Communications</td>
<td>V</td>
</tr>
<tr>
<td>AGM 215 [NP]</td>
<td>2</td>
<td>Machinery Management</td>
<td>V</td>
</tr>
<tr>
<td>EHS 276 [NP]</td>
<td>3</td>
<td>Landscape Maintenance</td>
<td>V</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................... 35

**Required
A.S. Degree: Recreational Land Management

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Recreational Land Management will be able to:

5. Employ the scientific method to solve problems in the laboratory and in the natural environment.
6. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.
7. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.
8. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.
9. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER REQUIRED - COMPLETE 5 UNITS

 AG 115 [1] Introduction to Agricultural Education and Careers ............... 1
 AG 349-A [NP] Agriculture Work Experience (total of 4 units)** ............. 4 OR
 AG 249 [NP] Agriculture Internship** .............................................. 4

II. AGRICULTURE SCIENCE BREADTH REQUIRED - COMPLETE 9 UNITS

 PLSC 200 [1,2] Introduction to Plant Science .................................... 3
 NR 200 [1,2] Soils ........................................................................... 4
 AGM 200 [NP] Introduction to Mechanical Technology ................. 3 OR
 AGEC 225 [NP] Agriculture Computer Applications ................ 3 OR
 AGEC 210 [NP] Elements of Agricultural Economics ..................... 3 OR
 AGEC 200 [NP] Agricultural Accounting and Analysis ............... 3

III. AGRICULTURE MAJOR REQUIRED - COMPLETE 9 UNITS

 NR 230 [2] Outdoor/Forest Recreation .............................................. 3
 NR 222 [1,2] Native Tree & Shrub Identification ............................... 3
 NR 220 [1] Introduction to Forestry .................................................. 3

IV. AGRICULTURE MAJOR ELECTIVE - COMPLETE 7 UNITS

 Any Natural Resources course not listed or used above ......................... 3
 EHS 276 [2] Landscape Maintenance .............................................. 3
 AG 280 [NP] Agriculture Computations ......................................... 3
 AGM 230 [NP] Field Surveying ....................................................... 2
 AG 285 [NP] Agricultural Communications .................................... 3
 AGM 215 [NP] Machinery Management .......................................... 2
 HE 100 [4] Standard First Aid/CPR ............................................... 1

MINIMUM UNITS IN A.S. MAJOR .................................................................... 30

**Required

---

Soil Science PROGRAM

In this program the student will develop skills and knowledge for entry-level employment in fields of soil and water management. These fields may include conservation, analysis, survey and farm management, as well as related fields such as range management, hydrology, irrigation, drainage, fertilization, and rural and urban planning. The program will also prepare the student for transfer to a university. Contact the division office in the Agriculture Building for advising assistance.

A.S. Degree: Soil Science

EXPECTED STUDENT LEARNING OUTCOMES
In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Soil Science will be able to:

1. Employ the scientific method to solve problems in the laboratory and in the natural environment.
2. Practice safe work habits in an employment setting, including handling and storage of hazardous materials and operation of basic tools and equipment.
3. Demonstrate sufficient mastery of forestry and land management skills for technical employment in the natural resource management.
4. Apply the principles of ecology, soil science, silviculture, cartography, and facilities maintenance and development to sustainable resources management problems.
5. Develop environmental ethics as an operational philosophy for resource management, public education of natural resources, and wildlife management.

MAJOR REQUIREMENTS
To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

I. AGRICULTURE CAREER CORE - COMPLETE 5 UNITS

 AG 115 [1] Introduction to Agricultural Education and Careers ............... 1
 AG 349-A [NP] Agriculture Work Experience (total of 4 units)** ............. 4 OR
 AG 249 [NP] Agriculture Internship** .............................................. 4

II. AGRICULTURE SCIENCE BREADTH CORE - COMPLETE 9 UNITS

 PLSC 200 [1,2] Introduction to Plant Science .................................... 3
 ANSC 200 [1,2] Introduction to Animal Science ................................... 3
 AGM 200 [1,2] Introduction to Mechanical Technology .................. 3 OR
 AGEC 200 [3,4] Agriculture Accounting and Analysis ..................... OR
 AGEC 210 [3,4] Elements of Agriculture Economics ...................... OR
 AGEC 225 [3,4] Agriculture Computer Applications ...................... 3

III. AGRICULTURE MAJOR CORES - COMPLETE 9 UNITS

Complete 4 units

 NR 200 [1,2] Soils ........................................................................... 4

Complete 5 units

 AGM 235 [3,4] Irrigation & Drainage .................................................. 3
 PLSC 250 [3,4] Plant Nutrition & Fertilizers ....................................... 3
 PLSC 230 [1,2] Fruit Science ......................................................... 3
 PLSC 205 [1,2] Field Crops ............................................................... 3
 NR 220 [3,4] Introductory Forestry .................................................. 3
 PLSC 241 [3,4] Viticulture ................................................................. 3

IV. AGRICULTURE MAJOR ELECTIVES - COMPLETE 7 UNITS

 NR 222 [1,2] Native Tree & Shrub Identification ............................... 3
 NR 224 [3,4] Introduction to Forestry Measurement ......................... 3
 EHS 270 [1,2] Introduction to Environmental Horticulture ............... 3
 PLSC 255 [3,4] Plant Pest Control .................................................... 3
 AGM 230 [1,2] Field Surveying ...................................................... 2
 PLSC 260 [3,4] Plant Disease Control ............................................. 3
 AGEC 146 [3,4] Agriculture, Environment & Society ..................... 3

Any course not already taken in Area III. above

MINIMUM UNITS IN A.S. MAJOR .................................................................... 30

**Required

---
Veterinary Technician PROGRAM

In this program, the student will develop skills and knowledge for entry-level employment in the field of veterinary technology. This field may include small and exotic animal care, veterinary laboratory procedures, and surgical techniques as well as x-ray technology, specialty animals, large animals, and veterinary office procedures. This program will also assist the student in qualification for the California Registered Veterinary Technician Examination by providing the educational requirements mandated by the Veterinary Medical Board.

Certificate of Achievement: Veterinary Technician

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a Certificate of Achievement in Veterinary Technician will be able to:

1. Give specific examples of careers in the Animal Agriculture industry and briefly describe the prerequisites for these careers.
2. Describe basic management techniques used by the Animal Science industry to produce wholesome, safe, environmentally responsible animal products.
3. Utilize a variety of technologies to gain information about the Animal Agriculture industry and apply these technologies in the analysis of specific situations.
4. Describe the economic significance of a specific area studied in animal science and explain the social/cultural benefits provided by that industry.

CERTIFICATE REQUIREMENTS

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

REQUIRED COURSES – COMPLETE 17 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 250</td>
<td>Veterinary Physiology, Anatomy, and Terminology</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 251</td>
<td>Veterinary Pharmacy Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ANSC 252</td>
<td>Veterinary Equipment: Operation Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 253</td>
<td>Veterinary Laboratory Procedures</td>
<td>1</td>
</tr>
<tr>
<td>ANSC 254</td>
<td>Veterinary Medical Office Procedures</td>
<td>2</td>
</tr>
<tr>
<td>ANSC 255</td>
<td>Preparation for Surgical and Dental Assistance</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 256</td>
<td>Veterinary Assistance and Nursing: Emergency</td>
<td>1</td>
</tr>
<tr>
<td>ANSC 257</td>
<td>Veterinary Assistance &amp; Nursing: Animal Handling</td>
<td>2</td>
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</table>

ELECTIVE COURSES – (NOT REQUIRED FOR CERTIFICATE)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>ANSC 55</td>
<td>Introduction to Veterinary Technology</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 200</td>
<td>Intro to Animal Science (Large animal oriented)</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 215</td>
<td>Animal Health &amp; Sanitation (Large animal oriented)</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT AWARD .................................... 17

• NOTE: To become a registered veterinary technician, students must meet specific requirements established by the AVMA (American Veterinary Medical Association). Please contact the MJC Agriculture Division office for advising.
The Dental Assisting Program at Modesto Junior College prepares students to take the Dental Assisting National Board Examination (DANB) to become a Certified Dental Assistant (CDA) and the California State Board Examination, leading to Licensure as a Registered Dental Assistant (RDA). A Radiation Safety certificate is issued by Modesto Junior College. This program is accredited nationally by the American Dental Association Commission on Dental Accreditation, and on a state level by the Dental Board of California.

Program expenses vary for each individual. The estimated cost for the Dental Assisting Program is $1,600 per semester, which includes enrollment and materials fees, health clearance, uniforms, books, and licensure and examinations. If you would like information on Financial Aid, call (209) 575-7700. The Dental Assisting Program begins in the fall semester of each year. It is a full-time, 9-month program. An A.S. Degree in Dental Assisting is also available. For additional program information, contact Allied Health at (209) 575-6362. For academic advising contact the Counseling Center, (209) 575-6080.

Eligibility And Preparation for the Dental Assisting Program

- Admission to Modesto Junior College
- High School Graduation or Equivalent (GED or College Degree) If you have transcripts on file verifying a college degree, you do not need to have your high school transcripts on file.
- Transcripts on File in the MJC Records Office. All transcripts (high school or equivalent and other college) must be on file in the MJC Records Office, prior to the Program application deadline. The Records Office will accept hand-carried transcripts that are in a sealed envelope with a school seal.

Recommended Competencies (for Certificate of Achievement)

Complete English, math and reading assessment requirements by the program application deadline. The following competencies are recommended for success in the Dental Assisting Program.

**Writing Competency**
- ENGL 49 [NP] Basic Composition and Reading (C or better) .................... 5
- Eligibility for ENGL 50 on assessment test

**Math Competency**
- MATH 10 [NP] Introduction to Mathematics (C or better) ........................... 4
- Eligibility for Math 20 on assessment test

**Reading Competency**
- READ 184 [NP] Critical Reading (C or better) ........................................ 5
- Reading competency (85) on Accuplacer OR completion of a college degree from an accredited United States college.

Program Prerequisites

(None required)

Program Application

Applications are available online or from Allied Health:

- February 1 - April 15
- Applications will continue to be accepted until the program is full or until August 15.
Selection Process for the Program

In the event there are more qualified applicants than spaces available in the program, a weighted lottery system will be employed. An applicant’s name will be entered an extra time for:

- **ENGLISH** - Satisfactory completion of ENGL 50 or ENGL 101
- **PSYCH 101** - Satisfactory completion of PSYCH 51 or PSYCH 101
- **PREVIOUSLY QUALIFIED APPLICANT** - Each previously qualified application to the MJC Dental Assisting Program

Additional Requirements - For Accepted Applicants Only

Accepted applicants will receive a letter with a Health Clearance form and information regarding the Health Clearance and CPR Certification.

**Health Clearance**

- A medical history and physical examination completed by a physician, physician’s assistant, or nurse practitioner within 6 months prior to program start date. The physician must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.
- CPR Certification

CPR Certification

CPR certification from the American Heart Association or the Red Cross for adult, eligible for recertification, and current throughout the program. Information on providers will be included on the acceptance letter.

Scholastic Requirements

Continuation in the Dental Assisting Program is dependent upon completion of all Program required courses with a C or better. If a student receives less than a C in any required course, that course must be repeated with a C or better in order to meet certification requirements.

Policy For Denial Of Licensure/Certification

The Dental Board of California and the Dental Assisting National Board reserve the right to deny application of licensure/certification for specific causes and/or actions. Anyone considering a career in dental assisting, who might be denied licensure/certification, is advised to discuss this issue with the respective Boards prior to entering the Dental Assisting Program.

Dental Assisting Curriculum

- Students are strongly advised to complete a general computer literacy or beginning word processing course (recommended CMPSC 201 or OFADM 330) prior to entering the program.

Certificate of Achievement: Dental Assisting

**REQUIRED COURSES (NON DENTAL ASSISTING)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Minimum Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 50</td>
<td>Basic Composition and Reading</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading</td>
</tr>
<tr>
<td>PSYCH 51</td>
<td>Psychology in Everyday Life</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>General Psychology</td>
</tr>
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</table>

**REQUIRED COURSES (DENTAL ASSISTING)**

(Fall Semester)

<table>
<thead>
<tr>
<th>Course</th>
<th>Minimum Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTAST 360</td>
<td>Introduction to Dental Assisting</td>
</tr>
<tr>
<td>DTAST 361</td>
<td>Prevention of Disease Transmission</td>
</tr>
<tr>
<td>DTAST 362</td>
<td>Dental Science</td>
</tr>
<tr>
<td>DTAST 363</td>
<td>Introduction to Clinical Dentistry</td>
</tr>
<tr>
<td>DTAST 364</td>
<td>Dental Materials</td>
</tr>
<tr>
<td>DTAST 365</td>
<td>Theory of Dental Radiology</td>
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</tbody>
</table>

(Spring Semester)

<table>
<thead>
<tr>
<th>Course</th>
<th>Minimum Units</th>
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</thead>
<tbody>
<tr>
<td>DTAST 366</td>
<td>Administrative Dental Assisting</td>
</tr>
<tr>
<td>DTAST 367</td>
<td>Expanded Functions</td>
</tr>
<tr>
<td>DTAST 368</td>
<td>Advanced Dental Assisting</td>
</tr>
<tr>
<td>DTAST 369</td>
<td>Clinical Dental Radiology</td>
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<tr>
<td>DTAST 370</td>
<td>Clinical</td>
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</table>

(Summer Session)

<table>
<thead>
<tr>
<th>Course</th>
<th>Minimum Units</th>
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<tbody>
<tr>
<td>DTAST 371</td>
<td>Clinical 3</td>
</tr>
<tr>
<td>DTAST 372</td>
<td>Pit and Focus Scisatomy</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS REQUIRED FOR CERTIFICATE**

30

A.S. Degree: Dental Assisting

To earn an Associate in Science Degree, the student must complete the requirements detailed in the Career Technical Education Pathway. Consult an advisor for selection of courses.

**MINIMUM UNITS REQUIRED IN A.S. DEGREE**

60

The Health Education requirement has been waived for all Allied Health certificates and degrees.

Medical Assisting PROGRAM

The Modesto Junior College Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs

1361 Park Street
Clearwater, FL 33756
(727) 210-2350

This program prepares students to take the national certification exam offered by the AAMA to become a Certified Medical Assistant (CMA). Medical assisting students at MJC receive transferable college credit for coursework. Many of the program graduates further their education by obtaining an A.S. Degree in Medical Assisting and/or Nursing.

Program Advisory

Students are strongly advised to complete the required curriculum listed under Required Courses (Non Dental Assisting) prior to entering the Dental Assisting Program. These courses must be completed by the second semester of the Program with a grade of C or better in order to complete the Dental Assisting Program and be eligible to take the certification and licensure examination.
The estimated program cost of $2,300 includes a $26/unit enrollment fee, as well as materials, health clearance, uniform, books and certification exam expenses. Program cost at Modesto Junior College is very competitive with the cost of medical assisting programs offered by local trade schools. If you would like information on Financial Aid, call 575-7700.

The Medical Assisting Program begins in the fall semester of each year. It is a full-time, eight-month certificate program offering training in administrative (front) and clinical (back) office procedures. In addition to the reasonable cost of this program, students of Modesto Junior College have the added benefit of college credit and comprehensive student services. If you have questions about program information, call Allied Health, 575-6362 or visit the Allied Health website at www.mjc.edu/allied health and search Medical Assisting Programs. For academic advising, contact Shirley Buzzee, Medical Assisting Program Director, 575-6377.

Eligibility And Preparation for the Medical Assisting Program

- Admission To Modesto Junior College
- High School Graduation Or Equivalent (GED or College Degree)
  If you have transcripts on file verifying a college degree, you do not need to have your high school transcripts on file.
- Transcripts on File in the MJC Records Office
  All transcripts (high school or equivalent and other colleges) must be on file in the MJC Records Office, prior to the Program application deadline. The Records Office will accept hand-carried transcripts that are in a sealed envelope with a school seal.

Recommended Competencies (for Certificate of Achievement)

Complete English, math and reading assessment requirements by the program application deadline. The following competencies are recommended for success in the Medical Assisting Program.

**WRITING COMPETENCY**

<table>
<thead>
<tr>
<th>ENGL 49 [NP]</th>
<th>Basic Composition and Reading (C or better)</th>
<th>5 OR 4 OR 3 OR 2 OR 1 OR 0</th>
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</thead>
<tbody>
<tr>
<td>Eligibility for ENGL 50 on assessment test</td>
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</tbody>
</table>

**MATH COMPETENCY**

<table>
<thead>
<tr>
<th>MATH 20 [NP]</th>
<th>Pre-algebra (C or better)</th>
<th>4 OR 3 OR 2 OR 1 OR 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility for Math 70 on assessment test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**READING COMPETENCY**

<table>
<thead>
<tr>
<th>READ 184 [NP]</th>
<th>Critical Reading (C or better)</th>
<th>5 OR 4 OR 3 OR 2 OR 1 OR 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading competency (85) on Accuplacer OR completion of a college degree from an accredited United States college.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program Prerequisites

(Non required)

Program Application

Applications are available online or from Allied Health:

**February 1 - April 15**

Applications will continue to be accepted until the program is full or August 15.

Selection Process for the Program

In the event there are more qualified applicants than space available in the Program, a weighted lottery system will be employed. An applicant’s name will be entered an extra time for:

- ANATOMY AND PHYSIOLOGY - Satisfactory completion of AP 50
- PSYCHOLOGY - Satisfactory completion of PSYCH 51 OR PSYCH 101
- SPEECH COMMUNICATION - Satisfactory completion of SPCOM 100 OR SPCOM 102 OR SPCOM 130
- PREVIOUSLY QUALIFIED APPLICANT - Each previously qualified application to the MJC Medical Assisting Program.

Additional Requirements

For Accepted Applicants Only

Accepted applicants will receive a letter with a Health Clearance form and information regarding the health clearance, criminal background check, drug screen and CPR certification.

Health Clearance

- A medical history and physical examination completed by a physician, physician’s assistant, or nurse practitioner within 3 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Criminal Background Check

Some externship sites will require students to provide a criminal background check Certificate of Verification before they will be allowed to participate in the externship portion of the program.

Drug Screen

All students participating in the externship experience will be required by the externship sites to pass a drug screen.

CPR Certification

The Medical Assisting Program will offer a CPR course for all accepted candidates. Details regarding date, time, location, and cost will be included in the acceptance letter. CPR certification must be from the American Heart Association, for the Healthcare Provider (infant, child and adult), eligible for recertification; and current throughout the program.

Scholastic Requirements

In order to be eligible for the National Certification Examination, all program requirements must be completed with a grade of C or better. If a student receives less than a C in any required course, that course must be repeated with a C or better in order to be eligible to take the AAMA Certification Exam.

Policy For Denial Of Certification

Beginning with the January 2001 administration of the Certification Examination, felons are no longer eligible for the Certification Examination unless the American Association of Medical Assistants (AAMA) Certifying Board grants a waiver based on one or more of the mitigating circumstances listed in the Disciplinary Standards. Any student considering a career in medical assisting, who has a criminal record, is advised to contact the AAMA for advisement prior to entering the Medical Assisting Program.

American Association of Medical Assistants

20 N. Wacker Drive, Suite 1575
Chicago, IL 60606-2903
(800) 228-2262
www.aama.ntl.org

Program Advisory

Students are strongly advised to complete the required curriculum listed under Required Courses (Non Medical Assisting) prior to entering the Medical Assisting program. These courses must be completed by the second semester of the program with a grade of C or better in order to complete the Medical Assisting program and be eligible to take the CMA exam.
Programs in Allied Health

Certificate of Achievement: Medical Assisting

**REQUISITE COURSES (NON MEDICAL ASSISTING)**

- AP 50 Integrative Anatomy and Physiology .......................................................... 3
- PSYCH 51 Psychology in Everyday Life ........................................................................ 3 OR
- PSYCH 101 General Psychology .............................................................................. 3
- SPCOM 100 Fundamentals of Public Speaking .......................................................... 3 OR
- SPCOM 102 Introduction to Human Communication ................................................. 3 OR
- SPCOM 130 Intercultural Communication ................................................................ 3

**REQUISITE COURSES (MEDICAL ASSISTING)**

**[FALL SEMESTER]**

- MDAST 320 Introduction to Medical Assisting .......................................................... 3
- MDAST 321 Medical Terminology ............................................................................. 3
- MDAST 322 Medical Assisting Administrative Procedures .................................. 3½
- MDAST 323 Medical Assisting Clinical Procedures .................................................. 3

**[SPRING SEMESTER]**

- MDAST 324 Introduction to Diseases and Pharmacology ...................................... 4
- MDAST 325 Laboratory Procedures ....................................................................... 3
- MDAST 326 Medical Assisting Practicum ................................................................. 7

**MINIMUM UNITS REQUIRED IN CERTIFICATE................................................. 35½**

A.S. Degree: Medical Assisting

To earn an Associate in Science Degree in Medical Assisting, the student must complete the requirements detailed in the Career Technical Education Pathway*. Consult an advisor for selection of courses.

**MINIMUM UNITS REQUIRED IN A.S. DEGREE............................................. 60**

*The Health Education requirement has been waived for all Allied Health certificates and degrees.

Nursing: Associate Degree Nursing (RN)

The Associate Degree Nursing (ADN) Program at Modesto Junior College prepares students to take the National Council Licensure Examination (NCLEX-RN), leading to licensure as a Registered Nurse (RN). The program is approved by the California Board of Registered Nursing.

The ADN Program begins in the fall and spring semesters of each year. It is a four-semester program. Although most classes are scheduled during the day, clinical experiences may include both morning and evening hours and weekends. During the five-week Preceptorship in NURSE 267, students will be expected to be in the clinical area on a full-time basis. Students must be flexible and prepared to accept these assignments.

Program expenses vary for each individual. The estimated start-up costs for the first semester of the ADN program is approximately $2,500, and $2,000 per semester for the 2nd, 3rd, and 4th semesters. These costs include enrollment and materials fees, criminal background check and drug screen fees, health clearance, uniforms, books, and pre-licensure readiness examination.

If you would like information on Financial Aid, call 575-7700. If you would like more information about the program and the selection process, please enroll in NURSE 115: Introduction to Nursing Majors. If you have questions about program information, call Allied Health, 575-6362 or visit the Allied Health website at www.mjc.edu/alliedhealth and search Associate Degree Nursing (ADN) Program. If you are just beginning your preparation for the nursing program and need academic advising, contact the Counseling Center (209) 575-6080.

Eligibility and Preparation for the Associate Degree Nursing Program

- **Admission to Modesto Junior College**
- **High School Graduation or Equivalent** (GED or college degree) If you have transcripts on file verifying a college degree, you do not need to have your high school transcripts on file.
- **Official Transcripts on File in the MJC Records Office**: All transcripts (high school or equivalent and other colleges) must be on file in the Allied Health Office prior to the program application deadline, unless they are already in the MJC Records Office. We will accept hand-carried transcripts that are in a sealed envelope with a school seal.

Required Math Competency for Acceptance into the ADN Program

- Eligibility for entrance into any 100-level MATH course through MJC Assessment process OR
- Score of 3, 4, or 5 on AP Exam: Calculus AB or Calculus BC or Statistics OR
- Completion of MATH 90 or higher level MATH course, or an equivalent course from another institution with a grade of C or higher.

Program Prerequisites

The following 4 prerequisites must be completed with a grade on transcript by the application deadline. All courses must be completed with a grade of C or better. A GPA of 2.6 or higher is recommended for the core biology prerequisites (ANAT 125, PHYSO 101, and MICRO 101.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 125</td>
<td>Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>MICRO 101</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>Introductory Human Physiology</td>
<td>5</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading</td>
<td>3</td>
</tr>
</tbody>
</table>

Program Application

Applications are accepted for the ADN Program once per year. The annual application period is May 1 through May 31. Students are selected from the annual applicant pool for fall and spring semesters of that academic year. Applications are available from the Allied Health office and website during the May application period only. Applications may be submitted in person or mailed but must be received in the Allied Health office or postmarked by the application deadline. If you are interested in the MJC ADN transfer policy go to www.mjc.edu/alliedhealth.

Selection Process

Chancellor’s Model

The MJC ADN Program uses the California Community College Chancellor’s Model for selection of program applicants. Applicants must achieve a Success Index score of 75 or higher to be qualified. Randomized selection will be used to select students from the pool of applicants with a score of 75 and above. The following four values are included in the selection formula for the Chancellor’s Model:

- **College GPA**: All lower division courses with grades on transcripts are included in calculating this GPA.
- **College English GPA**: All transfers lower division English courses are included in calculating this GPA.
- **Core Biology GPA**: (ANAT 125, PHYSO 101, and MICRO 101) The highest grade for the core biology courses (ANAT 125, PHYSO 101 and MICRO 101) will be used. If a student is permitted to repeat a course for a grade improvement in which the student initially received a "C" or higher, the highest grade will be used to calculate the core biology GPA.
- **Core Biology Repeations**: The overall composite score is lowered for each unsuccessful attempt of the core biology coursework (NC, W, D, and F). Courses initially completed with "C" grades will not be counted as repetitions.
Multiple Applications

If an applicant has applied to the program more than once, as a fully qualified applicant, the applicant’s name will be added to the lottery pool an additional time for each such application. An applicant is considered “fully qualified” if all admission requirements have been met, a complete application packet has been submitted by the application deadline, a predetermined cut score has been achieved on the Test of Essential Academic Skills (TEAS) and a Success Index score of 75 has been achieved on the Chancellor’s Model scoring formula.

Additional Requirements For Conditionally Accepted Applicants Only

Conditionally accepted applicants will receive information regarding health clearance and the criminal background check, CPR certification, drug screen and the Test of Essential Academic Skills (TEAS).

Health Clearance

A medical history and physical examination completed by a physician, physician’s assistant, or nurse practitioner within 6 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Criminal Background Check

All students participating in clinical assignments are required by acute care hospitals to complete a criminal background check and be cleared by the clinical facility in order to participate in the clinical experience.

CPR Certification

The ADN program will offer a Health Care Provider CPR class for all accepted applicants.

Drug Screening

All students participating in clinical assignments will be required to pass a drug screen.

Nursing Assessment/Readiness Test

Conditionally accepted applicants will be required to take the Test of Essential Academic Skills (TEAS) which will measure skills in the content area domains of Reading, Mathematics, Science, and English Language Usage. Preparation materials are available from Assessment Technologies Institute (ATI) at www.attesting.com. Conditionally accepted applicants will be provided with detailed information on scheduling of the TEAS. A predetermined cut score must be achieved on the TEAS.

Scholastic Requirements

Continuation in the ADN Program is dependent upon completion of all courses with a C or better. If a student receives less than a C in any required course, that course must be repeated with a C or better in order to qualify for the National Council Licensure Examination (NCLEX-RN).

Denial Of Licensure

The California Board of Registered Nursing protects the public by screening applicants for licensure in order to identify potentially unsafe practitioners. Statutory authority for denial of licensure is contained in the Business and Professions Code. Any student considering a career in nursing who has a criminal record is advised to access the current regulations. Google “Board of Registered Nursing/Licensees/License Discipline and Convictions”.

Program Advisory

Students are strongly advised to complete the required curriculum listed under Required Courses (Non-Nursing) and additional associate degree requirements prior to entering the ADN Program. These courses must be completed by the 4th semester of the program with a grade of C or better in order to complete the ADN program and be eligible to take the NCLEX-RN exam. To graduate from the MJC ADN program, a student must: 1) complete all ADN program requirements; 2) complete the 4th semester of the MJC ADN program; and 3) complete 12 units “in residence” at MJC.

EXPECTED STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Nursing will be able to:

1. Provide competent nursing care based on scientific principles, the Roy Adaptation Model and the nursing process, reflecting an ethic of caring evidenced by respect for patients and families, self, colleagues, and the profession.
2. Identify a nursing diagnosis following assessment of the patient’s physical condition and behavior, an analysis of information obtained from the patient and others, including members of the health care team.
3. Formulate a care plan, in collaboration with the patient, that ensures direct and indirect nursing care services that provide for the following patient needs: safety, comfort, hygiene, protection, disease prevention, and restorative measures.
4. As provider and manager of care, establish priorities, perform the skills required to carry out nursing interventions, explain the plan of care to the patient and family, and teach the patient and family how to care for identified health problems and needs.
5. Manage and prioritize care for groups of patients, delegate tasks to subordinates based on the legal scope of practice of the subordinates and on the preparation and competence needed for the tasks to be delegated, and effectively supervise the nursing care provided by subordinates.
6. Evaluate the effectiveness of the care plan through observation of the patient’s condition and behavior, signs and symptoms of illness, reactions to treatment, and thorough communication with the patient and the health care team, and modify the plan as needed.
7. Advocate for the rights of patients by initiating actions to improve health care, facilitate changes in decisions or activities that conflict with patients’ self-determination, and provide patients the opportunity to make informed decisions about their health care.
8. Recognize that each person is a unique individual with biological, psychological, social, and spiritual needs; understand how a person’s self-concept, role function, and interdependence are affected by the values, attitudes, life experiences, culture, ethnicity, and support systems of each person.

Associate Degree Nursing Program

Curriculum (for RN)

<table>
<thead>
<tr>
<th>REQUIRED COURSES (NON-NURSING)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 101</td>
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<tr>
<td>ANTHR 102</td>
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<tr>
<td>SOCIO 101</td>
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<tr>
<td>SOCIO 125</td>
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<td>SOCIO 150</td>
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<td>SOCIO 154</td>
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<td>SOCIO 156</td>
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<tr>
<td>SPCOM 100</td>
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<tr>
<td>SPCOM 102</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>REQUIRED COURSES (NURSING)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE 260</td>
</tr>
<tr>
<td>NURSE 261</td>
</tr>
<tr>
<td>NURSE 262</td>
</tr>
<tr>
<td>NURSE 263</td>
</tr>
<tr>
<td>NURSE 264</td>
</tr>
</tbody>
</table>

[FIRST SEMESTER]

[SECOND SEMESTER]
LVN to ADN Eligibility And Preparation for the LVN to ADN Advanced Placement Pathway

- Admission To Modesto Junior College
- High School Graduation Or Equivalent (GED or College Degree)
  If you have transcripts on file verifying a college degree, you do not need to have your high school transcripts on file.

Pathway Application

Applications are accepted for the LVN to ADN Advanced Placement Pathway twice per year. The biannual application periods are May 1 through May 31 and September 1 through September 30. Students are selected from the applicant pools for fall and spring semesters of the academic year. Applications are available from the Allied Health office and website during the application periods only. Applications may be submitted in person or mailed but must be received in the Allied Health office or postmarked by the application deadline. If you are interested in the MJC ADN transfer policy go to www.mjc.edu/alliedhealth.

Selection Process

LVN to ADN Advanced Placement Pathway applicants are selected on a space-available basis. Priority is given to applicants who have completed pathway prerequisites with grades on transcript at time of application.

Chancellor's Model

The MJC LVN to ADN Advanced Placement Pathway uses the California Community College Chancellor’s Model for selection of pathway applicants. Applicants must achieve a Success Index score of 70 or higher to be qualified. Randomized selection will be used to select students from the pool of applicants with a score of 70 and above. The following four values are included in the selection formula for the Chancellor’s Model:

- College GPA: All lower division courses with grades on transcripts are included in calculating this GPA.
- College English GPA: All transferable lower division English courses are included in calculating this GPA.
- Core Biology GPA: (ANAT 125, PHYSO 101, MICRO 101)
Multiple Applications

If an applicant has applied to the LVN to ADN Advanced Placement Pathway more than once, as a fully qualified applicant, the applicant's name will be added to the lottery pool an additional time for each such application. An applicant is considered "fully qualified" if all admission requirements have been met, a complete application packet has been submitted by the application deadline, a predetermined cut score has been achieved on the Test of Essential Academic Skills (TEAS) and a Success Index score of 70 has been achieved on the Chancellor's Model scoring formula.

Additional Requirements

for Conditionally Accepted Applicants only

Conditionally accepted applicants will receive information regarding health clearance and the criminal background check, CPR certification, drug screen and the Test of Essential Academic Skills (TEAS).

Health Clearance

- A medical history and physical examination completed by a physician, physician's assistant, or nurse practitioner within 6 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Criminal Background Check

All students participating in clinical assignments are required by acute care hospitals to complete a criminal background check and be cleared by the clinical facility in order to participate in the clinical experience.

CPR Certification

The ADN Program will offer a Health Care Provider CPR class for all accepted applicants.

Drug Screening

All students participating in clinical assignments will be required to pass a drug screen.

Nursing Assessment/Readiness Test

Conditionally accepted applicants will be required to take the Test of Essential Academic Skills (TEAS) which will measure skills in the content area domains of Reading, Mathematics, Science, and English and Language Usage. Preparation materials are available from Assessment Technologies Institute (ATI) at www.attesting.com. Conditionally accepted pathway applicants will be provided with detailed information on scheduling of the TEAS. A predetermined cut score must be achieved on the TEAS.

Written And Skills Proficiency Testing

In selected cases, both written and skills proficiency testing may be required.

Scholastic Requirements

Continuation in the LVN to ADN Advanced Placement Pathway is dependent upon completion of all courses with a C grade or better. If a student receives less than a C in any required course, that course must be repeated with a C or better in order to qualify for the National Council Licensure Examination (NCLEX-RN).

Denial of Licensure

The California Board of Registered Nursing protects the public by screening applicants for licensure in order to identify potentially unsafe practitioners. Statutory authority for denial of licensure is contained in the Business and Professions Code. Any student considering a career in nursing who has a criminal record is advised to access the current regulations through Google. Board of Registered Nursing/Licensure/Discipline and Convictions.

Program Advisory

Students are strongly advised to complete the required curriculum listed under Additional Associate Degree Requirements prior to entering the LVN to ADN Advanced Placement Pathway. These courses must be completed by the 4th semester of the Program with a grade of C or better in order to complete the LVN to ADN Advanced Placement Pathway and be eligible to take the NCLEX-RN exam. To graduate from the MJC ADN program, a student must: 1) complete all ADN program requirements; 2) complete the 4th semester of the MJC ADN program, and 3) complete 12 units “in residence” at MJC.

A.S. Degree: Nursing/LVN to ADN Advanced Placement Pathway

- To earn an Associate in Science Degree in Nursing the student must complete the requirements detailed in the Career Technical Pathway* (p. 67) or the University Preparation Pathway* (p. 65) in addition to the Nursing/LVN to ADN Advanced Placement Pathway coursework. Consult with an advisor for selection of courses.
*The Health Education requirement has been waived for all Allied Health certificates and degrees.

- NURSE 115: Introduction for Nursing Majors, no longer meets the Guidance requirement, but is recommended for success. To graduate from the MJC ADN program, a student must: 1) complete all LVN to ADN Advanced Placement Pathway requirements; 2) complete the 4th semester of the MJC ADN program; and 3) complete 12 units “in residence” at MJC.

REQUIRED COURSES (NURSING)

[First Semester]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE 265</td>
<td>Nursing Process: Medical-Surgical</td>
<td>6</td>
</tr>
<tr>
<td>NURSE 266</td>
<td>Nursing Process: Mental Health</td>
<td>4</td>
</tr>
</tbody>
</table>

[Second Semester]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE 267</td>
<td>Nursing Process: Advanced Medical-Surgical</td>
<td>11</td>
</tr>
</tbody>
</table>

NOTE: An applicant who became an LVN by challenging the LVN Board must complete 30 college units in the nursing major and have a total of 60 college units in order to receive an A.S. Degree. Contact Allied Health for advising regarding this issue at (209) 575-6362.

TOTAL UNITS FOR LVN TO ADN ADVANCED PLACEMENT PATHWAY .......... 54½

Nursing: LVN 30-Unit Option (LVN to RN)

In addition to the LVN to ADN Advanced Placement Pathway, there is also a LVN 30-Unit Option which prepares students to take the NCLEX-RN examination, but does not award an A.S. degree. Students interested in this option should contact the Director of Nursing in Allied Health for information and advising.
Nursing: Nurse Assistant Program (CNA)

The Nurse Assistant Program at Modesto Junior College is a one-semester course (NURSE 40, 5 units) that includes 50 hours of classroom instruction and 100 hours of supervised clinical experience within the guidelines set by the State Department of Health Services. NURSE 40 is offered in the fall and spring semesters. After completing Nurse 40 with a C or better, students are eligible to take the certification examination to become a certified nurse assistant (CNA). The exam has been developed to meet the evaluation requirements of federal and state nurse aid and competency evaluation legislation. Red Cross testing is available at MJC at the end of each semester.

Program expenses vary for each individual. The estimated cost for the Nurse Assistant Program is $600 that includes books, enrollment, health clearance, and certification examination and application fees. For financial aid information, call 575-7700. If you have questions about program information, contact Allied Health, 575-6362 or visit the Allied Health website at www.mjc.edu/alliedhealth and search Nurse Assistant Program.

Eligibility And Preparation for the Nurse Assistant Program

- Admission to Modesto Junior College
- High School Graduation or Equivalent (GED or College Degree)

Although high school graduation is not required, it is recommended for success.

RECOMMENDED COMPETENCY The following competency is recommended for success in the Nurse Assistant Program.

- Critical Reading (C or better) OR
- Reading competency (85) on Accuplacer OR
- Completion of a college degree from an accredited United States college

PROGRAM PREREQUISITES [NONE]

PROGRAM APPLICATION [NONE]

Skills Recognition Award: Nurse Assistant

REQUIRED CURRICULUM

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURSE 40</td>
<td>5</td>
<td>Nurse Assistant</td>
</tr>
<tr>
<td>NURSK 800</td>
<td>0</td>
<td>Nursing Skills Development</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD................................. 5

Additional Requirements for Students Enrolled In NURSE 40

PLEASE NOTE: In order to complete the health clearance process in a timely manner, students who are enrolled in NURSE 40 should contact the Allied Health office and pick up a health clearance packet. It is expected that enrolled students will have already begun the health clearance process by the first day of class.

Health Clearance

- A medical history and physical examination completed by a physician, physician's assistant, or nurse practitioner within 3 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Fingerprinting and Criminal Background Check

- All students participating in clinical assignments are required to complete a criminal background check and fingerprinting, and be cleared by the clinical facility in order to participate in the clinical experience. The students will not be charged for this requirement.

Policy For Denial Of Certification

Individuals who have been convicted of a certain penal code violations will not be certified unless the individual submits written evidence obtained from the court of “rehabilitation” (a felony) or a dismissal of the violation (if a misdemeanor). If you have been convicted of one of these crimes, you should be aware that you cannot be certified unless you meet the specified conditions of rehabilitation or dismissal issued by the courts and have received approval from the Department of Health Services. All other convictions not listed, except minor traffic violations, are subject to department review and require that you submit additional information.

To request clearance for prior conviction(s) or disciplinary action, contact:

Department of Health Services Licensing and Certification
ATCS MS 3201
PO Box 997416
Sacramento, CA 95899-7416
(916) 327-2445
www.dhs.ca.gov/lnc

Pharmacy Technician

Contact MJC Community Education at (209) 575-6063

Phlebotomy

Contact MJC Community Education at (209) 575-6063

Respiratory Care Program

The MJC Respiratory Care Program is a two-year associate degree program to prepare students to sit for the State Board Respiratory Care Practitioner Exam. The Respiratory Care Program of Modesto Junior College is accredited by the Commission on Accreditation for Respiratory Care (CoARC). Graduates are also eligible for both Certification and Registration administered by the National Board for Respiratory Care.

Commission on Accreditation for Respiratory Care
Eligibility And Preparation for the Respiratory Care Program

- Admission To Modesto Junior College
- High School Graduation is highly recommended but is not required.
- Transcripts on File in the MJC Records Office: All transcripts from other colleges must be on file in the MJC Records Office, prior to program application deadline. The Records Office will accept hand-carried transcripts that are in a sealed envelope with a school seal.

REQUIRED MATH COMPETENCY FOR ACCEPTANCE INTO THE RESPIRATORY CARE PROGRAM

- Eligibility for entrance into any 100-level MATH course through MJC Assessment process OR
- Score of 3,4, or 5 on AP Exam: Calculus AB or Calculus BC or Statistics
- Completion of MATH 90 or higher level MATH course, or an equivalent course from another institution with a grade of C or higher

Please Note: Catalog rights prior to Summer 2009, will be honored for math competency through the 2011-2012 academic year. Beginning with the 2012 Respiratory Care Program application period, applicants will need to meet the required math competency listed above.

Program Prerequisites

<table>
<thead>
<tr>
<th>Course</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 143</td>
<td>Introductory College Chemistry S AND</td>
</tr>
<tr>
<td>AP 150</td>
<td>Integrative Anatomy &amp; Physiology (C or better) OR</td>
</tr>
<tr>
<td>AP (ANAT 125 &amp; PHYSO 101, with a “C” or better, will be accepted in lieu of AP 150)</td>
<td>NOTE: BIO 111 is a prerequisite for the anatomy, physiology, and microbiology courses.</td>
</tr>
<tr>
<td>AP</td>
<td>Score of 3,4, or 5 on AP Exam: Calculus AB or Calculus BC or Statistics</td>
</tr>
<tr>
<td>AP</td>
<td>Completion of MATH 90 or higher level MATH course, or an equivalent course from another institution with a grade of C or higher</td>
</tr>
</tbody>
</table>

CPR Certification

All students participating in clinical assignments are required to complete CPR certification. It is offered as part of RSCR 220: Introduction to Respiratory Care Principles.

Drug Screen

All students participating in clinical assignments will be required to pass a drug screen.

Health Clearance

- A medical history and physical examination completed by a physician, physician’s assistant, or nurse practitioner within 3 months prior to program start date. The physical must state that the applicant does not have any health conditions that would create a hazard to self, employees, or patients.
- Documentation of required immunizations.
- A negative PPD skin test must be obtained. If a positive reaction is obtained, or has previously been obtained, a chest x-ray must be taken unless medically contraindicated.

Criminal Background Check

- All students participating in clinical assignments are required to pass a criminal background check and be cleared by the clinical facility in order to participate in the clinical experience.

Policy For Imposing Penalties For Denial Of Licensure

The law provides for denial of licensure for crimes or acts, which may in any way be related to patient care activities, i.e., sex crimes, drug crimes, alcohol or drug abuse, and crimes of violence. In such cases, the applicant’s responsibility to present sufficient evidence of rehabilitation to the Respiratory Care Board of California prior to taking the licensure examination. If the above violations are only misdemeanors, an in-house review and penalty determination may be performed and fines, warning letters, and/or probation may be issued without denial of a license. The Respiratory Care Board of California will screen applicants individually. Any student considering a career as a Respiratory Therapist who might be denied licensure is advised to consult the Disciplinary Guidelines (California Code of Regulations, 1399.374) published by the Respiratory Care Board of California before entering the program. This document is available on reserve in the MJC library. Further information...
Program Advisory

Students are strongly advised to complete the required curriculum listed under Required Courses (Non Respiratory Care) and additional associate degree requirements prior to entering the Respiratory Care Program. These courses must be completed by the last semester of the program with a grade of C or better in order to complete the Respiratory Care program and be eligible to take the certification and registration examination administered by the National Board for Respiratory Care.

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

A.S. Degree: Respiratory Care
Program Curriculum

REQUIRED COURSES (NON-RESPIRATORY CARE)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCH 101</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MICRO 101</td>
<td>Microbiology (Prerequisite to RSCR 242)</td>
<td>4</td>
</tr>
</tbody>
</table>

REQUIRED COURSES (RESPIRATORY CARE)

[SPRING]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCR 220</td>
<td>Introduction to Respiratory Care Principles</td>
<td>5</td>
</tr>
<tr>
<td>RSCR 230</td>
<td>Clinical 1</td>
<td>1</td>
</tr>
</tbody>
</table>

[FALL]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>RSCR 222</td>
<td>Basic Cardiopulmonary Anatomy &amp; Physiology</td>
<td>3</td>
</tr>
<tr>
<td>RSCR 224</td>
<td>Respiratory Care Theory 2</td>
<td>5</td>
</tr>
<tr>
<td>RSCR 232</td>
<td>Clinical 2</td>
<td>3½</td>
</tr>
</tbody>
</table>

[SPRING]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCR 240</td>
<td>Advanced Cardiopulmonary Physiology</td>
<td>4½</td>
</tr>
<tr>
<td>RSCR 242</td>
<td>Critical Care Procedures</td>
<td>4½</td>
</tr>
<tr>
<td>RSCR 250</td>
<td>Clinical 3</td>
<td>3½</td>
</tr>
</tbody>
</table>

[SUMMER - FIRST SESSION]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCR 244</td>
<td>Neonatal-Pediatric Respiratory Care</td>
<td>2</td>
</tr>
<tr>
<td>RSCR 251</td>
<td>Neonatal and Pediatric Clinical Practice</td>
<td>½</td>
</tr>
</tbody>
</table>

[SUMMER – SECOND SESSION]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>RSCR 253</td>
<td>Neonatal and Pediatric Clinical Practice 2</td>
<td>½</td>
</tr>
</tbody>
</table>

[FALL]

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCR 246</td>
<td>Current Issues in Respiratory Care</td>
<td>3</td>
</tr>
<tr>
<td>RSCR 248</td>
<td>Self-Directed Study</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 252</td>
<td>Physician Rounds for Respiratory Care</td>
<td>½</td>
</tr>
<tr>
<td>RSCR 255</td>
<td>Clinical 4</td>
<td>4½</td>
</tr>
<tr>
<td>RSCR 257</td>
<td>Clinical Preceptorship</td>
<td>2½</td>
</tr>
</tbody>
</table>

MINIMUM UNITS REQUIRED IN A.S. DEGREE ........................................ 51

A.S. Degree: Respiratory Care

To earn an Associate in Science Degree in Respiratory Care, the student must complete the requirements detailed in the Career Technical Education Pathway* (p. 67) or the University Preparation Pathway* (p. 65) in addition to the Respiratory Care coursework. Consult with an advisor for selection of courses.

MINIMUM UNITS REQUIRED IN A.S. DEGREE ........................................ 72½

*The Health Education requirement has been waived for all Allied Health certificates and degrees.
### Art Program

The comprehensive MJC Art Program offers several areas of concentration: art history, ceramics, computer graphics, drawing, design, sculpture, watercolor painting, oil painting, museum studies, and photography. The program is designed to include pre-professional and professional courses, personal enrichment in specific art areas, and classes for students who plan an art-related career. Art courses help students develop a capacity for visual analysis and the ability to solve problems in new and creative ways.

**A.A. Degree: Art**

**Expected Student Learning Outcomes**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Art will be able to:

1. Demonstrate preparedness to successfully continue studies in art at an upper division level.
2. Reproduce, render, and interpret in a variety of media through observation.
3. Plan, design, and produce original works of art.
4. Make informed assessments of quality and effectiveness in works of art, including their own.
5. Identify and distinguish various historical periods of art.

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Courses should be selected with the advice of an Art faculty advisor.

- Students who plan to transfer to a four-year college or university should consult with an Art faculty advisor and a counselor to ensure that all required transfer courses are completed.

### Required Courses - Complete 9 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 120</td>
<td>Basic Drawing</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 124</td>
<td>Color and Design</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 160</td>
<td>Appreciation of Art</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 164</td>
<td>History of Art 1</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 165</td>
<td>History of Art 2</td>
<td>3</td>
</tr>
</tbody>
</table>

### Elective Courses - Complete 11 Units, No More Than 1 Course in Each Area

#### Design and Drawing Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Basic Drawing 2</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 123</td>
<td>Figure Drawing</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 125</td>
<td>Color and Design 2</td>
<td>3</td>
</tr>
<tr>
<td>ART 127</td>
<td>Alternative Drawing Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Three-Dimensional Art Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 106</td>
<td>Ceramics 1</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 107</td>
<td>Ceramics 2</td>
<td>3</td>
</tr>
<tr>
<td>ART 108</td>
<td>Ceramics 3</td>
<td>3</td>
</tr>
<tr>
<td>ART 140</td>
<td>Sculpture 1</td>
<td>3</td>
</tr>
<tr>
<td>ART 142</td>
<td>Sculpture 2</td>
<td>3</td>
</tr>
<tr>
<td>ART 144</td>
<td>Oil Painting 2</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Painting and Printmaking Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 144</td>
<td>Watercolor Painting</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 166</td>
<td>Mixed Media Painting</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 147</td>
<td>Painting 1 (In Acrylic)</td>
<td>3</td>
</tr>
<tr>
<td>ART 148</td>
<td>Painting 1 (In Oil)</td>
<td>3</td>
</tr>
<tr>
<td>ART 149</td>
<td>Oil Painting 2</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Art History and Appreciation Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>Gallery Operation and Management</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 151</td>
<td>Appreciation of Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 167</td>
<td>American Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 162</td>
<td>History of Renaissance Art</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 163</td>
<td>History of Modern Art</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 164</td>
<td>History of Art 1</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 165</td>
<td>History of Art 2</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 168</td>
<td>Survey of Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 169</td>
<td>History of Non-Western Art</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Photography and Computer Graphics Area

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 102</td>
<td>Introduction to Computer Graphics</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 103</td>
<td>Applied Microcomputer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ART 170</td>
<td>Basic Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 173</td>
<td>Digital Imaging for Photographers</td>
<td>3 OR</td>
</tr>
<tr>
<td>ART 181</td>
<td>Basic Photography (1)</td>
<td>1½ OR</td>
</tr>
<tr>
<td>ART 182</td>
<td>Basic Photography (2)</td>
<td>1½ OR</td>
</tr>
</tbody>
</table>

**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**

**Rev 01/13/2012 LSM**
To earn a Skills Recognition Award, the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 150</td>
<td>6</td>
<td>Art and Design</td>
</tr>
<tr>
<td>ART 198B</td>
<td>2</td>
<td>Independent Study in Art Gallery/Museum Studies</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 9 UNITS AS INDICATED

I. ART APPRECIATION/HUMANITIES - COMPLETE 3 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 160</td>
<td>3</td>
<td>Art History of Art</td>
</tr>
<tr>
<td>ART 164</td>
<td>3</td>
<td>History of Art</td>
</tr>
<tr>
<td>HUMAN 101</td>
<td>3</td>
<td>Introduction to the Humanities</td>
</tr>
</tbody>
</table>

II. STUDIO ART - COMPLETE 3 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 120</td>
<td>3</td>
<td>Basic Drawing 1</td>
</tr>
<tr>
<td>ART 102</td>
<td>3</td>
<td>Introduction to Microcomputer Graphics</td>
</tr>
</tbody>
</table>

III. ART HISTORY/HUMANITIES - COMPLETE 3 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 162</td>
<td>3</td>
<td>History of Renaissance Art</td>
</tr>
<tr>
<td>ART 163</td>
<td>3</td>
<td>History of Modern Art</td>
</tr>
<tr>
<td>ART 165</td>
<td>3</td>
<td>History of Art</td>
</tr>
<tr>
<td>ART 169</td>
<td>3</td>
<td>History of Non-Western Art</td>
</tr>
<tr>
<td>HUMAN 105</td>
<td>3</td>
<td>Early Humanistic Traditions</td>
</tr>
<tr>
<td>HUMAN 106</td>
<td>3</td>
<td>Humanities in the Modern World</td>
</tr>
<tr>
<td>HUMAN 110</td>
<td>3</td>
<td>East Meets West</td>
</tr>
<tr>
<td>CMPGR 201</td>
<td>3</td>
<td>Animation - A Global View of Art in Motion</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD .......................................... 17

A.A. Degree: University Preparation, Emphasis in Art and Design (p. 169)

Communication Studies for Transfer PROGRAM

ABOUT THIS PROGRAM

This program is designed to prepare students who wish to transfer to a CSU and major in Communication Studies. This program will provide students with an alignment of courses required for transfer and a cohesive group of courses in the area of Speech Communication. Courses such as public speaking, argumentation, and interpersonal communication will enable the student to demonstrate ability to engage in critical thinking and rationality.

The Associate in Arts in Communication Studies for Transfer degree includes curriculum which focuses on practical application of communication skills and communication theory. Students who complete the degree will be able to demonstrate communication competence in both personal and business relationships.

The Associate in Arts in Communication Studies for Transfer is intended for students who plan to complete a bachelor's degree in Communication Studies at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that does accept this degree will be required to complete no more than 60 units after transfer to earn a bachelor's degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. In all cases, students should consult with a counselor for more information on university admission and transfer requirements.

A.A.-T: Communication Studies

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn an Associate of Arts degree in Communications Studies will be able to:

6. Construct a speech outline demonstrating clarity of ideas, proper source citations, awareness of audiences, and proper outlining techniques.

7. Identify and apply principles of interpersonal communication theory to build functional relationships.

8. Find, evaluate, and incorporate research materials into written and oral argumentation, as well as cite sources accurately.

9. Adequately debate others, present platform speeches, or perform works of literature in a classroom or outside venue.

To earn an Associate in Arts for Transfer Degree in this major, the student must complete the requirements detailed in the Transfer Model Curriculum pathway (p. 9 of the 2011-12 addendum only). All courses must be completed with a C or better.

REQUIRED COURSES (3 UNITS)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 100</td>
<td>3</td>
<td>Fundamentals of Public Speaking</td>
</tr>
</tbody>
</table>

A. COMPLETE 6 UNITS:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 104</td>
<td>3</td>
<td>Argumentation</td>
</tr>
<tr>
<td>SPCOM 107</td>
<td>3</td>
<td>Introduction to Debate</td>
</tr>
<tr>
<td>SPCOM 103</td>
<td>3</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>SPCOM 106</td>
<td>3</td>
<td>Group and Organizational Communication</td>
</tr>
</tbody>
</table>

B. COMPLETE 6 UNITS:

Any course not used in LIST A

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 105*</td>
<td>2</td>
<td>Forensics Debate</td>
</tr>
<tr>
<td>SPCOM 119*</td>
<td>2</td>
<td>Forensics Platform Speeches</td>
</tr>
<tr>
<td>SPCOM 125*</td>
<td>2</td>
<td>Forensics Interpretation Events</td>
</tr>
<tr>
<td>SPCOM 130</td>
<td>3</td>
<td>Intercultural Communication</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>SPCOM 120</td>
<td>3</td>
<td>Oral Interpretation</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.A. MAJOR ......................................................... 20
Emphasis in Humanities (p. 172)

Film PROGRAM

Film students get “hands-on” experience while learning to produce, direct, act as talent, shoot and edit a variety of film projects. In addition, qualified students can secure internships with the MJC TV-FILM production company or with local/regional television stations and film production companies. The MJC television and film facilities include a 3-camera television studio and control room, along with cameras and editing equipment to produce professional caliber projects.

Certificate of Achievement: Film

- To earn a Skills Recognition Award, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 142</td>
<td>Light, Sound, Camera &amp; Editing Workshop</td>
<td>3</td>
</tr>
<tr>
<td>RATV 150</td>
<td>Introduction to The Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>FILM 100</td>
<td>Film Production</td>
<td>3</td>
</tr>
<tr>
<td>FILM 151</td>
<td>Advanced Film Production</td>
<td>3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 4 OR MORE UNITS

Complete 1-2 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILM 199A</td>
<td>Film Internship</td>
<td>1-2</td>
</tr>
<tr>
<td>RATV 199A</td>
<td>MJC TV-FILM Production Company</td>
<td>1-2</td>
</tr>
</tbody>
</table>

Complete 3 units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 109</td>
<td>Creative Writing: Scriptwriting</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 161</td>
<td>Film Appreciation</td>
<td>4</td>
</tr>
<tr>
<td>FILM 153</td>
<td>Contemporary Film</td>
<td>3</td>
</tr>
<tr>
<td>FILM 154</td>
<td>Movies with a Message</td>
<td>3</td>
</tr>
<tr>
<td>FILM 155</td>
<td>The Documentary Film</td>
<td>3</td>
</tr>
<tr>
<td>RATV 143</td>
<td>Non-Linear Video Editing</td>
<td>3</td>
</tr>
</tbody>
</table>

MINIMUM UNITS REQUIRED IN SKILLS RECOGNITION AWARD .............. 16

Skills Recognition Award: Print Journalism

- To earn a Skills Recognition Award, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 150</td>
<td>Introduction to The Media Arts</td>
<td></td>
</tr>
<tr>
<td>JWMA 100</td>
<td>Reporting and Writing for the Media</td>
<td></td>
</tr>
<tr>
<td>HUMAN 124C</td>
<td>Multimedia New Production Staff</td>
<td></td>
</tr>
<tr>
<td>SOCI 211</td>
<td>Design and Typography</td>
<td></td>
</tr>
<tr>
<td>HIST 120</td>
<td>Library Research on the World Wide Web</td>
<td></td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 3 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 138</td>
<td>Writing for Radio, TV and New Media</td>
<td></td>
</tr>
<tr>
<td>CPSPR 264</td>
<td>Publishing on the World Wide Web</td>
<td></td>
</tr>
<tr>
<td>FILM 154</td>
<td>Movies with a Message</td>
<td></td>
</tr>
<tr>
<td>ENGL 105</td>
<td>Creative Writing: Poetry</td>
<td></td>
</tr>
<tr>
<td>ENGL 106</td>
<td>Creative Writing: Short Fiction</td>
<td></td>
</tr>
<tr>
<td>ENGL 108</td>
<td>Creative Writing: Autobiography</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD............................... 15

A.A. Degree: Journalism

STUDENT LEARNING OUTCOMES

Upon the successful completion of the A.A. degree in journalism at Modesto Junior College, students will be able to:

1. Identify and research stories that have news value to a community and conceptualize the coverage of these stories using written, audio or visual media.
2. Conduct an interview that yields valuable information and is accurately recorded.
3. Write a news article appropriate for publication in a local newspaper or online news site applying industry standards of accuracy, fairness, style and grammar.
4. Use a computer and current industry standard software to edit, format and layout text and images for a print or online publication.
5. Discuss the constitutional principles governing the rights and responsibilities of the media in the United States, and apply these principles and ethical considerations in the production of news content.
6. Discuss how the mass media impacts society on a local, national and global level.
To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES—COMPLETE 19 UNITS

MUST 101 [P] Music Fundamentals 1 ................................................................. 3 OR
MUST 120 [P] Music Theory Review ................................................................. 3

MINIMUM UNITS IN A.A. MAJOR ........................................................................ 22

MUSIC PROGRAM

The MJC Music Program offers courses for students wishing to earn an associate's degree in music, general education courses for non-music majors, and courses designed for community members. These include a comprehensive curriculum of music theory and musicianship. Ensemble and production courses include Concert and Symphonic Bands, Day and Evening Jazz Bands, Concert and Chamber Choruses, Masterworks Choir, Community Orchestra, Guitar Orchestra, opera/musical theatre productions, chamber music performances, and electronic music productions. The program also offers applied studies in piano, organ, harpsichord, guitar, voice, violin/viola, cello/bass, woodwinds, and brass/percussion, as well as survey courses such as Music Appreciation, Introduction to World Music, Introduction to American Popular Music, and History of Western Music.

Repeat Limitations on Applied Music and Ensemble Courses

The following limitations apply to all activities listed under Applied Music and Ensembles: each activity is limited to a maximum of four enrollments, regardless of the skill level of the individual courses. For example, a student may enroll, a) in beginning piano four times or b) twice in beginning piano and twice in intermediate piano. In either of these cases, the student cannot enroll in any additional piano courses because the maximum number of piano courses has been met. Students who have met the limit of repetition may audit the course by registering in the Community Education Office.

A.A. Degree: Music

EXPECTED STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Music will be able to:

1. Demonstrate musical literacy by decoding music notation through their instrument and/or voice.
2. Demonstrate the ability to use basic musical notation.
3. Perform and stylistically interpret music on their applied instrument/voice in an ensemble and/or in a solo setting.
4. Demonstrate an awareness of the scope, variety, structure and form of works in the canon of traditional western art music.

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Students who plan to transfer to a four-year school are strongly advised to meet with a member of the music faculty.

PROGRAM PREREQUISITES

MUST 101 [P] Music Fundamentals 1 ................................................................. 3 OR
MUST 120 [P] Music Theory Review ................................................................. 3

SATISFACTORY SCORE on music theory placement examination offered during the first meeting of MUST 120 and/or MUST 121. Students who do not meet entrance proficiencies will be encouraged to enroll in MUST 101 or MUST 120 prior to enrollment in MUST 121.

RECOMMENDED PREREQUISITES

MUST 111 [(P)] Rhythmic Skills ........................................................................... 1

REQUIRED COURSES IN MUSIC THEORY—COMPLETE 20 UNITS

MUST 121 [1] Music Theory 1 .............................................................................. 3
MUST 131 [1] Aural Skills 1 .................................................................................. 1
MUST 132 [2] Aural Skills 2 .................................................................................. 1
MUST 133 [3] Aural Skills 3 .................................................................................. 1
MUST 134 [4] Aural Skills 4 .................................................................................. 1
MUST 130 [1234] Practica Musica (4 times at 1 unit) ............................................. 4

ENSEMBLE—COMPLETE 4 UNITS

Any of the following* (repeated individually, or combined with each other to equal the required number of units—see Repeat Limitations above)

MUSE 145 [NP] Guitar Orchestra ........................................................................ 1
MUSE 155 [NP] Concert Choir ............................................................................ 1
MUSE 161 [NP] Community Orchestra ............................................................... 1
MUSE 165 [NP] String Orchestra ......................................................................... 1
MUSE 173 [NP] Symphonic Band ....................................................................... 1
MUSE 183 [NP] Jazz Band .................................................................................... 1

APPLIED MUSIC—COMPLETE 4 UNITS

Complete one or more of the courses below appropriate to the student’s instrument or voice* (repeat individually, or combined with each other to equal the required number of units—see Repeat Limitations above)

MUSA 121 [NP] Elementary Piano ...................................................................... 1
MUSA 122 [NP] Piano Enrichment ....................................................................... 1
MUSA 123 [NP] Intermediate Piano .................................................................... 1
MUSA 124 [NP] Advanced Piano ........................................................................ 2
MUSA 145 [NP] Applied Classical Guitar ............................................................ 1
MUSA 153 [NP] Applied Vocal Repertoire 1 ........................................................ 1
MUSA 154 [NP] Applied Vocal Repertoire 2 ........................................................ 1
MUSA 163 [NP] Applied Music (Violin and Viola) ................................................ 1
MUSA 164 [NP] Applied Music (Cello and Bass) .................................................. 1
MUSA 173 [NP] Applied Music (Brass and Percussion) ....................................... 1
MUSA 183 [NP] Applied Music (Woodwinds) ..................................................... 1

*Music majors will typically combine ensembles and applied studies according to their primary instrument/voice. Vocalists will enroll in Concert Choir and the appropriate applied voice course. Orchestral instrumentalists will enroll in Community Orchestra and the appropriate applied string course. Band instrumentalists will enroll in Symphonic Band instrumentalists will enroll in Symphonic Band and/or Jazz Band and applied woodwinds or brass/percussion. Guitarists will enroll in Guitar Orchestra and the appropriate applied guitar class. Students are strongly advised to seek the advice of a music faculty member specializing in his/her primary instrument/voice when choosing ensemble and applied music courses.

PIANO**—COMPLETE 2 UNITS

Any of the following (repeated individually, or combined with each other to equal the required number of units—see Repeat Limitations above)

MUSA 121 [NP] Elementary Piano ...................................................................... 1
MUSA 122 [NP] Piano Enrichment ....................................................................... 1
MUSA 123 [NP] Intermediate Piano .................................................................... 1
MUSA 124 [NP] Advanced Piano ........................................................................ 2

**Students whose primary instrument is piano may count their applied studies in piano toward this requirement.

TOTAL UNITS IN THE A.A. MAJOR IN ..................................................................... 30
RECOMMENDED MUSIC ELECTIVES

ENSEMBLE - COMPLETE 1 - 2 UNITS

Any ensemble other than the student’s primary ensemble. (Students are advised to seek the advice of a faculty member directing that ensemble to determine if he/she has the appropriate experience to succeed in the ensemble.)

APPLIED MUSIC - COMPLETE 1 - 2 UNITS

Any applied music course other than that in the student’s primary instrument/voice. (Students are advised to seek the advice of a faculty member specializing in that instrument/voice to determine which level of course is appropriate.)

OTHER - COMPLETE 1 - 3 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS G 121</td>
<td>3</td>
</tr>
<tr>
<td>MUS G 122</td>
<td>3</td>
</tr>
<tr>
<td>MUSP 151</td>
<td>1</td>
</tr>
<tr>
<td>MUSP 153</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL OPTIONAL MUSIC ELECTIVES ................................................................. 3 - 7

Photography PROGRAM

Photography is both an artistic and technical vocation. This program is designed to develop the student’s aesthetic and technical abilities by working with design, composition, lighting, various types of image content, photographic processes, image critique, and presentation techniques.

A.A. Degree: Photography

EXPECTED STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Photography will be able to:

1. Demonstrate preparedness to successfully continue studies in art at an upper division level.
2. Represent and interpret aspects of their physical and social environment in a variety of photography-related media.
3. Plan, design, and produce original works of art.
4. Make informed assessments of quality and effectiveness in works of art, including their own, and identify and distinguish various historical periods of photography-related art.

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 65) or the University Preparation Pathway (p. 63) which include completion of the requirements below. Courses should be selected with the assistance of a Photography faculty advisor.

REQUIRED COURSES - COMPLETE 18 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 124</td>
<td>[2]</td>
</tr>
<tr>
<td>ART 160</td>
<td>[1]</td>
</tr>
<tr>
<td>ART 170</td>
<td>[3]</td>
</tr>
<tr>
<td>ART 172</td>
<td>[2]</td>
</tr>
<tr>
<td>ART 173</td>
<td>[3]</td>
</tr>
<tr>
<td>ART 175</td>
<td>[3]</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE AT LEAST 2 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 161</td>
<td>[NP]</td>
</tr>
<tr>
<td>ART 163</td>
<td>[NP]</td>
</tr>
<tr>
<td>ART 164</td>
<td>[NP]</td>
</tr>
<tr>
<td>ART 165</td>
<td>[NP]</td>
</tr>
<tr>
<td>ART 178B D</td>
<td>[3]</td>
</tr>
<tr>
<td>INTR. 146 E</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN AA MAJOR .............................................................................. 20

Radio Broadcasting PROGRAM

Radio students at MJC learn in an environment designed to be as close to the “real world” of professional broadcasting as possible.

The Radio Broadcasting program is designed to teach students skills in production, announcing and writing. These skills are used on work on campus radio station, MJC Pirates Radio. Located in the Performing and Media Arts Center and opened daily by broadcasting students in a model commercial broadcast station employing FCC standards and practices. The Radio Broadcasting Program provides advanced students ample opportunities to internships, part-time employment and independent directed studies.

Skills Recognition Award: Radio Broadcasting

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

REQUIRED COURSES - COMPLETE 13 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 131</td>
<td>[1]</td>
</tr>
<tr>
<td>RATV 132</td>
<td>[2]</td>
</tr>
<tr>
<td>RATV 133</td>
<td>[3]</td>
</tr>
<tr>
<td>RATV 134</td>
<td>[NP]</td>
</tr>
<tr>
<td>RATV 135</td>
<td>[NP]</td>
</tr>
<tr>
<td>RATV 137</td>
<td>[NP]</td>
</tr>
<tr>
<td>RATV 138</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 4 UNITS

Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 199 A-D</td>
<td>[3]</td>
</tr>
</tbody>
</table>

If necessary, select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 132</td>
<td>[2]</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ........................................ 17

A.A. Degree: Radio Broadcasting

EXPECTED STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Theatre will be able to:

1. Demonstrate preparedness to successfully continue studies in theatre at an upper division level.
2. Represent and interpret aspects of their physical and social environment in a variety of theatre-related media.
3. Plan, design, and produce original works of art.
4. Make informed assessments of quality and effectiveness in works of art, including their own, and identify and distinguish various historical periods of theatre-related art.

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Courses should be selected with the assistance of a Radio Broadcasting faculty advisor.

REQUIRED COURSES - COMPLETE 13 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATV 131</td>
<td>[1]</td>
</tr>
<tr>
<td>RATV 132</td>
<td>[2]</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN AA MAJOR .............................................................................. 20
## Recording Arts Program

**Skills Recognition Award: Recording Arts**

**Required Courses - Complete 11 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 111</td>
<td>2</td>
<td>Recording Arts 1</td>
</tr>
<tr>
<td>MUSC 112</td>
<td>2</td>
<td>Recording Arts 2</td>
</tr>
<tr>
<td>MUSC 126</td>
<td>2</td>
<td>Music Production for Multimedia</td>
</tr>
<tr>
<td>MUSC 168</td>
<td>2</td>
<td>Music Production for Multimedia</td>
</tr>
<tr>
<td>MUSC 121</td>
<td>3</td>
<td>Introduction to the Synthesizer and MIDI</td>
</tr>
<tr>
<td>MUSG 111</td>
<td>1</td>
<td>Introduction to American Popular Music</td>
</tr>
</tbody>
</table>

**Elective Courses - Complete 6 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSC 122</td>
<td>2</td>
<td>Electronic Music 2</td>
</tr>
<tr>
<td>MUST 101</td>
<td>2</td>
<td>Music Fundamentals</td>
</tr>
<tr>
<td>MUSA 121</td>
<td>1</td>
<td>Elementary Piano</td>
</tr>
<tr>
<td>MUSG 112</td>
<td>1</td>
<td>The History of the Beatles</td>
</tr>
<tr>
<td>RATV 133</td>
<td>2</td>
<td>Introduction to Radio Production</td>
</tr>
<tr>
<td>RATV 134</td>
<td>2</td>
<td>Television Studio Production</td>
</tr>
</tbody>
</table>

**Total Units for Skills Recognition Award** 17

## Speech Communication Program

The Speech Communication Program at Modesto Junior College offers students a variety of courses which incorporate both theory and performance instruction. These include public speaking, argumentation and debate, organizational communication, intercultural and interpersonal communication, context speaking and forensics competition which includes debate and individual events. The MJC Forensics team has captured a number of state and national championships. The program also offers courses in practical speech communication and voice improvement. Most courses are available to students in both day and evening hours.

**Skills Recognition Award: Speech Communication**

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

**Required Courses - Complete 12 Units**

**Oral Communication Area - Complete 3 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 100</td>
<td>3</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>SPCM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>SPCM 110</td>
<td>3</td>
<td>Persuasion</td>
</tr>
</tbody>
</table>

**Critical Thinking Area - Complete 3 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 104</td>
<td>3</td>
<td>Argumentation</td>
</tr>
<tr>
<td>SPCM 107</td>
<td>3</td>
<td>Introduction to Debate</td>
</tr>
</tbody>
</table>

**Group and Organizational Communication Area - Complete 3 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 106</td>
<td>3</td>
<td>Group &amp; Organizational Communication</td>
</tr>
<tr>
<td>SPCM 109</td>
<td>3</td>
<td>Women in Management</td>
</tr>
</tbody>
</table>

**Professional Skills Area - Complete 3 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 103</td>
<td>3</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>SPCM 130</td>
<td>3</td>
<td>Intercultural Communication</td>
</tr>
</tbody>
</table>

**Total Units for Skills Recognition Award** 12

**A.A. Degree: Speech Communication**

**Expected Student Learning Outcomes**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Speech Communication will be able to:

1. Construct a speech outline demonstrating clarity of ideas, proper source citation, awareness of audience, and proper outlining techniques.
2. Identify and apply principles of interpersonal communication theory to build functional relationships.
3. Find, evaluate, and incorporate research materials into written and oral argumentation, as well as cite sources correctly.
4. Adequately debate others, present platform speeches, or perform works of literature in a classroom or outside venue.

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Student should consult with a Speech advisor for selection of Elective Units.

**Required Courses - Complete 6 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 102</td>
<td>3</td>
<td>Introduction to Human Communication</td>
</tr>
<tr>
<td>SPCM 101</td>
<td>3</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>SPCM 104</td>
<td>3</td>
<td>Argumentation</td>
</tr>
</tbody>
</table>

**Elective Courses - Complete 14 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 101</td>
<td>3</td>
<td>Voice and Articulation</td>
</tr>
<tr>
<td>SPCM 103</td>
<td>3</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>SPCM 105</td>
<td>2</td>
<td>Forensics Debate</td>
</tr>
<tr>
<td>SPCM 106</td>
<td>3</td>
<td>Group &amp; Organizational Communication</td>
</tr>
<tr>
<td>SPCM 107</td>
<td>3</td>
<td>Introduction to Debate</td>
</tr>
<tr>
<td>SPCM 109</td>
<td>3</td>
<td>Women in Management</td>
</tr>
<tr>
<td>SPCM 110</td>
<td>3</td>
<td>Persuasion</td>
</tr>
<tr>
<td>SPCM 115</td>
<td>2</td>
<td>Forensics Platform Speeches</td>
</tr>
<tr>
<td>SPCM 120</td>
<td>3</td>
<td>Oral Reading / Interpretation</td>
</tr>
<tr>
<td>SPCM 122</td>
<td>3</td>
<td>Introduction to Readers’ Theatre</td>
</tr>
<tr>
<td>SPCM 123</td>
<td>3</td>
<td>Storytelling</td>
</tr>
<tr>
<td>SPCM 124</td>
<td>2</td>
<td>Advanced Readers’ Theatre</td>
</tr>
<tr>
<td>SPCM 125</td>
<td>2</td>
<td>Forensics Interpretation Events</td>
</tr>
<tr>
<td>SPCM 130</td>
<td>3</td>
<td>Intercultural Communication</td>
</tr>
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<td>SPCM 135</td>
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<td>Forensics Limited Preparation Events</td>
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<tr>
<td>SPCM 145</td>
<td>1</td>
<td>Parliamentary Procedure</td>
</tr>
<tr>
<td>SPCM 199</td>
<td>1-3</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**Minimum Units in A.A. Major** 20

**Color Legend:**

- **UNCHANGED FROM 2011-2012 CATALOG**
- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
Emphasis in Communication (p. 170)

Television Production Program

Modesto Junior College’s department of Television Production has been created to train students to work in the television, cable, film and video entertainment industry. Students get a variety of hands-on opportunities with course study in both studio and off location television, film, and documentary production. Students will learn to produce, direct, act, talent, shoot and edit projects and programs that air on local cable channels. Advance television and film students are encouraged to submit their work to local and national student film and video competitions. In addition, qualified students can secure internships with local production companies or the MJC TV-FILM production company.

Students who enroll in the Television Production program will get to explore new career paths that result from the development of new digital technologies. They will leave with the skills required for a promising career in the television, film and entertainment industry.

Skills Recognition Award: Television Production

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

### REQUIRED COURSES - COMPLETE 13 UNITS

- RATV 140 [1] Introduction to the Media Arts
- RATV 116 [1] Television Production
- RATV 142 [2] Light, Sound, Camera & Editing Workshop
- RATV 199C [2,3] MJC TV FILM Production Company

### ELECTIVE COURSES - COMPLETE 3 UNITS

- RATV 138 [1,2] Writing for Radio, TV and New Media
- RATV 141 [NP] Documentary Production
- RATV 143 [NP] Non-Linear Video Editing
- ENGL 120 [NP] Mass Media & the Public
- CMPGR 267 [NP] Introduction to Multimedia

### TOTAL UNITS FOR SKILLS RECOGNITION AWARD........................................ 16

A.A. Degree: Television Production

### STUDENT LEARNING OUTCOMES

1. Operate TV studio, TV control room and field equipment to create a 5-15 minute television or video production.
2. Write programs proposals and scripts for television productions.
3. Use digital editing software to record, play back and edit various audio and video materials.
4. Demonstrate ability to act a talent and direct talent in a television program.
5. Identify and utilize all stages of production to produce and direct a 5-minute video.
6. Define industry standard terminology and demonstrate its proper use.

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

### REQUIRED COURSES - COMPLETE 15 UNITS

- RATV 142 [2] Light, Sound, Camera and Editing Workshop
- RATV 190 [1] Television Production 3
- RATV 150 [1] Introduction to the Media Arts
- FILM 150 [1] Film Production

### ELECTIVE COURSES - COMPLETE 5 UNITS

- FILM 152 [2] Advanced Film Production 1
- FILM 162 [NP] Advanced Film Production 2
- RATV 161 [NP] Voice and Acting
- RATV 131 [NP] Radio Control Room & Studio Production
- RATV 137 [NP] Radio and Television Announcing
- RATV 138 [NP] Writing for Radio, TV and New Media
- RATV 141 [NP] Documentary Production
- RATV 143 [NP] Non-Linear Video Editing

### MINIMUM UNITS IN A.A. MAJOR..................................................................... 20

### Theatre Program

The Theatre Program at MJC is designed to prepare students to work in professional or semi-professional theatre situations or to transfer to four-year colleges and universities to pursue additional drama classes that may include preparation for teaching theatre. The program is designed to teach students the techniques of acting, directing, playwriting, lighting, makeup, oral interpretation, stage design, and children’s theatre. The Theatre program provides students the opportunity to act in major productions.

Skills Recognition Award: Design & Technical Theatre

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

### REQUIRED COURSES - COMPLETE 15 UNITS

- THETR 100 [NP] Introduction to Theatre Arts
- THETR 175 [1] Stage Costuming
- THETR 178 [2] Introduction to Scene Design
- THETR 182 [1] Practical Stage Lighting
- THETR 183 [2] Fundamentals of Stage Make-up 1
- THETR 190A [NP] Theatre Production Workshop
- THETR 196 [NP] Theatre Management

### TOTAL UNITS FOR SKILLS RECOGNITION AWARD.......................................... 15

Skills Recognition Award: Theatre Performance

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

### REQUIRED COURSES - COMPLETE 6 UNITS


### ELECTIVE COURSES - COMPLETE 9 UNITS

- THETR 122 [1] Introduction to Readers Theatre
- THETR 123 [NP] Storytelling
- THETR 131 [NP] Fundamentals of Choreography
- THETR 195 [NP] Movement for the Performing Artist
### A.A. Degree: Theatre

#### STUDENT LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Theatre will be able to:

1. Demonstrate knowledge of theatre from a historical perspective.
2. Synthesize and apply information on contemporary trends and technologies in theatre.
3. Analyze a theatrical text.
4. Research and analyze the directing of other directors.
5. Demonstrate knowledge of theatrical protocol.
6. Demonstrate understanding of the collaborative nature of theatre.
7. Demonstrate the process required to prepare a resume, audition piece, or portfolio.
9. Employ initiative and leadership qualities in individual development and growth.
10. Express creativity in the artistic process.

#### MAJOR REQUIREMENTS

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Students should consult with a Theatre faculty advisor for selection of Elective Units. Students who plan to transfer to a four-year college or university should consult with a Theatre faculty advisor to ensure that all required transfer courses are completed.

#### REQUIRED COURSES - COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>THETR 100</td>
<td>Introduction to Theatre Arts</td>
<td>3</td>
</tr>
<tr>
<td>THETR 160</td>
<td>Fundamentals of Acting</td>
<td>3</td>
</tr>
<tr>
<td>THETR 190B</td>
<td>Theatre Production Workshop</td>
<td>2</td>
</tr>
</tbody>
</table>

#### ELECTIVE COURSES: GENERAL - COMPLETE 10 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>THETR 101</td>
<td>Voice and Articulation</td>
<td>3</td>
</tr>
<tr>
<td>THETR 105</td>
<td>Introduction to Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THETR 122</td>
<td>Introduction to Readers' Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THETR 123</td>
<td>Storytelling</td>
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<td>THETR 124</td>
<td>Advanced Readers' Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THETR 127</td>
<td>Ballet 2</td>
<td>1</td>
</tr>
<tr>
<td>THETR 129</td>
<td>Jazz 2</td>
<td>1</td>
</tr>
<tr>
<td>THETR 131</td>
<td>Fundamentals of Choreography</td>
<td>2</td>
</tr>
<tr>
<td>THETR 150</td>
<td>Elements of Playwriting</td>
<td>3</td>
</tr>
<tr>
<td>THETR 156</td>
<td>Rehearsal and Performance in Comedy</td>
<td>2</td>
</tr>
<tr>
<td>THETR 157</td>
<td>Rehearsal and Performance in Drama</td>
<td>2</td>
</tr>
<tr>
<td>THETR 158</td>
<td>Rehearsal and Performance in Classical Theatre</td>
<td>2</td>
</tr>
<tr>
<td>THETR 159</td>
<td>Rehearsal and Performance in Musical Theatre</td>
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<tr>
<td>THETR 161</td>
<td>Intermediate Acting</td>
<td>3</td>
</tr>
<tr>
<td>THETR 164</td>
<td>Improvisational Acting</td>
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<tr>
<td>THETR 165</td>
<td>History of the American Musical Theatre</td>
<td>3</td>
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#### ELECTIVE COURSES: MOVEMENT - COMPLETE 2 UNITS

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>THETR 170X,A</td>
<td>Hip Hop</td>
<td>½, 1</td>
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<tr>
<td>THETR 185X,A</td>
<td>Beginning Modern Dance</td>
<td>½, 1</td>
</tr>
<tr>
<td>THETR 186X,A</td>
<td>Intermediate Modern Dance</td>
<td>½, 1</td>
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<tr>
<td>THETR 187X,A</td>
<td>Advanced Modern Dance</td>
<td>½, 1</td>
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</table>

#### MINIMUM UNITS IN A.A. MAJOR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>THETR 188</td>
<td>Jazz Dance</td>
<td>1</td>
</tr>
<tr>
<td>THETR 189</td>
<td>Ballet 1</td>
<td>1</td>
</tr>
<tr>
<td>THETR 195</td>
<td>Movement for the Performing Artist</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>THETR 188</td>
<td>Jazz Dance</td>
<td>1</td>
</tr>
<tr>
<td>THETR 189</td>
<td>Ballet 1</td>
<td>1</td>
</tr>
<tr>
<td>THETR 195</td>
<td>Movement for the Performing Artist</td>
<td>3</td>
</tr>
</tbody>
</table>

#### TOTAL UNITS FOR SKILLS RECOGNITION AWARD

15

#### MINIMUM UNITS IN A.A. MAJOR

20

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**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**
Educational Programs in

Behavioral & Social Sciences

(Vacant), Dean
Business, Behavioral, & Social Sciences Division

East Campus
Journalism 150
(209) 575-6129

SUPPORT STAFF
Rhonda Campbell, Administrative Secretary
Mandy Landis, Administrative Technician

INSTRUCTIONAL SUPPORT STAFF
Penny Belus, Inst. Support Technician
Ranai Callton, Inst. Support Asst.

Todd Mathias, Inst. Support Aide
Sampao Murphy, Inst. Support Asst.
Wendy Towers, Program Technician
Don Rousseau, Program Rep. I
Ken Sholar, Inst. Support Asst.
Juli Zunigten, Inst. Support Asst.

Degrees and/or Certificates Offered:

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of Justice</td>
<td>A.S., A.A.</td>
<td>Human Services</td>
</tr>
<tr>
<td>Chemical Dependency Counseling</td>
<td>AA</td>
<td>Supervisory Management in Public Safety</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>SR</td>
<td>Psychosocial Rehabilitation</td>
</tr>
</tbody>
</table>

ABOUT THE DIVISION

Offerings in the Behavioral and Social Sciences Division are designed to meet the needs of transfer students, non-transfer students and community residents who desire general education courses. A student may complete an Associate of Arts degree in Behavioral and Social Sciences. All majors must complete a program of courses approved by the division. Faculty advisors from the division will assist students in the selection of proper courses.

Programs in Behavioral & Social Sciences

ADMINISTRATION OF JUSTICE

PROGRAM

Modesto Junior College offers a comprehensive Administration of Justice program. The curriculum is designed to prepare candidates for employment or transfer to a four-year educational institution offering a major in one of the criminal justice fields. Satisfactory completion of the requirements will lead to the Associate in Arts degree or the Associate in Science degree. Classes are offered both day and evening.

All candidates for degrees in Administration of Justice must consult with an Administration of Justice Advisory Committee. Prior to use of a firearm in any course, each student must sign a declaration to the effect that he/she is not prohibited from such use by Penal Code Section 12021. Students are also advised that some of the Administration of Justice courses include actual or simulated experiences which require considerable agility and physical ability.

All candidates for degrees in Administration of Justice must consult with an Administration of Justice Advisory Committee. Prior to use of a firearm in any course, each student must sign a declaration to the effect that he/she is not prohibited from such use by Penal Code Section 12021. Students are also advised that some of the Administration of Justice courses include actual or simulated experiences which require considerable agility and physical ability.

A.A. Degree: Administration of Justice

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) in addition to completing the coursework below. A student may complete an Associate of Arts degree in Behavioral and Social Sciences. All majors must complete a program of courses approved by the division. Faculty advisors from the division will assist students in the selection of proper courses.

A.S. Degree: Administration of Justice

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) in addition to completing the coursework below. Associate in Science degree candidates may select an option in either Law Enforcement (police, sheriff, etc.) or Corrections (prison, parole, probation, etc.).

REQUIRED COURSES - COMPLETE 18 UNITS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ADJI 201</td>
<td>Introduction to Administration of Justice</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 202</td>
<td>Prin. and Proc. of the Justice System</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 203</td>
<td>Concepts of Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 204</td>
<td>Legal Aspects of Evidence</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 205</td>
<td>Community Relations</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 212</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 214</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 215</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 216</td>
<td>Criminal Investigation</td>
<td>3</td>
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<tr>
<td>ADJI 217</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<tr>
<td>ADJI 218</td>
<td>Criminal Law</td>
<td>3</td>
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<td>ADJI 219</td>
<td>Criminal Investigation</td>
<td>3</td>
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<td>ADJI 220</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<td>ADJI 221</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 222</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 223</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 224</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 225</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 226</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<tr>
<td>ADJI 227</td>
<td>Criminal Law</td>
<td>3</td>
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<tr>
<td>ADJI 228</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 229</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
</tr>
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<td>ADJI 230</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 231</td>
<td>Criminal Investigation</td>
<td>3</td>
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<tr>
<td>ADJI 232</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<td>ADJI 233</td>
<td>Criminal Law</td>
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<td>ADJI 234</td>
<td>Criminal Investigation</td>
<td>3</td>
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<tr>
<td>ADJI 235</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<tr>
<td>ADJI 236</td>
<td>Criminal Law</td>
<td>3</td>
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<td>ADJI 237</td>
<td>Criminal Investigation</td>
<td>3</td>
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<td>ADJI 238</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
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<td>ADJI 239</td>
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<td>ADJI 240</td>
<td>Criminal Investigation</td>
<td>3</td>
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<td>ADJI 241</td>
<td>Criminal Law Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 242</td>
<td>Criminal Law</td>
<td>3</td>
</tr>
<tr>
<td>ADJI 243</td>
<td>Criminal Investigation</td>
<td>3</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.A. MAJOR ................................................................. 21

Color Legend:

CHANGE FROM PROG REVISION  NEW/MODIFIED REQUIREMENT  INACTIVATED  UNCHANGED FROM 2011-2012 CATALOG

ACADEMIC PROGRAMS
## Chemical Dependency Counseling PROGRAM

### A.A. Degree: Human Services/Chemical Dependency Counseling

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below:

#### REQUIRED COURSES - COMPLETE 23 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMSR 101</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 111</td>
<td>Counseling in Chemical Dependency</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 116</td>
<td>Drugs and Alcohol in Society</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 117</td>
<td>Intervention, Treatment Strategies in Chemical Dependency</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 118</td>
<td>Pharmacology of Abused Substances</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 120</td>
<td>Professional Development in the Helping Professions</td>
<td>3</td>
</tr>
<tr>
<td>HUMSR 144</td>
<td>Community Agency Practicum Discussion</td>
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</tr>
<tr>
<td>HUMSR 145AB</td>
<td>Community Agency Practicum</td>
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#### MINIMUM UNITS IN A.A. MAJOR

<table>
<thead>
<tr>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>23</td>
</tr>
</tbody>
</table>

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### Ethnic Studies PROGRAM

#### Skills Recognition Award: Ethnic Studies

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

#### REQUIRED COURSES – COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ANTHR 102</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 107</td>
<td>World Civilization from the 16th Century</td>
<td>3</td>
</tr>
<tr>
<td>SPCM 130</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

#### COMPLETE ONE OPTION for 9 units, with 3 units completed each concentration:

##### I. International Studies Option:

- **A. EXAMINING CULTURE THROUGH ARTS AND LITERATURE:** COMPLETE 3 UNITS
  - ART 169 | History of Non-Western Art | 3 |
  - ENGL 131 | Introduction to World Literature to 1500 | 3 |
  - ENGL 132 | Introduction to World Lit. from 1500 to Present | 3 |
  - ENGL 151 | Folklore | 3 |
  - ENGL 173 | Introduction to Latin American Literature | 3 |
  - HUMAN 110 | East Meets West | 3 |
  - MUSC 169 | Introduction to World Music | 3 |
  - THEAT 102 | World Theater | 3 |
  - THEAT/PE 194 | World Dance | 3 |

- **B. EXAMINING HISTORICAL AND POLITICAL PERSPECTIVES:** COMPLETE 3 UNITS
  - BUSAD 208 | Introduction to International Business | 3 |
  - GEG 110 | World Regional Geography | 3 |
  - HIST 106 | World Civilization from the 16th Century | 3 |
  - HIST 125 | History of Mexico | 3 |
  - POLS 110 | International Relations | 3 |

- **C. EXPLORING CULTURAL AND SOCIOLOGICAL ISSUES:** COMPLETE 3 UNITS
  - ANTHR 140 | Magic, Witchcraft, & Religion | 3 |
  - ANTHR 150 | Native People of North America | 3 |
  - GEG 102 | Cultural Geography | 3 |
  - HUMAN 130 | Introduction to Western Religions | 3 |
  - SOCS 105 | Women’s Studies | 3 |

##### II. Domestic Studies Option:

- **A. EXAMINING CULTURE THROUGH ARTS AND LITERATURE:** COMPLETE 3 UNITS
  - ENGL 171 | Introduction to African American Literature | 3 |
  - ENGL 172 | Introduction to Chicano Literature | 3 |
  - ENGL 179 | Intro to Native American Lit. Mythology, and the Oral Tradition | 3 |
  - HUMAN 120 | Culture, Diversity, & Tolerance in the Arts | 3 |
  - SPAN 112 | Introduction to Chicano/a Literature | 3 |

- **B. EXAMINING HISTORICAL AND POLITICAL PERSPECTIVES:** COMPLETE 3 UNITS
  - HIST 113 | Social & Cultural Hist of the U.S prior to the 20th Century | 3 |
  - HIST 119 | Social & Cultural Hist. of 20th Century America | 3 |
  - HIST 128 | History of the American Far Western Frontier | 3 |
  - HIST 154 | African Americans through the 19th Century | 3 |
  - HIST 155 | African Americans through the 20th & 21st Century | 3 |

- **C. EXPLORING CULTURAL AND SOCIOLOGICAL ISSUES:** COMPLETE 3 UNITS
  - ADJ 144 | Multicultural Issues within Public Safety | 3 |
  - CLOD 262 | Diversity in Educational Settings | 3 |
  - SOC 150 | Ethnicity & Culture in America | 3 |
  - SOC 154 | African-American Cultures and Communities | 3 |
  - SOC 156 | Mexican Culture in the United States | 3 |

#### TOTAL UNITS FOR SKILLS RECOGNITION

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
</tr>
</tbody>
</table>
**Human Services PROGRAM**

Certificate of Achievement: Human Services

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

**REQUIRED COURSES - COMPLETE 27 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
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<tbody>
<tr>
<td>HUMSR 101</td>
<td>1</td>
<td>Introduction to Human Service Careers</td>
</tr>
<tr>
<td>HUMSR 110</td>
<td>1</td>
<td>Introduction to Human Services</td>
</tr>
<tr>
<td>HUMSR 114</td>
<td>1</td>
<td>Introduction to Interviewing, Counseling</td>
</tr>
<tr>
<td>HUMSR 116</td>
<td>1</td>
<td>Drugs and Alcohol in Society</td>
</tr>
<tr>
<td>HUMSR 120</td>
<td>2</td>
<td>Professional Development in the Helping Professions</td>
</tr>
<tr>
<td>SOCIO 150</td>
<td>2</td>
<td>Ethnicity and Culture in America</td>
</tr>
<tr>
<td>SOCIO 156</td>
<td>2</td>
<td>Mexican Culture in the United States</td>
</tr>
<tr>
<td>SOCIO 125</td>
<td>2</td>
<td>Sociology of the Family</td>
</tr>
<tr>
<td>HUMSR 144</td>
<td>NP</td>
<td>Community Agency Practicum Discussion</td>
</tr>
<tr>
<td>HUMSR 145ABD</td>
<td>NP</td>
<td>Community Agency Practicum</td>
</tr>
<tr>
<td>PSYCH 110</td>
<td>2</td>
<td>Human Sexual Behavior</td>
</tr>
<tr>
<td>PSYCH 130</td>
<td>3</td>
<td>Personal Adjustment</td>
</tr>
<tr>
<td>PSYCH 141</td>
<td>3</td>
<td>Human Life Span</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT** 27

**A.A. Degree: Human Services**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 17 UNITS**

<table>
<thead>
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<tr>
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<td>1</td>
<td>Introduction to Human Service Careers</td>
</tr>
<tr>
<td>HUMSR 110</td>
<td>2</td>
<td>Introduction to Interviewing, Counseling</td>
</tr>
<tr>
<td>HUMSR 114</td>
<td>NP</td>
<td>Death and Dying</td>
</tr>
<tr>
<td>HUMSR 144</td>
<td>NP</td>
<td>Community Agency Practicum Discussion</td>
</tr>
<tr>
<td>HUMSR 145ABD</td>
<td>NP</td>
<td>Community Agency Practicum</td>
</tr>
<tr>
<td>HUMSR 116</td>
<td>1</td>
<td>Drugs and Alcohol in Society</td>
</tr>
<tr>
<td>SOCIO 150</td>
<td>NP</td>
<td>Minorities in America</td>
</tr>
<tr>
<td>SOCIO 156</td>
<td>NP</td>
<td>Mexican Culture in the United States</td>
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**ELECTIVE COURSES - COMPLETE 3 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ANTHR 102</td>
<td>2</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>HUMSR 103</td>
<td>1</td>
<td>Introduction to Human Service Careers</td>
</tr>
<tr>
<td>HUMSR 113</td>
<td>NP</td>
<td>Co-Occurring Disorders</td>
</tr>
<tr>
<td>HUMSR 119</td>
<td>NP</td>
<td>Introduction to Group Leadership &amp; Group Process</td>
</tr>
<tr>
<td>HUMSR 120</td>
<td>NP</td>
<td>Professional Devt. in the Helping Professions</td>
</tr>
<tr>
<td>POLSC 120</td>
<td>4</td>
<td>California Politics and Problems</td>
</tr>
<tr>
<td>PSYCH 51</td>
<td>1</td>
<td>Psychology in Everyday Life</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>1</td>
<td>General Psychology</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR** 20

---

**Psychosocial Rehabilitation PROGRAM**

The Psychosocial Rehabilitation (PSR) program comes from the emerging need in the human services field to recruit and hire qualified persons to provide services for people who have mental health problems, including consumers and family members as employees in the mental health system. Completion of the Psychosocial Rehabilitation program will provide the SKILLS RECOGNITION holder with a core curriculum of essential skills necessary for jobs in the human services field and provide the nine units of college credit necessary to sit for the national test-based certification exam, enabling people to become certified Psychosocial Rehabilitation Practitioners. This core set of courses not only provides a basic education for people entering the human services profession but also provides training and growth opportunities for existing human service employees. In addition, this SKILLS RECOGNITION will serve as another step in an educational and career ladder leading to a Human Services SKILLS RECOGNITION and/or Degree. All coursework will be applicable as electives and/or meet the requirements for the Human Services degrees at NIC.

**Skills Recognition Award: Psychosocial Rehabilitation**

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

**REQUIRED COURSES - COMPLETE 9 UNITS**

<table>
<thead>
<tr>
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<th>Units</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>HUMSR 142</td>
<td>NP</td>
<td>Introduction to Psychosocial Rehabilitation</td>
</tr>
<tr>
<td>HUMSR 143</td>
<td>NP</td>
<td>Applications of Psychosocial Rehabilitation Practice</td>
</tr>
<tr>
<td>HUMSR 144</td>
<td>NP</td>
<td>Community Agency Practicum Discussion</td>
</tr>
<tr>
<td>HUMSR 145ABD</td>
<td>NP</td>
<td>Community Agency Practicum</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION** 9

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**Color Legend:**

- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
Awards Conferred in:

Accounting, AS, AA, C
Accounting Clerk, C
Bookkeeping, AS, AA, C
Business Administration, AS, AA
Business Operations, AS, AA
Clerical, AS, AA, C
Computer Applications Specialist, C
Computer Graphics Applications, AS, C
Computer Information Systems, AA
Computer Programming Specialist, C
Computer Science, AS, AA
International Business, C
Marketing, AS, AA
Network Administration, C
Network Technician, C
Office Administration, AS, AA, C
Office Computer Applications, C
Office Support, C
Professional Selling, C
Records Management/Data-Entry Specialist, C
Real Estate, AS, AA, C
Retail Management, SR
Supervisory Management, AS, AA, C
Word Processing, C

Certificate of Achievement: Accounting

The Accounting Certificate is designed for students entering into the accounting field at the entry level. If you wish to pursue professional certification (i.e., Certified Public Accountant and/or Certified Management Accountant), you should plan to earn at least a bachelor’s degree in Business Administration with a major in Accounting.

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 18 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 202</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 203</td>
<td>Computer Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>Spreadsheet Skills for Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 204</td>
<td>Cost Accounting</td>
<td>3     OR</td>
</tr>
<tr>
<td>BUSAD 336</td>
<td>Tax Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 300</td>
<td>Machine Calculation</td>
<td>2</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPS 201</td>
<td>General Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>CMPS 202</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 377</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 230</td>
<td>Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>MATH 50</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 319</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
</tbody>
</table>

Total units for Certificate of Achievement: 24

Color Legend:

CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG
A.A. Degree: Accounting

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

To earn a Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 20 UNITS

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>BUSAD 202</td>
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<td>CMPS 201</td>
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<tr>
<td>BUSAD 203</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>1</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.A. MAJOR ...................................................... 20

A.S. Degree: Accounting

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

To earn a Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 20 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201</td>
<td>1</td>
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<tr>
<td>BUSAD 202</td>
<td>2</td>
</tr>
<tr>
<td>CMPS 201</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 203</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>1</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.S. MAJOR ...................................................... 30

Certificate of Achievement: Bookkeeping

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 19 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>MATH 50</td>
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<tr>
<td>BUSAD 310</td>
<td>[NP]</td>
</tr>
<tr>
<td>BUSAD 320</td>
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<td>[NP]</td>
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<tr>
<td>BUSAD 319</td>
<td>[NP]</td>
</tr>
<tr>
<td>BUSAD 300</td>
<td>[NP]</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CMPS 202</td>
<td>[NP]</td>
</tr>
<tr>
<td>BUSAD 248</td>
<td>[NP]</td>
</tr>
<tr>
<td>OFADM 203</td>
<td>[NP]</td>
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<tr>
<td>OFADM 305</td>
<td>[NP]</td>
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<tr>
<td>BUSAD 377</td>
<td>[NP]</td>
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</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT.......................... 25

A.A. Degree: Bookkeeping

EXPECTED STUDENT LEARNING OUTCOMES

Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 19 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
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<td>[4]</td>
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<td>[1]</td>
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<td>BUSAD 50</td>
<td>[1]</td>
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<tr>
<td>BUSAD 200</td>
<td>[2]</td>
</tr>
<tr>
<td>BUSAD 319</td>
<td>[3]</td>
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</table>

ELECTIVE COURSES - COMPLETE 3 UNITS

<table>
<thead>
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<th>Course</th>
<th>Units</th>
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<tr>
<td>BUSAD 245</td>
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</table>

MINIMUM UNITS IN A.A. MAJOR ...................................................... 22

A.S. Degree: Bookkeeping

Color Legend:
### Expected Student Learning Outcomes

**Students who earn a...**

**[PLOs PENDING AT CURRICULUM COMMITTEE]**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**Required Courses - Complete 19 Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BUSAD 310</td>
<td>Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 320</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 203</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 300</td>
<td>Machine Calculations</td>
<td>2</td>
</tr>
<tr>
<td>MATH 50</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>Spreadsheet Skills for Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 319</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses - Complete 5 Units**

- Any courses in Business Administration, Computer Science, or Office Administration

**Minimum Units in A.S. Major**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

### Business Administration Program

This curriculum plan is intended for those interested in transferring to a four-year college or university. Students are encouraged to consult with the business staff or counselor in order to modify the curriculum to reflect their career interests and the career goals of the major. Students who plan to pursue a Business Administration major at a four-year institution should check the catalog of the senior school for specific requirements. Visit www.assist.org for specific transfer information.

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

**A.A. Degree: Business Administration**

**Expected Student Learning Outcomes**

**Students who earn a...**

**[PLOs PENDING AT CURRICULUM COMMITTEE]**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**Required Courses - Complete 15 Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 202</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minimum Units in A.A. Major**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

### ELECTIVE COURSES - COMPLETE 5 UNITS

Any courses in Office Administration, Business Administration, or Computer Graphics Applications, Computer Science, Real Estate and Economics (ECON 101 and 102 only)

**Minimum Units in A.A. Major**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

### Color Legend:

- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG
The Business Operations major is designed for those students seeking an A.A./A.S. degree in management and/or marketing activities of organizations. The major offers two separate tracks for those students wishing to specialize in either area.

The Management track in Business Operations will prepare students for careers in both profit and nonprofit organizations. The basic functions of management are applied in organizations of all sizes and types. These functions include planning, organization, directing, and controlling. Students will learn the theory and techniques of problem solving, communication, motivation, and quality performance.

A.A. Degree:
Business Operations: Management

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 20 UNITS

- BUSAD 240 [1] Principles of Management ............................................... 3

MINIMUM UNITS IN A.A. MAJOR ............................................................. 20

A.S. Degree:
Business Operations: Management

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the Required units for A.A. Degree, in addition to the following coursework.

ELECTIVE COURSES - COMPLETE 10 UNITS

Any courses in Business Administration, Computer Science, or Office Administration

UNITS IN A.S. MAJOR ............................................................................ 30

The Clerical A.A./A.S. Degree/Certificate programs are designed to prepare students for various types of office occupations in the clerical field. Clerical training involves the study of various procedures, duties, and practices applicable to many business offices, as well as the development and acquisition of basic skills necessary for success in those positions. Students learn keyboarding, records management, human relations, business communication, and math.

Career possibilities in the clerical field are numerous. Jobs exist in governmental agencies, schools, health facilities, stores, and in private businesses. Some of the career alternatives for clerical graduates are record keeper, file clerk, general office clerk, mail clerk, inventory clerk, receptionist, and word processor.

Certificate of Achievement: Clerical

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

REQUIRED COURSES - COMPLETE 30 UNITS

- OFADM 202 [1] Intermediate Keyboarding ........................................ 2
- OFADM 303 [1] Keyboarding for Speed & Accuracy (twice at ½ unit) ... 1
- OFADM 304 [1] Professional English for Business ......................... 3
- OFADM 313 [1] Office Skills ............................................................. 3
- OFADM 323 [1] Introduction to Computers and Windows .................... 1
- OFADM 359 [2] Introduction to Spreadsheet Software ...................... 1
- OFADM 362 [1] Introduction to Business Presentation Software .......... 1
- OFADM 363 [1] Understanding the Internet ..................................... 1
- OFADM 366 [2] Proofreading Techniques ......................................... 1
- OFADM 375 [1] 10-Key on the Computer ......................................... 1
- OFADM 304 [1] Professional English for Business ......................... 3
- OFADM 313 [1] Office Skills ............................................................. 3
- OFADM 359 [2] Introduction to Spreadsheet Software ...................... 3
- OFADM 363 [1] Understanding the Internet ..................................... 3
- OFADM 375 [1] 10-Key on the Computer ......................................... 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .............................. 30

A.A. Degree: Clerical

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 20 UNITS

- OFADM 202 [1] Intermediate Keyboarding ........................................ 2
- OFADM 313 [1] Office Skills ............................................................. 3
- OFADM 353 [NP] Introduction to Computers and Windows ................... 1
- OFADM 359 [2] Introduction to Spreadsheet Software ...................... 1
- OFADM 375 [4] 10-Key on the Computer ......................................... 1

MINIMUM UNITS IN A.A. MAJOR ............................................................. 20
A.S. Degree: Clerical

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) in addition to the 20 Required Units for A.A. Degree, plus 10 Elective Units from the Elective Courses below, and complete the MJC Associate Degree Requirements. Student should consult with a Clerical advisor for selection of Elective Units.

ELECTIVE COURSES - COMPLETE 10 UNITS

OFADM 303 [NP] Keyboarding for Speed & Accuracy (twice at ½ unit) .......... 1
OFADM 307 [NP] Alphabetical Footnoting .................................................. 3
OFADM 320 [NP] Telephone Techniques .......................................................
OFADM 330 [NP] Beginning Word Processing ............................................ 3
OFADM 362 [NP] Introduction to Business Presentation Software ............... 1
OFADM 363 [NP] Understanding the Internet .............................................. 1
OFADM 366 [NP] Proofreading Techniques .................................................. 1
BUSAD 300 [NP] Machine Calculations ....................................................... 2
BUSAD 310 [NP] Bookkeeping 1 ................................................................ 3

MINIMUM UNITS IN A.S. MAJOR .................................................................. 30

Certificate of Achievement: Computer Applications Specialist

REQUdRd COURSES – COMPLETE 18 UNITS

CMPS 201 [1] General Computer Literacy ..................................................... 3
CMGR 263 [1] Internet Literacy ................................................................ 3
CMPS 278 [2] Spreadsheet Software .......................................................... 2

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ................................ 18

Certificate of Achievement: Computer Graphics Applications

ELECTIVE COURSES - COMPLETE 2 UNITS

ART 160 [NP] Appreciation of Art ................................................................. 3
ART 170 [NP] Basic Photography ................................................................. 3 OR
ART 181 [NP] Basic Photography 1 ............................................................... 1½ OR
ART 182 [NP] Basic Photography 2 ............................................................... 1½
CGR 201 [NP] Graphic Arts Fundamentals ................................................. 3
CLR 237 [2] Logo Design and Typography ................................................ 3
CLR 237 [1] Electronic Publishing ............................................................... 3
ART 123 [NP] Figure Drawing .................................................................
ELTEC 315 [NP] Introduction to Media Systems ........................................ 2
ENGTC 210 [NP] Introduction to C.A.D .......................................................
CMPS 201 [1] General Computer Literacy ..................................................
CMFG 236 [NP] Advanced Photoshop ....................................................... 3
CMFG 262 [NP] Exploring the World Wide Web ......................................... 1
CMFG 263 [NP] Internet Literacy ................................................................. 3
CMFG 264 [NP] Publishing on the World Wide Web ...................................
CMFG 267 [2] Dreamweaver in Website Design ......................................... 3
CMFG 285A, B [NP] Special Projects ........................................................... 1,2
CMFG 287 [NP] Introduction to Multimedia ................................................. 3
CMFG 298A, B [NP] Special Topics (with approval) ..................................... 1,2
RATV 134 [NP] Television Studio Operations ............................................ 3
ARCH 110 [NP] Descriptive Drawing .......................................................... 1

Color Legend:

CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
A.S. Degree: **Computer Graphics Applications**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of Required and Elective courses for certificate, with the exception of CMPGR 219.

**TOTAL UNITS REQUIRED IN A.S. MAJOR** ................................................................. 39

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**Computer Information Systems PROGRAM**

The Business Computer Information Systems program is designed for students who plan to specialize in business computer applications at a four-year college. Students who wish to declare this transfer major should ask for program planning assistance from a business program advisor. Transfer institutions vary in lower division (first two years of college) major department requirements. Meeting the Modesto Junior College Associate Degree major requirements does not necessarily mean a given transfer institution's major requirements have been met.

---

A.A. Degree: **Computer Information Systems**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Students are urged to meet with a Computer Science faculty advisor to assist them plan their specific program for graduation.

**REQUIRED COURSES - COMPLETE 21 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 202</td>
<td>Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 275</td>
<td>Database Mgmt. Systems for Microcomputers</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 220</td>
<td>Database Server Administration</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR** ......................................................................... 21

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**Computer Programming Specialist PROGRAM**

Certificate of Achievement:

**Computer Programming Specialist**

This Skills Recognition Award will prepare students to work as an entry level programmer in the areas of JAVA programming, C++ programming, or Visual BASIC programming.

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

**REQUIRED COURSES – COMPLETE 13 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 204</td>
<td>Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 205</td>
<td>Problem Solving and Programming 1</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 206</td>
<td>UNIX/Linux OS</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 213</td>
<td>Programming with Visual Basic</td>
<td>3</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES – COMPLETE 3-4 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 214</td>
<td>Advanced Visual Basic</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 216</td>
<td>Script Programming for the Web</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 261</td>
<td>Problem Solving and Programming 2</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 291</td>
<td>Windows Programming with Visual Studio</td>
<td>4</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS FOR CERTIFICATE OF ACHIEVEMENT** ........................................... 16
The Computer Science A.S. Degree program at Modesto Junior College is designed to meet the needs of non-transfer students who wish to acquire the new computer skills needed in today's work environment. The Computer Science program provides students with a general knowledge of computer literacy and information systems, microcomputer hardware and software systems, the ability to work with a wide variety of applications software, and an opportunity to develop programming and problem-solving skills.

Students who wish to major in Computer Science and transfer to a four-year institution should ask for program planning assistance from a business program advisor. Modesto Junior College offers a Computer Science transfer major to meet the major requirement for the associate degree. Transfer institutions vary in lower division (first two years of college) major department requirements. Meeting the Modesto Junior College Associate Degree major requirements does not necessarily mean the transfer institution's major requirements have been met. Consult a Computer Science faculty advisor for assistance in determining the appropriate courses for the major you select.

A.A. Degree: Computer Science

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Students are urged to meet with a Computer Science faculty advisor to assist them plan their specific program for graduation.

IMPORTANT: This program is intended to be a Transfer Program guide only. Associate Degree Requirements, general education patterns, and junior standing requirements are subject to change. It is the student’s responsibility to consult the catalog for the targeted college/university. Students may consult a business division advisor for a sample four-semester plan and more detailed program-planning guidance.

RECOMMENDED PREPARATION - (NOT PART OF MAJOR)
OFADM 301 [1] Beginning Keyboarding ........................................ 11 OR Equivalent Keyboarding Skills

REQUIRED COURSES - COMPLETE 20 UNITS
CMPS 205 [2] Problem Solving and Programming 1 ......................................................... 4
CMPS 241 [4] Assembly Language Programming ................................................................. 4
CMPS 261 [3] Problem Solving and Programming 2 ............................................................... 4
MATH 122 [1] Functions and Analytical Geometry ................................................................. 4 OR (Higher Math) ............................................................... 4

MINIMUM UNITS FOR A.A. MAJOR ................................................................. 20

A.S. Degree: Computer Science

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Students are urged to meet with a Computer Science faculty advisor to assist them plan their specific program for graduation.

IMPORTANT: This program is intended to be a Transfer Program guide only. Associate Degree Requirements, general education patterns, and junior standing requirements are subject to change. It is the student’s responsibility to consult the catalog for the targeted college/university. Students may consult a business division advisor for a sample four-semester plan and more detailed program-planning guidance.

REQUIRED OPTION - COMPLETE ONE OPTION FOR 30-33 UNITS

Information Systems Option
CMPS 204 [1] Introduction to Programming ................................................................. 3
CMPS 275 [1] Database Management Systems ............................................................... 3
CMPS 278 [3] Spreadsheet Software ................................................................. 3
CMPS 294 [4] Computer Science Final Project ............................................................. 3

Networking Option
CMPS 204 [1] Introduction to Programming ................................................................. 3
CMPS 263 [2] Networking Essentials ................................................................. 4
CMPS 206 [2] UNIX/Linux OS ................................................................. 3
CMPS 294 [4] Computer Science Final Project ............................................................. 3

Programming Option
CMPS 201 [1] General Computer Literacy ................................................................. 3
CMPS 204 [1] Introduction to Programming ................................................................. 3
CMPS 205 [2] UNIX/Linux OS ................................................................. 3
CMPS 206 [2] Problem Solving and Programming 1 ......................................................... 3
CMPS 261 [3] Problem Solving and Programming 2 ......................................................... 4
CMPS 241 [4] Assembly Language Programming .......................................................... 4
CMPS 294 [4] Computer Science Final Project ............................................................. 3

MINIMUM UNITS IN A.S. MAJOR ................................................................. 30-33
International Business Program

The International Business Skills Recognition Award is designed for those students seeking an entrepreneurial or organizational career in global commerce. It may be obtained as an individual certificate or incorporated into other appropriate majors. Courses are designed to provide an essential understanding of both domestic and international business practices. Economic and cultural considerations are addressed in relation to business of all sizes and types.

Certificate of Achievement: International Business

- To earn a Skills Recognition Award, the student must complete the coursework as indicated below. Each course must be completed with a grade of C or better.

**REQUIRED COURSES - COMPLETE 17 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 208</td>
<td>Survey of International Business</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 209</td>
<td>Import/Export Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT** ........................................ 17

---

Marketing Program

The Marketing program is designed for those students interested in activities relating to the presentation, purchase, and distribution of goods and services in profit and nonprofit organizations. Students will learn the central role that marketing plays in organizations of every size and type, public and private.

A.A. Degree: Marketing

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 20 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BUSAD 210</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 240</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 245</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 299A,B</td>
<td>Marketing Projects</td>
<td>1-2</td>
</tr>
<tr>
<td>BUSAD 358</td>
<td>Sales and Ad Promotion</td>
<td>3</td>
</tr>
<tr>
<td>CMPGR 215</td>
<td>Business Presentation Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 201</td>
<td>General Computer Literacy</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR** ................................................................ 20

A.S. Degree: Marketing

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**ELECTIVE COURSES - COMPLETE 10 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 310</td>
<td>Bookkeeping</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 200</td>
<td>Spreadsheet Skills for Financial Accounting</td>
<td>2</td>
</tr>
</tbody>
</table>

ANY 4-5 UNITS OF COURSEWORK IN BUSAD, OFADM OR CMPSC

**MINIMUM UNITS IN A.S. MAJOR** ................................................................ 30
This certificate is designed for students seeking entry-level job positions in computer network administration, designing networks, installing server and client operating systems, configuring network services, and implementing network security.

Note: All of these courses are also preparation for Microsoft certification as a Microsoft Certified Professional (MCP) in the individual subject. A student who has completed the Network Administration Certificate would be eligible to complete the Microsoft Certified Systems Engineer (MCSE) certification with the completion of just one additional course from the options list.

Certificate of Achievement: Computer Network Administration

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

**REQUIRED COURSES – COMPLETE 15 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 206</td>
<td>UNIX/Linux OS</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 220</td>
<td>Database Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 264</td>
<td>Windows Server OS</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 281</td>
<td>Advanced Networking and Security</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 289</td>
<td>Directory Services</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 15

Certificate of Achievement: Computer Network Technician

This certificate of achievement is designed for students seeking an entry-level position in computer network hardware installation, troubleshooting, and repair.

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

**REQUIRED COURSES – COMPLETE 14 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 201</td>
<td>General Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>CMPET 206</td>
<td>Personal Computer Assembly, Upgrading and Repair</td>
<td>3</td>
</tr>
<tr>
<td>CMPET 210</td>
<td>Intermediate Personal Computer Assembly, Upgrading, and Repair (CompTIA A+)</td>
<td>3</td>
</tr>
<tr>
<td>CMPGR 262</td>
<td>Exploring the Internet</td>
<td>1</td>
</tr>
<tr>
<td>CMPSC 263</td>
<td>Networking Essentials</td>
<td>4</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES – COMPLETE 3 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 206</td>
<td>UNIX/Linux Systems and Programming</td>
<td>3</td>
</tr>
<tr>
<td>ELTEC 208</td>
<td>World of Electricity and Electronics</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 17

Certificate of Achievement: Office Administration

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

**REQUIRED COURSES - COMPLETE 32 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFADM 202</td>
<td>Intermediate Keyboarding 2</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 231</td>
<td>Intermediate Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 311</td>
<td>Business Proofreading and Editing</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 314</td>
<td>Office Procedures and Technologies</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 315</td>
<td>Today’s Office</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 359</td>
<td>Introduction to Spreadsheet Software</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 361</td>
<td>Introduction to Databases</td>
<td>1</td>
</tr>
<tr>
<td>OFADM 363</td>
<td>Understanding the Internet</td>
<td>1</td>
</tr>
<tr>
<td>OFADM 320</td>
<td>Telephone Techniques</td>
<td>1</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 232</td>
<td>Advanced Word Processing &amp; Desktop Publishing</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 375</td>
<td>Machine Transcription 2</td>
<td>2</td>
</tr>
<tr>
<td>OFFADM 375</td>
<td>10-Key on the Computer</td>
<td>1</td>
</tr>
<tr>
<td>CMPGR 215</td>
<td>Business-Presentation Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 50</td>
<td>Business Math</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 32

A.A. Degree: Office Administration

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below

**REQUIRED COURSES - COMPLETE 20 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFADM 202</td>
<td>Intermediate Keyboarding 2</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 231</td>
<td>Intermediate Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 320</td>
<td>Telephone Techniques</td>
<td>1</td>
</tr>
<tr>
<td>OFADM 311</td>
<td>Business Proofreading and Editing</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 314</td>
<td>Office Procedures and Technologies</td>
<td>3</td>
</tr>
<tr>
<td>OFADM 315</td>
<td>Today’s Office</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 359</td>
<td>Introduction to Spreadsheet Software</td>
<td>2</td>
</tr>
<tr>
<td>OFADM 361</td>
<td>Introduction to Databases</td>
<td>1</td>
</tr>
<tr>
<td>OFADM 362</td>
<td>Introduction to Business-Presentation Software</td>
<td>1</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>Business Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR**: 20
A.S. Degree: **Office Administration**

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the the required courses for AA Degree, the 10 Elective units belows. Student should consult with an Office Administration advisor for selection of Elective Units.

**MINIMUM UNITS IN A.S. MAJOR** ............................................. 30

### Office Support PROGRAM

The Office Support Certificate of Achievement is designed for students desiring to meet entry-level qualifications for office support positions which require keyboarding, telephone techniques, business document formatting, document organization, time management, word processing skills, Internet and e-mail protocol, and spreadsheet design.

**Certificate of Achievement: Office Support**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...

**[PLOs PENDING AT CURRICULUM COMMITTEE]**

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

**REQUIRED COURSES - COMPLETE 18 UNITS**

- OFADM 301 [1] Beginning Keyboarding ............................................. 1½
- CMPSC 278 [2] Spreadsheet Software .................................................... 3
- OFADM 361 [2] Introduction to Databases ............................................. 1
- OFADM 362 [2] Introduction to Business Presentation Software .................. 1
- OFADM 353 [1] Introduction to Windows ............................................. 1

**MINIMUM UNITS FOR CERTIFICATE OF ACHIEVEMENT** ............. 18

### Office Computer Applications PROGRAM

The Office Computer Applications Certificate of Achievement will be given for occupational preparation and/or career supplementation and/or career upgrade. These courses will help students meet the computer requirements needed for today’s office worker—keyboarding, advanced document preparation including mail merge and linking/embedding documents, spreadsheet design and analysis, computer presentation design, information management utilizing a database, and the Windows operating system.

**Certificate of Achievement: Office Computer Applications Specialist?**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...

**[PLOs PENDING AT CURRICULUM COMMITTEE]**

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

**REQUIRED COURSES - COMPLETE 18 UNITS**

- OFADM 201 [1] Beginning Keyboarding ............................................. 1½
- OFADM 304 [1] Professional English for Business .................................. 3
- OFADM 304 [NP] Professional English for Business ................................. 3
- OFADM 305 [NP] Records Management ..................................................... 3
- OFADM 312 [NP] Alphabetic Notetaking ................................................... 3
- OFADM 329 [NP] Machine Transcription 2 .............................................. 2
- OFADM 314 [NP] Office Procedures and Technologies ............................. 3
- OFADM 320 [1] Telephone Techniques .................................................... 1
- OFADM 359 [2] Introduction to Spreadsheets ......................................... 1
- OFADM 363 [2] Introduction to the Internet ............................................. 1

**MINIMUM UNITS FOR CERTIFICATE OF ACHIEVEMENT** ............. 17
Professional Selling

PROGRAM

The Professional Selling Certificate program concerns itself with the activities that take place in the sale and distribution of goods and services in a world economy. It includes such areas of creative selling as marketing and business communication. Professional Selling is an important part of the marketing process. The salesperson must be able to interpret product and service features in terms of benefits and advantages to the consumer, and to then persuade the buyer to select that product or service. In the Professional Selling Program, the student is trained for entry-level jobs in sales.

Certificate of Achievement: Professional Selling

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 27 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 210</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 245</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 377</td>
<td>Human Relations in Business</td>
<td>3</td>
</tr>
<tr>
<td>MATH 50</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>SCPOM 100</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>Composition and Reading</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 50</td>
<td>Basic Writing</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 310</td>
<td>Bookkeeping 1</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 240</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 358</td>
<td>Sales and Ad Promotion</td>
<td>3</td>
</tr>
</tbody>
</table>

ADDITIONAL ELECTIVE COURSES - COMPLETE 3 UNITS

Any courses in Business Administration, Computer Science, or Office Administration

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT.................................................. 30

Real Estate

PROGRAM

The Real Estate A.A./A.S. Degree/Certificate program is designed to provide the skills necessary for salespersons and other workers in the real estate field. Courses cover principles and practices of real estate, financing economics, legal aspects of real estate appraisal, and escrow. The courses fulfill the state requirements for the salesperson and/or brokers license. Students may qualify for entry level jobs in the real estate field. Classes are also designed to upgrade the skills of persons who already work in the real estate or escrow field.

Certificate of Achievement: Real Estate

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

• [PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 15 UNITS

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>RLES 380</td>
<td>Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>RLES 381</td>
<td>Real Estate Practices</td>
<td>3</td>
</tr>
<tr>
<td>RLES 384</td>
<td>Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>RLES 385</td>
<td>Real Estate Appraisal/Residential</td>
<td>3</td>
</tr>
<tr>
<td>RLES 392</td>
<td>Basic Escrow Procedures</td>
<td>3</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES COMPLETE 6-8 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLES 382</td>
<td>Legal Aspects of Real Estate</td>
<td>3 OR</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>3-4</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
</tbody>
</table>

Complete 3-5 units to meet 26 unit requirement

Courses in Business Administration, Economics, Psychology, or Speech Communication ................................ 3

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT.................................................. 26

A.A. Degree: Real Estate

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below

REQUIRED COURSES - COMPLETE 20 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLES 380</td>
<td>Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>RLES 381</td>
<td>Real Estate Practices</td>
<td>3</td>
</tr>
<tr>
<td>RLES 382</td>
<td>Legal Aspects of Real Estate</td>
<td>3</td>
</tr>
<tr>
<td>RLES 384</td>
<td>Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 218</td>
<td>Business Law</td>
<td>4</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.A. MAJOR ............................................................................ 20

A.S. Degree: Real Estate

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]
Records Management PROGRAM

The Records Management/Data Entry Specialist Certificate of Achievement is designed for students desiring to meet entry-level requirements for records management and data entry employees: keyboarding, filing rules and their applications, manual and computer filing system development, telephone techniques, time management skills, ten-key data entry and math calculations.

Certificate of Achievement: Records Management/Data Entry Specialist

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 16 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>OFADM 301</td>
<td>1½</td>
<td>Beginning Keyboarding</td>
<td></td>
</tr>
<tr>
<td>OFADM 302</td>
<td>1½</td>
<td>Beginning Document Processing</td>
<td></td>
</tr>
<tr>
<td>OFADM 304</td>
<td>1</td>
<td>Professional English for Business</td>
<td></td>
</tr>
<tr>
<td>OFADM 305</td>
<td>2</td>
<td>Records Management</td>
<td></td>
</tr>
<tr>
<td>OFADM 313</td>
<td>1</td>
<td>Office Skills</td>
<td></td>
</tr>
<tr>
<td>OFADM 361</td>
<td>1</td>
<td>Introduction to Databases</td>
<td></td>
</tr>
<tr>
<td>OFADM 375</td>
<td>1</td>
<td>10-Key on the Computer</td>
<td></td>
</tr>
<tr>
<td>BUSAD 300</td>
<td>2</td>
<td>Machine Calculations</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................ 16

Certificate of Achievement: Retail Management (WAFC)

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 27 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 50</td>
<td>1</td>
<td>Business Math</td>
<td></td>
</tr>
<tr>
<td>ENGL 50</td>
<td>1</td>
<td>Basic Composition and Reading</td>
<td></td>
</tr>
<tr>
<td>ENGL 101</td>
<td>NP</td>
<td>Composition and Reading</td>
<td></td>
</tr>
<tr>
<td>CMPSC 201</td>
<td>1</td>
<td>General Computer Literacy</td>
<td></td>
</tr>
<tr>
<td>CMPSC 202</td>
<td>2</td>
<td>Business Information Systems</td>
<td></td>
</tr>
<tr>
<td>SPCOM 100</td>
<td>1</td>
<td>Fundamentals of Public Speaking</td>
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<td>SPCOM 101</td>
<td>NP</td>
<td>Voice and Articulation</td>
<td></td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>NP</td>
<td>Introduction to Human Communication</td>
<td></td>
</tr>
<tr>
<td>SPCOM 106</td>
<td>NP</td>
<td>Group Organizational Communication</td>
<td></td>
</tr>
<tr>
<td>BUSAD 240</td>
<td>2</td>
<td>Principles of Management</td>
<td></td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>NP</td>
<td>Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>BUSAD 377</td>
<td>3</td>
<td>Human Relations in Business</td>
<td></td>
</tr>
<tr>
<td>BUSAD 274</td>
<td>3</td>
<td>Human Resources Management</td>
<td></td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>2</td>
<td>Business Communication</td>
<td></td>
</tr>
<tr>
<td>OFADM 311</td>
<td>NP</td>
<td>Business Proofreading and Editing</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................ 27

Supervisory Management PROGRAM

The Supervisory Management Program is designed to prepare students for leadership responsibilities at the operating level in business, industry, and government. It also provides owners, managers, and other supervisory personnel with the opportunity to complete specific courses designed to develop management ability. Many of the courses are offered in the evening to accommodate working students who are interested in upgrading their skills.

Certificate of Achievement: Supervisory Management

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>SUPR 106</td>
<td>1</td>
<td>Group and Organizational Communication</td>
<td></td>
</tr>
<tr>
<td>SUPR 351</td>
<td>1</td>
<td>Elements of Supervision</td>
<td></td>
</tr>
<tr>
<td>BUSAD 274</td>
<td>3</td>
<td>Human Resources Management</td>
<td></td>
</tr>
<tr>
<td>SUPR 364</td>
<td>2</td>
<td>Total Quality Management</td>
<td></td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 9 UNITS

Any course in Business Administration, Computer Science, or Office Administration.

Color Legend:

CHANGE FROM PROG REVISION  NEW/MODIFIED REQUIREMENT  INACTIVATED  UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT................................. 21

A.A. Degree: Supervisory Management

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPR 106</td>
<td>1</td>
<td>Group and Organizational Communication</td>
<td></td>
</tr>
<tr>
<td>SUPR 351</td>
<td>1</td>
<td>Elements of Supervision</td>
<td></td>
</tr>
<tr>
<td>BUSAD 274</td>
<td>3</td>
<td>Human Resources Management</td>
<td></td>
</tr>
<tr>
<td>SUPR 364</td>
<td>2</td>
<td>Total Quality Management</td>
<td></td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 310</td>
<td>2</td>
<td>Bookkeeping 1</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>2</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>2</td>
<td>Business Communication</td>
</tr>
<tr>
<td>OFADM 304</td>
<td>2</td>
<td>Professional English for Business</td>
</tr>
<tr>
<td>BUSAD 240</td>
<td>NP</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>BUSAD 245</td>
<td>NP</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>BUSAD 248</td>
<td>3</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUSAD 377</td>
<td>NP</td>
<td>Human Relations in Business</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.A. MAJOR .................................................. 21

A.S. Degree: Supervisory Management

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Student should consult with a Supervisory Management advisor for selection of Elective Units.

REQUIRED COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPR 106</td>
<td>1</td>
<td>Group and Organizational Communication</td>
</tr>
<tr>
<td>SUPR 351</td>
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<td>Elements of Supervision</td>
</tr>
<tr>
<td>BUSAD 274</td>
<td>3</td>
<td>Human Resources Management</td>
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<tr>
<td>SUPR 364</td>
<td>2</td>
<td>Total Quality Management</td>
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</table>

ELECTIVE COURSES - COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
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<td>2</td>
<td>Bookkeeping 1</td>
</tr>
<tr>
<td>BUSAD 201</td>
<td>2</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>BUSAD 210</td>
<td>2</td>
<td>Business Communication</td>
</tr>
<tr>
<td>OFADM 304</td>
<td>2</td>
<td>Professional English for Business</td>
</tr>
<tr>
<td>BUSAD 240</td>
<td>NP</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>BUSAD 245</td>
<td>NP</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>BUSAD 248</td>
<td>3</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BUSAD 377</td>
<td>NP</td>
<td>Human Relations in Business</td>
</tr>
</tbody>
</table>

ADDITIONAL ELECTIVE COURSES - COMPLETE 9 UNITS

Any course in Business Administration, Computer Science, or Office Administration

UNITS IN A.S. MAJOR .................................................................... 30

---

Word Processing PROGRAM

The Word Processing Certificate program is designed to teach students word processing skills and concepts. Students acquire the necessary competencies for the modern office. Word processing and Desktop publishing have become one of the fastest growing careers during the past decade. There are a wide variety of employment opportunities available.

Certificate of Achievement: Word Processing

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn a...

[PLOs PENDING AT CURRICULUM COMMITTEE]

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

REQUIRED COURSES - COMPLETE 26 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFADM 303</td>
<td>NP</td>
<td>Keyboarding for Speed &amp; Accuracy (twice at ½ unit)</td>
</tr>
<tr>
<td>OFADM 231</td>
<td>1</td>
<td>Intermediate Keyboarding</td>
</tr>
<tr>
<td>OFADM 232</td>
<td>2</td>
<td>Advanced Word Processing &amp; Desktop Publishing</td>
</tr>
<tr>
<td>OFADM 311</td>
<td>1</td>
<td>Business Proofreading and Editing</td>
</tr>
<tr>
<td>OFADM 314</td>
<td>2</td>
<td>Office Procedures and Technologies</td>
</tr>
<tr>
<td>OFADM 359</td>
<td>1</td>
<td>Introduction to Spreadsheet Software</td>
</tr>
<tr>
<td>OFADM 361</td>
<td>2</td>
<td>Introduction to Databases</td>
</tr>
<tr>
<td>OFADM 363</td>
<td>1</td>
<td>Understanding the Internet</td>
</tr>
<tr>
<td>OFADM 364</td>
<td>1</td>
<td>Grammar in the Office</td>
</tr>
<tr>
<td>BUSAD 270</td>
<td>2</td>
<td>Business Communication</td>
</tr>
<tr>
<td>CMPGR 215</td>
<td>2</td>
<td>Business Presentation Graphics</td>
</tr>
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</table>

ELECTIVE COURSES - COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>CMPGR 214</td>
<td>NP</td>
<td>Digital Capture for Computer Graphics</td>
</tr>
<tr>
<td>CMPGR 217</td>
<td>NP</td>
<td>Computer Illustration Software</td>
</tr>
<tr>
<td>CMPGR 235</td>
<td>NP</td>
<td>Beginning Photoshop</td>
</tr>
<tr>
<td>CMPGR 264</td>
<td>NP</td>
<td>Publishing on the World Wide Web</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT.................................. 32

Note: Not all courses are offered every semester; therefore, students should see an advisor for appropriate course sequence.

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Color Legend:

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REV 01/13/2012 LSM
Educational Programs in Career Technical Education

Pedro Mendez, Interim Dean
West Campus
John Muir Hall
(209) 575-6332

SUPPORT STAFF
Traci Wade, Administrative Specialist
Reene Valasquez, Grant Support Specialist
Macario Ramirez, Inst. Support Specialist
Will Lotko, Lab Assistant II
Irene Nunez, Graphic Arts Tech.
Russ Cator, Lab Assistant II

Degrees and/or Certificates Offered:

- A.A. Degree: Autobody/Collision Repair
  - The Auto Body A.A. degree is designed to help the beginning student progress through basic procedures in body repairs and painting to entry-level job skill development. Current practices used in industry are emphasized. The course orientation examines use of trade equipment, shop safety, theory, and hands-on activities required to perform practical repair operations.
  - To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

- REQUIRED COURSES - COMPLETE 24 UNITS
  - AUBDY 115 [1] Introduction to Technical Industries ........................................ 1
  - AUTEC 311 [1] Basic Automotive Systems ....................................................... 4
  - AUBDY 301 [1] Automotive Collision Repair 1 ................................................. 5
  - AUBDY 303 [3] Automotive Collision Repair 3 ................................................. 4

- TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................ 24

**Certificate of Achievement: Autobody/Collision Repair**

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

**REQUIRED COMPETENCIES**

- MATH 20 [1,2,3] Pre-Algebra ................................................................. 5 OR Eligibility for MATH 70 through Placement Exam

**REQUIRED COURSES - COMPLETE 24 UNITS**

- AUBDY 115 [1] Introduction to Technical Industries ........................................ 1
- AUTEC 311 [1] Basic Automotive Systems ....................................................... 4
- AUBDY 301 [1] Automotive Collision Repair 1 ................................................. 5
- AUBDY 303 [3] Automotive Collision Repair 3 ................................................. 4

**MINIMUM UNITS IN A.A. MAJOR ........................................................................ 24**

**Automotive Industry**

**Autobody Collision Repair PROGRAM**

The Auto Body program is designed to help the beginning student progress through basic procedures in body repairs and painting to entry-level job skill development. Current practices used in industry are emphasized. The course orientation examines use of trade equipment, shop safety, theory, and hands-on activities required to perform practical repair operations.

**Certificate of Achievement: Autobody/Collision Repair**

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

**REQUIRED COMPETENCIES**

- MATH 20 [1,2,3] Pre-Algebra ................................................................. 5 OR Eligibility for MATH 70 through Placement Exam

**REQUIRED COURSES - COMPLETE 24 UNITS**

- AUBDY 115 [1] Introduction to Technical Industries ........................................ 1
- AUTEC 311 [1] Basic Automotive Systems ....................................................... 4
- AUBDY 301 [1] Automotive Collision Repair 1 ................................................. 5
- AUBDY 303 [3] Automotive Collision Repair 3 ................................................. 4

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................ 24**

**Color Legend:**

- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG
**Program:**

**Autobody Refinishing**

**Skills Recognition Award:**

**Auto Body/Refinishing**

**Expected Student Learning Outcomes:**

Students who earn a Certificate of Achievement in Autobody/Refinishing will be able to:

1. Comply with current auto body industry safety and environmental standards.
2. Perform body repairs to vehicles in accordance with auto body industry standards.
3. Work successfully in the auto body repair industry.

**Requirements for Skills Recognition:**

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

**Required Courses - Complete 8 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUBDY 115</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUBDY 301</td>
<td>Automotive Collision Repair 1</td>
</tr>
<tr>
<td>AUBDY 302</td>
<td>Automotive Collision Repair 2</td>
</tr>
<tr>
<td>AUBDY 303</td>
<td>Automotive Collision Repair 3</td>
</tr>
<tr>
<td>AUBDY 320</td>
<td>Automotive Spray Refinishing 1</td>
</tr>
<tr>
<td>AUBDY 321</td>
<td>Automotive Spray Refinishing 2</td>
</tr>
<tr>
<td>AUBDY 399</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION AWARD**

**A.S. Degree: Autobody/Refinishing**

**Expected Student Learning Outcomes:**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students complete the Associate’s Degree in Autobody Refinishing will be able to:

1. Comply with current auto body industry safety and environmental standards.
2. Perform body repairs to vehicles in accordance with auto body industry standards.
3. Work successfully in the auto body repair industry.

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**Required Courses - Complete 27 1/2 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUBDY 115</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUBDY 301</td>
<td>Automotive Collision Repair 1</td>
</tr>
<tr>
<td>AUBDY 302</td>
<td>Automotive Collision Repair 2</td>
</tr>
<tr>
<td>AUBDY 303</td>
<td>Automotive Collision Repair 3</td>
</tr>
<tr>
<td>AUBDY 321</td>
<td>Automotive Spray Refinishing 1</td>
</tr>
<tr>
<td>AUBDY 322</td>
<td>Automotive Spray Refinishing 2</td>
</tr>
<tr>
<td>AUBDY 399</td>
<td>Independent Study</td>
</tr>
<tr>
<td>AUTEC 311</td>
<td>Basic Automotive Systems</td>
</tr>
<tr>
<td>AUTEC 315</td>
<td>Engine Rebuilding</td>
</tr>
<tr>
<td>AUTEC 319</td>
<td>A8: Engine Performance</td>
</tr>
<tr>
<td>AUTEC 320</td>
<td>A5: Brakes Systems</td>
</tr>
<tr>
<td>AUTEC 321</td>
<td>A2: Automatic Transmissions &amp; Transaxles</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>A3: Manual Transmissions &amp; Drive Axles</td>
</tr>
<tr>
<td>AUTEC 323</td>
<td>A1: Advanced Engine Performance</td>
</tr>
<tr>
<td>AUTEC 324</td>
<td>A6: Automotive Electricity 1</td>
</tr>
<tr>
<td>AUTEC 368</td>
<td>A6: Automotive Electricity 2</td>
</tr>
<tr>
<td>AUTEC 369</td>
<td>A6: Automotive Electricity 3</td>
</tr>
<tr>
<td>AUTEC 399</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**Elective Courses - Complete a Minimum of 3 1/2 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTEC 321</td>
<td>A5: Braking Systems</td>
</tr>
<tr>
<td>AUTEC 368</td>
<td>A6: Automotive Electricity 1</td>
</tr>
</tbody>
</table>

**Minimum Units in A.S. Major**

**31**

---

**Program:**

**Automotive Technology**

The Automotive Technology program is designed to provide training in automobile repair, maintenance, and service. This program offers four levels of training: Automotive Technician, Automotive Maintenance Mechanic, Automotive Mechanic, and Automotive Technician. The program prepares students for entry-level jobs in the auto servicing and repair industry.

**Certificate of Achievement: Automotive Technician**

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

**Required Competencies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 20</td>
<td>Pre-Algebra</td>
</tr>
</tbody>
</table>

**Required Courses - Complete 11 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTEC 311</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUTEC 315</td>
<td>Basic Automotive Systems</td>
</tr>
<tr>
<td>AUTEC 319</td>
<td>World of Electricity and Electronics</td>
</tr>
<tr>
<td>MACH 301</td>
<td>Machine Shop I</td>
</tr>
<tr>
<td>MACH 2110</td>
<td>Machine Tool Technology 1</td>
</tr>
<tr>
<td>AUTEC 368</td>
<td>A6: Auto Electric/Electronic Systems 1</td>
</tr>
</tbody>
</table>

**Elective Courses - Complete 27 Units**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTEC 315</td>
<td>Engine Rebuilding</td>
</tr>
<tr>
<td>AUTEC 317</td>
<td>Automotive Air Conditioning</td>
</tr>
<tr>
<td>AUTEC 319</td>
<td>A8: Engine Performance</td>
</tr>
<tr>
<td>AUTEC 320</td>
<td>A5: Brakes Systems</td>
</tr>
<tr>
<td>AUTEC 321</td>
<td>A2: Automatic Transmissions &amp; Transaxles</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>A3: Manual Transmissions &amp; Drive Axles</td>
</tr>
<tr>
<td>AUTEC 323</td>
<td>A1: Advanced Engine Performance</td>
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<tr>
<td>AUTEC 324</td>
<td>A6: Automotive Electricity 1</td>
</tr>
<tr>
<td>AUTEC 369</td>
<td>A6: Automotive Electricity 2</td>
</tr>
<tr>
<td>AUTEC 399</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**Total Units for Certificate of Achievement**

**38**

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Color Legend:

- **NEW/MODIFIED REQUIREMENT**
- **CHANGE FROM PROG REVISION**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**
A.S. Degree: **Automotive Technician**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 11 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTEC 115</td>
<td>[1]</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUTEC 311</td>
<td>[1]</td>
<td>Basic Automotive Systems</td>
</tr>
<tr>
<td>ELTE 208</td>
<td>[1]</td>
<td>World of Electricity</td>
</tr>
<tr>
<td>MACH 301</td>
<td>[1]</td>
<td>Machine Shop 1</td>
</tr>
<tr>
<td>MACH 211C</td>
<td>[1]</td>
<td>Machine Tool Technology 1</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES - COMPLETE 19 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AUTEC 319</td>
<td>[3,4]</td>
<td>A8: Engine Performance</td>
</tr>
<tr>
<td>AUTEC 321</td>
<td>[2,3,4]</td>
<td>A5: Brakes Systems</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>[2,3,4]</td>
<td>A4: Steering, Suspension, &amp; Alignment</td>
</tr>
<tr>
<td>AUTEC 323</td>
<td>[2,3,4]</td>
<td>A2: Automatic Transmissions &amp; Transaxles</td>
</tr>
<tr>
<td>AUTEC 315</td>
<td>[2,3,4]</td>
<td>Engine Rebuilding</td>
</tr>
<tr>
<td><strong>AUTEC 317</strong></td>
<td>[2,3,4]</td>
<td>Automotive Air Conditioning</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR ................................................................. 30**

**Certificate of Achievement: Maintenance Mechanic**

- To earn a Certificate of Achievement, the student must complete the required competencies and electives below. Each course must be completed with a grade of C or better.

**REQUIRED COMPETENCIES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 20</td>
<td>[1,2,3]</td>
<td>Pre-Algebra</td>
</tr>
<tr>
<td>AUTEC 115</td>
<td>[1]</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>AUTEC 311</td>
<td>[1]</td>
<td>Basic Automotive Systems</td>
</tr>
<tr>
<td>ELTE 208</td>
<td>[1]</td>
<td>World of Electricity</td>
</tr>
<tr>
<td>MACH 301</td>
<td>[1]</td>
<td>Machine Shop 1</td>
</tr>
<tr>
<td>MACH 211C</td>
<td>[1]</td>
<td>Machine Tool Technology 1</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES - COMPLETE 23 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTEC 315</td>
<td>[2,3,4]</td>
<td>Engine Rebuilding</td>
</tr>
<tr>
<td>AUTEC 317</td>
<td>[2,3,4]</td>
<td>A7: Auto Heating and Air Conditioning</td>
</tr>
<tr>
<td>AUTEC 321</td>
<td>[2,3,4]</td>
<td>A5: Brakes Systems</td>
</tr>
<tr>
<td>AUTEC 322</td>
<td>[2,3,4]</td>
<td>A4: Steering, Suspension, &amp; Alignment</td>
</tr>
<tr>
<td>AUTEC 323</td>
<td>[2,3,4]</td>
<td>A2: Automatic Transmissions &amp; Transaxles</td>
</tr>
<tr>
<td>AUTEC 369</td>
<td>[2,3]</td>
<td>A6: Automotive Electricity 2</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT................................. 37**
A.S. Degree: Building and Safety Code Administration

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the required courses for certificate of achievement, completion at least 6 elective units. Each course must be completed with a grade C or better.

Minimum Units Required in A.S. Major: 30

Construction Program

Skills Recognition Award: Construction—Carpentry

Required Courses: Complete 13 units
- INTEC 300: Elementary Carpentry & Construction [1]
- INTEC 225: Principles of Electrical Wiring [3]
- INTEC 200: Introduction to Mechatronics Technology [1]
- VVACE 140A-D: Work Experience [NP]

Elective Courses: Complete 2 units
- INTEC: 301: Employability Skills [NP]
- AGM: 230: Field Surveying [NP]
- ENGTC: 375: Construction Blueprint Reading [NP]

Total Units for Skills Recognition Award: 15

Skills Recognition Award: Construction—General

Required Courses: Complete 14 units
- INTEC: 300: Elementary Carpentry & Construction [1]
- INTEC: 248: Electrical Codes & Ordinances [3]
- INTEC: 249: Analysis of Electrical Codes [4]
- INTEC: 306: Intro to Occupational Safety & Health [2]
- INTEC: 367: Plumbing Principles and Methods [1] or

Elective Courses: Complete 2 units
- AGM: 230: Field Surveying [NP]
- ENGTC: 375: Construction Blueprint Reading [NP]
- INTEC: 208: World of Electricity and Electronics [NP]

Total Units for Skills Recognition Award: 16

Home Building Program

Certificate of Achievement: Home Building Technologies

To earn a Certificate of Achievement, the student must complete the 24 required units. Each course must be completed with a grade C or better.

Required Courses: Select 24 units
- INTEC: 248: Electrical Codes & Ordinances [3]
- INTEC: 249: Analysis of Electrical Codes [4]
- INTEC: 306: Intro to Occupational Safety & Health [2]
- INTEC: 367: Plumbing Principles and Methods [1] or

Total Units for Certificate of Achievement: 24

A.S. Degree: Home Building Technologies

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

Elective Courses: Select 6 or more units
- INTEC: 208: World of Electricity and Electronics [NP]
- INTEC: 375: Construction Blueprint Reading [1,3]
- INTEC: 370: Uniform Plumbing Code [1,3]
- ARCH: 106: Materials of Construction [NP]
- ARCH: 107: Materials of Construction - Laboratory [NP]

Minimum Units Required in A.S. Major: 30
**A.A. Degree: Computer Electronics**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 16 UNITS**
- CMPSC 204 [3] Introduction to Programming
- CMPET 206 [2,3,4] Personal Computer Assembling, Upgrading, and Repair
- CMPET 214 [2,3,4] Microprocessor Programming and Interfacing
- ELTEC 208 [1] The World of Electricity and Electronics

**ELECTIVE COURSES - COMPLETE 4 UNITS**
- CMPET 210 [3,4] Intermediate Personal Computer Servicing
- CMPET 212 [3,4] Introduction to Automated Process Control Systems
- CMPET 233 [4,3] Introduction to Programmable Logic Controllers
- CMPET 234 [2,3,4] Advanced Topics in Programmable Logic Controllers
- CMPET 232 [NP] Introduction to Programmable Logic Controllers
- CMPET 232 [2,3,4] Network + Certification Training Lab
- CMPSC 205 [3,4] Problem Solving and Programming 1

**MINIMUM UNITS IN A.A. MAJOR**

---

**A.S. Degree: Computer Electronics**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 16 UNITS**
- CMPET 206 [2,3,4] Personal Computer Assembling, Upgrading, and Repair
- CMPET 214 [2,3,4] Microprocessor Programming and Interfacing
- ELTEC 208 [1] The World of Electricity and Electronics

**ELECTIVE COURSES - COMPLETE 14 UNITS, AT LEAST 6 IN EACH AREA**

**ELECTRONICS CATEGORY**
- CMPET 210 [NP] Intermediate Personal Computer Servicing
- CMPET 233 [NP] Introduction to Programmable Logic Controllers
- CMPET 234 [2,3,4] Advanced Topics in Programmable Logic Controllers
- CMPET 232 [2,3,4] Network + Certification Training Lab
- ELTEC 221 [2,3,4] Instrumentation Devices and Systems

**MINIMUM UNITS IN A.S. MAJOR**

---

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**

---
Certificate of Achievement: Graphic Design

The Graphic Design Program is structured to develop the capability of the student to creatively solve design problems related to the printed product. The Program incorporates both artistic and technical coursework to address the total requirements of the profession.

The Graphic Design field distinguishes itself from the general arts field by emphasizing the application of visual knowledge. Possible job opportunities include: graphic artist, graphic designer, commercial artist, illustrator, and pre-press layout person.

Graphic Design

PROGRAM

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of all Required Courses for Associate Degree plus the additional units listed below.

A.S. Degree: Graphic Design

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of all Required Courses for Associate Degree plus the additional units listed below.

Additional Required Courses for A.S. Degree - Complete 11 Units:

- ART 124 [1,2] Color and Design 1
- CGR 360A [4] Independent Study (with advisor approval)

Minimum Units in A.S. Major: 21

Certificate of Achievement: Prepress

To earn a Certificate of Achievement, the student must complete the following competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

Prepress

PROGRAM

To earn a Certificate of Achievement, the student must complete the following competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

Required Courses - Complete 16 Units

- CGR 231 [1] InDesign and Typography 1
- CGR 233 [1,2] Color and Design 1
- CGR 235 [1] InDesign and Typography 1
- CGR 237 [1,2] Image Capture and Manipulation (Photoshop)
- CGR 321 [2,3] InDesign and Typography 2
- CGR 360 [4] Continuation Graphic Internship
- CGR 399B [4] Independent Study (with advisor approval)

Total Units for Certificate of Achievement: 37
Certificate of Achievement:
Presses and Bindery

To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - COMPLETE 13 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGR 201</td>
<td>3</td>
<td>Graphic Arts Fundamentals</td>
</tr>
<tr>
<td>CGR 214</td>
<td>3</td>
<td>Bindery</td>
</tr>
<tr>
<td>CGR 222</td>
<td>3</td>
<td>Image Assembly and Platemaking</td>
</tr>
<tr>
<td>CGR 223</td>
<td>3</td>
<td>Lithographic and Renographic Printing</td>
</tr>
<tr>
<td>CGR 232</td>
<td>3</td>
<td>Advanced Presses</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .............................................. 13

Printing & Lithography

PROGRAM

In the Communication Graphics program, students learn each phase of printing and receive an overview of industry practices. Most courses offer the student a choice of scheduling laboratory hours among several alternatives. Open access and computer assisted teaching techniques are incorporated with regular instruction. Communication Graphics courses are recommended for students majoring in Advertising, Art, Business, Journalism, and Vocational Printing.

Certificate of Achievement:
Printing and Lithography

To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

COMPETENCIES (FOR CERTIFICATES ONLY)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 20</td>
<td>5</td>
<td>Pre-Algebra</td>
</tr>
<tr>
<td>EL TEC 208</td>
<td>NP</td>
<td>The World of Electricity</td>
</tr>
<tr>
<td>EL TEC 265</td>
<td>NP</td>
<td>Troubleshooting Techniques</td>
</tr>
<tr>
<td>MACH 301</td>
<td>NP</td>
<td>Machine Shop 1</td>
</tr>
</tbody>
</table>

REQUIRED COURSES - COMPLETE 16 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>CGR 201</td>
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<td>Graphic Arts Fundamentals</td>
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<td>Bindery</td>
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<tr>
<td>CGR 222</td>
<td>3</td>
<td>Image Assembly and Platemaking</td>
</tr>
<tr>
<td>CGR 223</td>
<td>3</td>
<td>Lithographic and Renographic Printing</td>
</tr>
<tr>
<td>CGR 224</td>
<td>3</td>
<td>Illustrator and Electronic Publishing</td>
</tr>
<tr>
<td>CGR 230</td>
<td>3</td>
<td>Graphic Design 1</td>
</tr>
<tr>
<td>CGR 232</td>
<td>3</td>
<td>Electronic Prepress</td>
</tr>
<tr>
<td>CGR 330</td>
<td>3</td>
<td>Printing Maintenance</td>
</tr>
<tr>
<td>EL TEC 205</td>
<td>NP</td>
<td>Model-Booting Systems</td>
</tr>
<tr>
<td>EL TEC 208</td>
<td>NP</td>
<td>The World of Electricity</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .............................................. 16

A.A. Degree: Printing & Lithography

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 66) which include completion of all required courses as listed under the Certificate (21 units), plus 16 units from the Elective Courses. All courses must be completed with a C or better.

A.S. Degree: Printing & Lithography

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 66) which include completion of all required courses as listed under the Certificate (21 units), plus 16 units from the Elective Courses. All courses must be completed with a C or better.

Printing Maintenance

PROGRAM

Certificate of Achievement:
Printing Maintenance

To earn a Certificate of Achievement, the student must meet/complete the competencies for the Communication Graphics Program, and complete the coursework as indicated. Each course must be completed with a grade of C or better.

REQUIRED COURSES - COMPLETE 16 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGR 201</td>
<td>3</td>
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<td>CGR 222</td>
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<tr>
<td>CGR 223</td>
<td>3</td>
<td>Lithographic and Renographic Printing</td>
</tr>
<tr>
<td>CGR 224</td>
<td>3</td>
<td>Illustrator and Electronic Publishing</td>
</tr>
<tr>
<td>CGR 230</td>
<td>3</td>
<td>Graphic Design 1</td>
</tr>
<tr>
<td>CGR 232</td>
<td>3</td>
<td>Electronic Prepress</td>
</tr>
<tr>
<td>CGR 330</td>
<td>3</td>
<td>Printing Maintenance</td>
</tr>
<tr>
<td>EL TEC 205</td>
<td>NP</td>
<td>Model-Booting Systems</td>
</tr>
<tr>
<td>EL TEC 208</td>
<td>NP</td>
<td>The World of Electricity</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT .............................................. 16

* Students completing two or more certificates will need to replace the second or third CGR 332 with a 399B Independent Study.
General Plant Maintenance—Program

Courses are intended for students who are interested in career opportunities in Plant or Facilities Mechanical Maintenance as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate of Achievement: General Plant Maintenance

- To earn a Certificate of Achievement, the student must complete the required courses and complete at least 3 units from the elective courses. Each course must be completed with a grade C or better.

**REQUIRED COURSES — COMPLETE 21 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115</td>
<td>3</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>INTEC 202</td>
<td>3</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 203</td>
<td>3</td>
<td>Industrial Mechanical/Pneumatic Components</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>3</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 367</td>
<td>2</td>
<td>Plumbing Principles and Methods</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>3</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>ENGTC 325</td>
<td>2</td>
<td>Construction Blueprint Reading</td>
</tr>
<tr>
<td>MACH 301</td>
<td>3</td>
<td>Machine Shop 1</td>
</tr>
<tr>
<td>WEID 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES — SELECT AT LEAST 3**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 208</td>
<td>1</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 222</td>
<td>3</td>
<td>Industrial &amp; Electrical Control Systems</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>3</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>ELTEC 205</td>
<td>1</td>
<td>Electronics Fabrication &amp; Assembly Techniques</td>
</tr>
<tr>
<td>ELTEC 214</td>
<td>2-3</td>
<td>Microprocessor Programming and Interfacing</td>
</tr>
<tr>
<td>INTEC 265</td>
<td>1</td>
<td>Troubleshooting Techniques</td>
</tr>
<tr>
<td>ELTEC 221</td>
<td>3</td>
<td>Digital Principles and Circuits</td>
</tr>
<tr>
<td>ELTEC 223</td>
<td>3</td>
<td>Industrial Electrical Components &amp; Control Devices</td>
</tr>
<tr>
<td>ELTEC 226</td>
<td>3</td>
<td>Motors, Controls and Controllers</td>
</tr>
<tr>
<td>ELTEC 229</td>
<td>3</td>
<td>Commercial and Industrial Wiring</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>2</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 234</td>
<td>3</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 265</td>
<td>1</td>
<td>Troubleshooting Techniques</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**

- **A.A. Degree: General Plant Maintenance**...

- **A.S. Degree: General Plant Maintenance**...

The Electronics Technology Program prepares students to enter industry as Electronics Technicians or to transfer to a four-year university program. An Industrial Electronics study option and a Computer Electronics study option are available. Students receive theoretical and laboratory instruction in electrical/electronic principles, analog and digital devices, electrical/electronic systems, computer hardware, industrial equipment and control systems. Consult with an Electronics Advisor for selection of courses and options. Classes in Electronics Technology are offered in theoretical and manipulative skills leading to the associate degree. Students may also select a program for transfer to a state university.

Certificate of Achievement: Industrial Electronics

- To earn a Certificate of Achievement, the student must complete all required courses with a C or better, and complete the electives as indicated.

**REQUIRED COMPETENCIES**

- **MATH 70** Elementary Algebra...

**REQUIRED COURSES — COMPLETE 26½ UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 205</td>
<td>1</td>
<td>Electronics Fabrication and Assembly Techniques</td>
</tr>
<tr>
<td>ELTEC 208</td>
<td>1</td>
<td>The World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>ELTEC 212</td>
<td>2</td>
<td>Digital Principles and Circuits</td>
</tr>
<tr>
<td>ELTEC 221</td>
<td>3</td>
<td>Instrumentation Devices and Systems</td>
</tr>
<tr>
<td>ELTEC 223</td>
<td>3</td>
<td>Industrial Electrical Components &amp; Control Devices</td>
</tr>
<tr>
<td>ELTEC 226</td>
<td>3</td>
<td>Motors, Controls and Controllers</td>
</tr>
<tr>
<td>ELTEC 229</td>
<td>3</td>
<td>Commercial and Industrial Wiring</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>2</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 234</td>
<td>3</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 265</td>
<td>1</td>
<td>Troubleshooting Techniques</td>
</tr>
<tr>
<td>CMPET 206</td>
<td>(2,3,4)</td>
<td>Personal Computer Assembly, Upgrading, and Repairing</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES — COMPLETE 9 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 214</td>
<td>(2,3,4)</td>
<td>Microprocessor Programming and Interfacing</td>
</tr>
<tr>
<td>INTEC 202</td>
<td>[NP]</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 203</td>
<td>1</td>
<td>Industrial Mechanical/Pneumatic Components</td>
</tr>
<tr>
<td>CMPET 206</td>
<td>(2,3,4)</td>
<td>Personal Computer Assembly, Upgrading, and Repairing</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**

- **A.A. Degree: General Plant Maintenance**...

- **A.S. Degree: General Plant Maintenance**...

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. All courses must be completed with a C or better.

**REQUIRED COURSES — COMPLETE 26½ UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 205</td>
<td>1</td>
<td>Electronics Fabrication and Assembly Techniques</td>
</tr>
<tr>
<td>ELTEC 208</td>
<td>1</td>
<td>The World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>ELTEC 212</td>
<td>2</td>
<td>Digital Principles and Circuits</td>
</tr>
<tr>
<td>ELTEC 221</td>
<td>3</td>
<td>Instrumentation Devices and Systems</td>
</tr>
<tr>
<td>ELTEC 223</td>
<td>3</td>
<td>Industrial Electrical Components &amp; Control Devices</td>
</tr>
<tr>
<td>ELTEC 226</td>
<td>3</td>
<td>Motors, Controls and Controllers</td>
</tr>
<tr>
<td>ELTEC 229</td>
<td>3</td>
<td>Commercial and Industrial Wiring</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>2</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 234</td>
<td>3</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 265</td>
<td>1</td>
<td>Troubleshooting Techniques</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**

- **A.A. Degree: General Plant Maintenance**...

- **A.S. Degree: General Plant Maintenance**...
INDUSTRIAL TECHNOLOGY

Electrician

Courses are intended for students that are interested in career opportunities in the Plant or Facilities Electricians as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate of Achievement: Industrial Technology - Electrician

- To earn a Certificate of Achievement, the student must complete the 24 required units. Each course must be completed with a grade C or better.

REQUIRED COURSES: COMPLETE 24 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 223</td>
<td>2</td>
<td>Industrial Electrical Components &amp; Control Devices</td>
</tr>
<tr>
<td>ELTEC 226</td>
<td>3</td>
<td>Motors, Controls and Controllers</td>
</tr>
<tr>
<td>ELTEC 229</td>
<td>4</td>
<td>Commercial &amp; Industrial Wiring</td>
</tr>
<tr>
<td>ELTEC 232</td>
<td>2</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 234</td>
<td>3</td>
<td>Advanced Topics in Programmable Logic Controllers</td>
</tr>
<tr>
<td>ELTEC 265</td>
<td>1</td>
<td>Troubleshooting</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES - COMPLETE 4 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 214</td>
<td>[2,3,4]</td>
<td>Introduction to Microprocessors &amp; Digital Systems</td>
</tr>
<tr>
<td>INTEC 202</td>
<td>[NP]</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 203</td>
<td>[1]</td>
<td>Industrial Mechanical/Pneumatic Components</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN A.S. MAJOR ................................................................. 30½

A.S. Degree: Industrial Technology - Electrician

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of 23 required units, and at least 7 elective units. All courses must be completed with a grade C or better.

REQUIRED COURSES: COMPLETE 23½ UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 220</td>
<td>[1]</td>
<td>Blueprint Reading</td>
</tr>
<tr>
<td>ELTEC 222</td>
<td>[2]</td>
<td>Electrical Safety</td>
</tr>
<tr>
<td>INTEC 208</td>
<td>[1]</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 229</td>
<td>[2]</td>
<td>Commercial and Industrial Wiring</td>
</tr>
<tr>
<td>INTEC 248</td>
<td>[2]</td>
<td>Electrical Codes &amp; Ordinances</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>[3]</td>
<td>Introduction to Plant Maintenance</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES: COMPLETE AT LEAST 7 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTEC 232</td>
<td>[3,4]</td>
<td>Introduction to Programmable Logic Controllers</td>
</tr>
<tr>
<td>HE 100</td>
<td>[NP]</td>
<td>Standard First Aid/CPR</td>
</tr>
<tr>
<td>INTEC 221</td>
<td>[4]</td>
<td>Instrumentation Devices and Systems</td>
</tr>
<tr>
<td>INTEC 249</td>
<td>[2,4]</td>
<td>Analysis of Electrical Codes</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>[NP]</td>
<td>Introduction to Occupational Safety and Health</td>
</tr>
<tr>
<td>INTEC 346</td>
<td>[NP]</td>
<td>Heating, Ventilation, Air Conditioning, and Refrigeration</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................ 30

Certificate of Achievement: Industrial Technology - Maintenance

- To earn a Certificate of Achievement, the student must complete the 24 required units. Each course must be completed with a grade C or better.

REQUIRED COURSES: COMPLETE 24 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 202</td>
<td>[2,4]</td>
<td>Fundamentals of Industrial Technology</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>[4]</td>
<td>Industrial Mechanical/Pneumatic Components</td>
</tr>
<tr>
<td>INTEC 226</td>
<td>[2,4]</td>
<td>Motors and Motor Controls</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>[3]</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>[2,4]</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>INTEC 362</td>
<td>[3]</td>
<td>Industrial Refrigeration Systems</td>
</tr>
<tr>
<td>INTEC 367</td>
<td>[3]</td>
<td>Plumbing Principles and Methods</td>
</tr>
<tr>
<td>WELD 200</td>
<td>[NP]</td>
<td>Arc and Gas Welding</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................................ 24

A.S. Degree: Industrial Technology - Maintenance

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of 24 required units, and at least 6 elective units. All courses must be completed with a grade C or better.

ELECTIVE COURSES - COMPLETE 6 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115</td>
<td>[NP]</td>
<td>Introduction to Technical Industries</td>
</tr>
<tr>
<td>INTEC 301</td>
<td>[1]</td>
<td>Intro to Industrial Operations</td>
</tr>
<tr>
<td>INTEC 305</td>
<td>[2]</td>
<td>Principles of Quality Control Systems</td>
</tr>
<tr>
<td>INTEC 308</td>
<td>[NP]</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 362</td>
<td>[1,3]</td>
<td>Hydraulics/ pneumatics</td>
</tr>
<tr>
<td>INTEC 350</td>
<td>[4]</td>
<td>Industrial Technology Internship</td>
</tr>
<tr>
<td>MACH 2311D</td>
<td>[NP]</td>
<td>Machining Tool Technology 1</td>
</tr>
</tbody>
</table>

MINIMUM UNITS REQUIRED IN A.S. MAJOR .................................................. 30

MINIMUM UNITS REQUIRED IN A.S. MAJOR .................................................. 30
INDUSTRIAL TECHNOLOGY

PROGRAMS IN CAREER TECHNICAL EDUCATION

Industrial Technology – Systems

Courses are intended for students that are interested in career opportunities in the Plant Operations, Instrumentation and Controls field, as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate of Achievement:
Industrial Technology – Systems

- To earn a Certificate of Achievement, a student must complete the 26 required units and complete at least 4 elective units. Each course must be completed with a grade C or better.

REQUIRED COURSES – COMPLETE 26 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 201</td>
<td>[1]</td>
<td>World of Electricity &amp; Electronics</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>[2]</td>
<td>Instrumentation Devices &amp; Systems</td>
</tr>
<tr>
<td>INTEC 225</td>
<td>[1]</td>
<td>Industrial Elec. Comp. &amp; Control Day</td>
</tr>
<tr>
<td>INTEC 248</td>
<td>[3]</td>
<td>Electrical Codes &amp; Ordinances</td>
</tr>
<tr>
<td>INTEC 249</td>
<td>[4]</td>
<td>Analysis of Electrical Codes</td>
</tr>
<tr>
<td>INTEC 261</td>
<td>[3]</td>
<td>Introduction to Plant Maintenance</td>
</tr>
<tr>
<td>INTEC 306</td>
<td>[4]</td>
<td>Intro to Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>ELECT 222</td>
<td>[3]</td>
<td>Intro to Program, Logic Controllers</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES – COMPLETE AT LEAST 4 UNITS FOR A.S. DEGREE OR CERTIFICATE

Choose any other INTEC courses

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 30

A.S. Degree:
Industrial Technology – Systems

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the required units, and at least 4 elective units. All courses must be completed with a grade C or better.

MINIMUM UNITS IN A.S. MAJOR .................................................................... 30

INDUSTRIAL TECHNOLOGY

Certificate of Achievement:
Industrial Technology – Technician

To earn a Certificate of Achievement, students must complete the 17 required units and complete at least 12 units from the elective courses. Each course must be completed with a grade C or better.

REQUIRED COURSES – COMPLETE 17 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 111</td>
<td>[1]</td>
<td>Intro to Technical Industy</td>
</tr>
<tr>
<td>INTEC 201</td>
<td>[1]</td>
<td>Intro to Industrial Operations</td>
</tr>
<tr>
<td>INTEC 203</td>
<td>[1]</td>
<td>Industrial Mechanical/ Pneumatic Components</td>
</tr>
<tr>
<td>INTEC 223</td>
<td>[4]</td>
<td>Industrial Elec. Comp. &amp; Control Day</td>
</tr>
<tr>
<td>INTEC 301</td>
<td>[4]</td>
<td>Employability Skills</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES – COMPLETE AT LEAST 12 UNITS FOR CERTIFICATE

Choose any other INTEC courses

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 29

Machine Tool Technology PROGRAM

Skills Recognition Award: CNC Operator

- To earn a Skills Recognition Award, student must complete the 6 required units. This series of courses is intended to give the student a sufficient skill base to be able to operate and to edit programs for basic CNC lathes and CNC milling machines that are commonly used in manufacturing applications.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 219</td>
<td>[1]</td>
<td>Intro to CNC Mill Programming</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES – COMPLETE 2 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 395ABC</td>
<td>[3 or 4]</td>
<td>Advanced Machine Tool Technology Laboratory</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ............................................. 11

Skills Recognition Award: CNC Programmer

- To earn a Skills Recognition Award, student must complete the 11 required units. Each course must be completed with a grade C or better.

REQUIRED COURSES – COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 218</td>
<td>[2]</td>
<td>Intro to CNC Lathe Programming</td>
</tr>
<tr>
<td>MACH 219</td>
<td>[1]</td>
<td>Intro to CNC Mill Programming</td>
</tr>
<tr>
<td>MACH 222</td>
<td>[NP]</td>
<td>CNC Machine Operations</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES – COMPLETE 2 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 310</td>
<td>[2]</td>
<td>Advanced Topics in Machining</td>
</tr>
<tr>
<td>MACH 311</td>
<td>[2]</td>
<td>CNC Programming with Macros</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ............................................ 11

Certificate of Achievement:
Machine Tool Technology 1

- To earn a Skills Recognition Award, student must complete the 16 required units. Each course must be completed with a grade C or better.

REQUIRED COURSES – COMPLETE 16 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACH 233C</td>
<td>[3 or 4]</td>
<td>Machine Tool Technology Laboratory</td>
</tr>
<tr>
<td>WELD 200</td>
<td>[NP]</td>
<td>Arc &amp; Gas Welding</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ............................................. 16

Color Legend:
- Change from Prog Revision
- New/Modified Requirement
- Inactivated
- Unchanged from 2011-2012 Catalog
Certified of Achievement: Machine Tool Technology 2

- To earn a Certificate of Achievement, student must complete the 27 required units and one course from the elective.

<table>
<thead>
<tr>
<th>REQUIRED COMPETENCIES FOR CERTIFICATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 20 Elementary Algebra.................... 4 OR</td>
</tr>
<tr>
<td>Math 70 eligibility through assessment process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED COURSES - COMPLETE 27 UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200 [1] Arc and Gas Welding................................. 3</td>
</tr>
<tr>
<td>MACH 219 [2] Introduction to CNC Mill Programming ............... 2</td>
</tr>
<tr>
<td>Complete 2 units from the following:</td>
</tr>
<tr>
<td>MACH 395ABC [1-3] Advanced Machine Tool Technology Laboratory..... 1-3 OR</td>
</tr>
<tr>
<td>MACH 310 [3] Advanced Topics in Machining.......................... 2 OR</td>
</tr>
<tr>
<td>MACH 218 [3] Intro to CNC Lathe Programming........................ 2</td>
</tr>
<tr>
<td>Complete 2 units:</td>
</tr>
<tr>
<td>INTEC 376 [NP] Mechanical Blue Print Reading........................ 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTIVE COURSES - COMPLETE 3 UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 204 [2,3] Gas Metal Arc Welding................... 3 OR</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT........................ 30

A.S. Degree: Machine Tool Technology

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of 27 Required units, 3 elective units. The classes within this series is intended to address the needs of those who wish to obtain an A.S degree in Machine Tool Technology or are interested in advancing the skills developed while obtaining the Machine Tool Technology 1 certificate.

MINIMUM UNITS IN A.S. MAJOR ............................................ 30

Maintenance Electrician PROGRAM

Courses are intended for students that are interested in career opportunities in the Plant or Facilities Maintenance Electrician field as well as those currently working in the industry who need to update or upgrade their knowledge and skills.

Certificate of Achievement: Maintenance Electrician

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

<table>
<thead>
<tr>
<th>REQUIRED COURSES – COMPLETE 24½ UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 203 [1] Industrial Mechanical/Pneumatic Components........ 3</td>
</tr>
<tr>
<td>INTEC 208 [1] World of Electricity &amp; Electronics.................. 3</td>
</tr>
<tr>
<td>INTEC 229 [3,4] Commercial and Industrial Wiring........... 3½</td>
</tr>
<tr>
<td>INTEC 261 [3] Introduction to Plant Maintenance...................... 3</td>
</tr>
<tr>
<td>INTEC 265 [NP] Troubleshooting Techniques.......................... 2</td>
</tr>
<tr>
<td>ELTEC 232 [4] Intro to Program. Logic Controllers........... 2</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT...................... 24½

A.A. Degree: Maintenance Electrician

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. All courses must be completed with a C or better.

<table>
<thead>
<tr>
<th>REQUIRED COURSES – COMPLETE 21½ UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 115 [2,3] Introduction to Technical Industries............ 3</td>
</tr>
<tr>
<td>INTEC 203 [1] Industrial Mechanical/Pneumatic Components........ 3</td>
</tr>
<tr>
<td>INTEC 229 [3,4] Commercial and Industrial Wiring........... 3½</td>
</tr>
<tr>
<td>INTEC 261 [3] Introduction to Plant Maintenance...................... 3</td>
</tr>
<tr>
<td>ELTEC 232 [4] Intro to Program. Logic Controllers........... 2</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN AA MAJOR ............................................ 21½

A.S. Degree: Maintenance Electrician

- To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. Each course must be completed with a C or better.

<table>
<thead>
<tr>
<th>REQUIRED COURSES – COMPLETE 25½ UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 203 [1] Industrial Mechanical/Pneumatic Components........ 3</td>
</tr>
<tr>
<td>INTEC 208 [1] World of Electricity &amp; Electronics.................. 3</td>
</tr>
<tr>
<td>INTEC 229 [3,4] Commercial and Industrial Wiring........... 3½</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN AA MAJOR ............................................ 21½

Color Legend:
- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG
Maintenance Machinist Program

Skills Recognition Award: Maintenance Machinist 1

• To earn a Skills Recognition Award, student must complete the 9 units. This series of courses is intended to meet the needs of those students interested in pursuing career opportunities in machining and plant engineering and maintenance fields. The Maintenance Machinist series of classes are similar in content to the Machine Tool Tech classes offered during the day.

REQUIRED COURSES – COMPLETE 9 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 226</td>
<td>Motors and Motor Controls</td>
<td>3</td>
</tr>
<tr>
<td>INT 248</td>
<td>Electrical Codes &amp; Ordinances</td>
<td>3</td>
</tr>
<tr>
<td>INT 261</td>
<td>Introduction to Plant Maintenance</td>
<td>3</td>
</tr>
<tr>
<td>EL 232</td>
<td>Intro to Program. Logic Controllers</td>
<td>2</td>
</tr>
</tbody>
</table>

MINIMUM UNITS IN AS MAJOR .......................................................... 30½

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ........................................ 9

Certificate of Achievement: Maintenance Machinist 2

• To earn a Certificate of Achievement, student must complete the 18 required units and 3 units of electives.

REQUIRED COMPETENCIES FOR CERTIFICATE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 315</td>
<td>Introduction to Technical Industries</td>
<td>1</td>
</tr>
<tr>
<td>INT 221</td>
<td>Instrumentation Devices &amp; Systems</td>
<td>3</td>
</tr>
<tr>
<td>INT 249</td>
<td>Analysis of Electrical Codes</td>
<td>3</td>
</tr>
<tr>
<td>INT 260</td>
<td>Intro to Occupational Safety &amp; Health</td>
<td>3</td>
</tr>
<tr>
<td>EL 234</td>
<td>Adv. Program. Logic Controllers</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ..................................... 21

Welding Program

Skills Recognition Award: Fabricator Technician

• To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COMPETENCIES

For all Certificates and Skills Recognitions: All students who plan to earn a certificate must meet/complete the required competencies.

MATH 20 Pre-Algebra ................................................................. 5 OR

Eligibility for MATH 70 by MJC assessment process

TOTAL UNITS FOR SKILLS RECOGNITION AWARD .................................... 16

Skills Recognition Award: Gas Metal Arc Welding

• To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES – COMPLETE 10 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>Arc and Gas Welding</td>
<td>3</td>
</tr>
<tr>
<td>SM 331</td>
<td>Sheet Metal &amp; Installation 1</td>
<td>3</td>
</tr>
<tr>
<td>WELD 204</td>
<td>Gas Metal &amp; Flux Core Welding</td>
<td>3</td>
</tr>
<tr>
<td>WELD 300</td>
<td>Intermediate Welding</td>
<td>3</td>
</tr>
<tr>
<td>WELD 325</td>
<td>Design &amp; Fabrication Process</td>
<td>3</td>
</tr>
<tr>
<td>WELD 399</td>
<td>Independent Study</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD .................................... 10

Color Legend:

CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
Skills Recognition Award: Shielded Metal Arc Welding

- To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES – COMPLETE 8 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>WELD 300</td>
<td>3</td>
<td>Intermediate Welding</td>
</tr>
<tr>
<td>WELD 399</td>
<td>2</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION AWARD** 8

Skills Recognition Award: Gas Tungsten Arc Welding

- To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES – COMPLETE 10 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>WELD 300</td>
<td>3</td>
<td>Intermediate Welding</td>
</tr>
<tr>
<td>WELD 206</td>
<td>3</td>
<td>Gas Tungsten Arc Welding (TIG)</td>
</tr>
<tr>
<td>WELD 399A</td>
<td>1</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION AWARD** 10

Skills Recognition Award: Pipe Welding

- To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES – COMPLETE 10 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>WELD 300</td>
<td>3</td>
<td>Intermediate Welding</td>
</tr>
<tr>
<td>WELD 340</td>
<td>3</td>
<td>Pipe Welding</td>
</tr>
<tr>
<td>WELD 399A</td>
<td>1</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION AWARD** 10

Skills Recognition Award: Sheet Metal Fabricator

- To earn a Skills Recognition Award, the student must meet/complete the required competencies, and complete the following coursework. Each course must be completed with a grade of C or better.

**REQUIRED COURSES – COMPLETE 10 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>SM 331</td>
<td>1</td>
<td>Sheet Metal &amp; Installation 1</td>
</tr>
<tr>
<td>SM 332</td>
<td>2</td>
<td>Sheet Metal &amp; Installation 2</td>
</tr>
<tr>
<td>WELD 399</td>
<td>2</td>
<td>Independent Study</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR SKILLS RECOGNITION AWARD** 10

A.A. Degree: Welding

- To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES – COMPLETE 21 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>SM 331</td>
<td>3</td>
<td>Sheet Metal &amp; Installation 1</td>
</tr>
<tr>
<td>WELD 204</td>
<td>3</td>
<td>Gas and Flux Core Arc Welding</td>
</tr>
<tr>
<td>WELD 206</td>
<td>3</td>
<td>Gas Tungsten Arc Welding</td>
</tr>
<tr>
<td>WELD 325</td>
<td>3</td>
<td>Design &amp; Fabrication Process</td>
</tr>
<tr>
<td>WELD 340</td>
<td>3</td>
<td>Pipe Welding</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR** 21

A.S. Degree: Welding

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES – COMPLETE 30 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTEC 306</td>
<td>3</td>
<td>Introduction to Occupational Safety and Health</td>
</tr>
<tr>
<td>MACH 211C</td>
<td>3</td>
<td>Machine Tool Technology 1</td>
</tr>
<tr>
<td>SM 331</td>
<td>3</td>
<td>Sheet Metal &amp; Installation 1</td>
</tr>
<tr>
<td>WELD 200</td>
<td>3</td>
<td>Arc and Gas Welding</td>
</tr>
<tr>
<td>WELD 204</td>
<td>3</td>
<td>Gas Metal Arc (MIG) Flux Core Arc (FCAW)</td>
</tr>
<tr>
<td>WELD 206</td>
<td>3</td>
<td>Gas Tungsten Arc Welding (TIG)</td>
</tr>
<tr>
<td>WELD 300</td>
<td>3</td>
<td>Intermediate Welding</td>
</tr>
<tr>
<td>WELD 325</td>
<td>3</td>
<td>Design and Fabrication Processes</td>
</tr>
<tr>
<td>WELD 340</td>
<td>3</td>
<td>Pipe Welding</td>
</tr>
<tr>
<td>WELD 399A</td>
<td>3</td>
<td>Independent Study/Special Problems</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR** 30
The mission of the Child Development Department at Modesto Junior College is to enhance the intellectual, cultural, and economic strength of our diverse community by supporting and encouraging all students in their pursuit of lifelong learning and success, and in their abilities to strengthen children and families in the community.

The Child Development program offers both theoretical and practical courses, which focus on the growth and development of all children from conception to late adolescence. Students use this knowledge to create culturally relevant, inclusive, age-appropriate, anti-bias environments that promote optimum care and learning opportunities.

Learning to respond to the needs of children, families, staff, and agencies; builds and nurtures children in becoming competent members of the larger diverse and global community.

Coursework prepares students for a wide variety of careers in direct services for children and support services for families in licensed, state, federal, private and/or non-profit programs serving infants, children, and adolescents.

Required coursework in the Child Development program emphasizes educational ladders leading to certificates, the Associate of Science degree, and transfer to baccalaureate programs. This coursework is designed to meet the academic requirements of the Child Development Permits, issued by the Commission on Teacher Credentialing (Title 5), the California Department of Social Services (DSS Title 22), the Early Intervention Certificates developed in conjunction with the California Early Start Commission on Teacher Credentialing (Title 22) and the California Department of Social Services (DSS Title 22).

The Certificates of Achievement in Child Development act as a pathway to various career opportunites in education, State of California permits, Early Intervention Assistant Personnel Competencies for California's Early Start Program, A.A./A.S. degrees, and transfer to a university. Teachers and administrators of funded child development programs in the State of California must hold permits issued by the California Commission on Teacher Credentialing. All certificates align with the permits issued by the State of California, Commission on Teacher Credentialing. To earn a Certificate of Achievement, the student must complete the coursework as indicated. Each course must be completed with a grade of C or better.

**A.S. Degree: Child Development**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 21 UNITS**

- **CLDDV 101 [1]** Principles and Practices of Teaching Young Children ................. 3
- **CLDDV 103 [1]** Child Growth and Development ........................................ 3
- **CLDDV 104 [1]** Child Growth and Development - Conception .................. 3
- **CLDDV 105 [1]** Child Growth and Development - Conception ................. 3
- **CLDDV 106 [1]** Child Growth and Development - Late Childhood - Adolescence 3
- **CLDDV 107 [1]** Introduction to Curriculum ............................................ 3
- **CLDDV 108 [1]** Child-Family-Community .............................................. 3
- **CLDDV 109 [1]** Health, Safety, and Nutrition ......................................... 3
- **CLDDV 111 [2]** Guidance of Young Children ......................................... 3
- **CLDDV 121 [2]** Infant and Toddler Development .................................... 3
- **CLDDV 125 [2]** Diversity in Educational Settings .................................. 3
- **CLDDV 262 [4]** Inclusion Special Needs Practicum .................................. 2-5
- **CLDDV 127 [3]** Infant and Toddler Practicum ........................................ 2-5
- **CLDDV 128 [3]** Preschool Practicum ....................................................... 2-5
- **CLDDV 163 [4]** Working with Children with Special Needs .................. 3
- **CLDDV 167 [4]** Observation and Assessment ......................................... 3
- **CLDDV 262 [4]** Diversity in Educational Settings .................................. 3

**LAB PRACTICUM - COMPLETE A MINIMUM OF 3 UNITS**

- **CLDDV 126 [4]** Principles and Practices of Teaching Young Children ................. 2-5
- **CLDDV 127 [3]** Infant and Toddler Practicum ........................................ 2-5
- **CLDDV 128 [3]** Preschool Practicum ....................................................... 2-5
- **CLDDV 163 [4]** Working with Children with Special Needs .................. 3
- **CLDDV 167 [4]** Observation and Assessment ......................................... 3
- **CLDDV 262 [4]** Diversity in Educational Settings .................................. 3

**MINIMUM UNITS IN A.S. MAJOR** ................................................................. 33

**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**

**Certificates in Child Development**

The Certificates of Achievement in Child Development act as a pathway to various career opportunities in education, State of California permits, Early Intervention Assistant Personnel Competencies for California’s Early Start Program, A.A./A.S. degrees, and transfer to a university. Teachers and administrators of funded child development programs in the State of California must hold permits issued by the California Commission on Teacher Credentialing. All certificates align with the permits issued by the State of California, Commission on Teacher Credentialing. To earn a Certificate of Achievement, the student must complete the coursework as indicated. Each course must be completed with a grade of C or better.

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...
Certificate of Achievement: **Associate Teacher**

**REQUIRED COURSES - COMPLETE A MINIMUM OF 12 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 101</td>
<td>3</td>
<td>Principles and Practices of Teaching Young Children</td>
</tr>
</tbody>
</table>

**CHILD GROWTH AND DEVELOPMENT:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 103</td>
<td>3</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>CLDDV 104</td>
<td>2 AND</td>
<td>Child Growth and Development - Conception</td>
</tr>
<tr>
<td>CLDDV 105</td>
<td>2</td>
<td>Child Growth and Development - Late Childhood - Adolescence</td>
</tr>
<tr>
<td>CLDDV 107</td>
<td>3</td>
<td>Introduction to Curriculum</td>
</tr>
<tr>
<td>CLDDV 109</td>
<td>3</td>
<td>Child-Family-Community</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 12-13

Certificate of Achievement: **Teacher**

**REQUIRED COURSES - COMPLETE A MINIMUM OF 15 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 101</td>
<td>3</td>
<td>Principles and Practices of Teaching Young Children</td>
</tr>
</tbody>
</table>

**CHILD GROWTH AND DEVELOPMENT:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 103</td>
<td>3</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>CLDDV 104</td>
<td>2 AND</td>
<td>Child Growth and Development - Conception</td>
</tr>
<tr>
<td>CLDDV 105</td>
<td>2</td>
<td>Child Growth and Development - Late Childhood - Adolescence</td>
</tr>
<tr>
<td>CLDDV 107</td>
<td>3</td>
<td>Introduction to Curriculum</td>
</tr>
<tr>
<td>CLDDV 109</td>
<td>3</td>
<td>Child-Family-Community</td>
</tr>
</tbody>
</table>

**LAB PRACTICUM - COMPLETE A MINIMUM OF 3 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 126</td>
<td>4</td>
<td>Inclusion Special Needs Practicum</td>
</tr>
<tr>
<td>CLDDV 127</td>
<td>3</td>
<td>Infant and Toddler Practicum</td>
</tr>
<tr>
<td>CLDDV 128</td>
<td>2-5</td>
<td>Preschool Practicum</td>
</tr>
</tbody>
</table>

**ELECTIVES - COMPLETE 9 UNITS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 111</td>
<td>2</td>
<td>Health, Safety, and Nutrition</td>
</tr>
<tr>
<td>CLDDV 121</td>
<td>2</td>
<td>Guidance of Young Children</td>
</tr>
<tr>
<td>CLDDV 125</td>
<td>2</td>
<td>Infant and Toddler Development</td>
</tr>
<tr>
<td>CLDDV 163</td>
<td>4</td>
<td>Working with Children with Special Needs</td>
</tr>
<tr>
<td>CLDDV 167</td>
<td>4</td>
<td>Observation and Assessment</td>
</tr>
<tr>
<td>CLDDV 262</td>
<td>4</td>
<td>Diversity in Educational Settings</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 24-30

Certificate of Achievement: **Master Teacher**

**REQUIRED COURSES - COMPLETE A MINIMUM OF 17 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 101</td>
<td>3</td>
<td>Principles and Practices of Teaching Young Children</td>
</tr>
</tbody>
</table>

**CHILD GROWTH AND DEVELOPMENT:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 103</td>
<td>3</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>CLDDV 104</td>
<td>2 AND</td>
<td>Child Growth and Development - Conception</td>
</tr>
<tr>
<td>CLDDV 105</td>
<td>2</td>
<td>Child Growth and Development - Late Childhood - Adolescence</td>
</tr>
<tr>
<td>CLDDV 107</td>
<td>3</td>
<td>Introduction to Curriculum</td>
</tr>
<tr>
<td>CLDDV 109</td>
<td>3</td>
<td>Child-Family-Community</td>
</tr>
</tbody>
</table>

**LAB PRACTICUM - COMPLETE A MINIMUM OF 3 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 126</td>
<td>4</td>
<td>Inclusion Special Needs Practicum</td>
</tr>
<tr>
<td>CLDDV 127</td>
<td>3</td>
<td>Infant and Toddler Practicum</td>
</tr>
<tr>
<td>CLDDV 128</td>
<td>2-5</td>
<td>Preschool Practicum</td>
</tr>
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</table>

**ELECTIVES - COMPLETE 9 UNITS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 111</td>
<td>2</td>
<td>Health, Safety, and Nutrition</td>
</tr>
<tr>
<td>CLDDV 121</td>
<td>2</td>
<td>Guidance of Young Children</td>
</tr>
<tr>
<td>CLDDV 125</td>
<td>2</td>
<td>Infant and Toddler Development</td>
</tr>
<tr>
<td>CLDDV 163</td>
<td>4</td>
<td>Working with Children with Special Needs</td>
</tr>
<tr>
<td>CLDDV 167</td>
<td>4</td>
<td>Observation and Assessment</td>
</tr>
<tr>
<td>CLDDV 262</td>
<td>4</td>
<td>Diversity in Educational Settings</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 32-40

Certificate of Achievement: **Early Interventionist**

**REQUIRED COURSES - COMPLETE A MINIMUM OF 32 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 101</td>
<td>3</td>
<td>Principles and Practices of Teaching Young Children</td>
</tr>
</tbody>
</table>

**CHILD GROWTH AND DEVELOPMENT:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 103</td>
<td>3</td>
<td>Child Growth and Development</td>
</tr>
<tr>
<td>CLDDV 104</td>
<td>2 AND</td>
<td>Child Growth and Development - Conception</td>
</tr>
<tr>
<td>CLDDV 105</td>
<td>2</td>
<td>Child Growth and Development - Late Childhood - Adolescence</td>
</tr>
</tbody>
</table>

**ELECTIVES - COMPLETE 9 UNITS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDDV 111</td>
<td>2</td>
<td>Health, Safety, and Nutrition</td>
</tr>
<tr>
<td>CLDDV 121</td>
<td>2</td>
<td>Guidance of Young Children</td>
</tr>
<tr>
<td>CLDDV 125</td>
<td>2</td>
<td>Infant and Toddler Development</td>
</tr>
<tr>
<td>CLDDV 163</td>
<td>4</td>
<td>Working with Children with Special Needs</td>
</tr>
</tbody>
</table>

**TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT**: 32-40
The Child Development program focuses on the growth and development of children from conception to late adolescence. Students use this knowledge to effectively guide children by creating nurturing learning environments, and by responding to the needs of children, families, staff, agencies, and the larger community. The Child Development program includes both theoretical and practical courses. Training prepares students for a wide variety of careers in direct services for children and support services for families. Review the matrix below to see course requirements for each academic award, any learning environments, and by responding to the needs of children, families, staff, agencies, and the larger community. The Child Development program includes both theoretical and practical courses.

### Child Development Program Matrix

#### DEGREE

<table>
<thead>
<tr>
<th>AS Degree</th>
<th>Associate Teacher</th>
<th>Teacher</th>
<th>Master Teacher</th>
<th>Site Supervisor</th>
<th>Early Interventionist</th>
</tr>
</thead>
<tbody>
<tr>
<td>181</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>101</td>
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<tr>
<td>103 or 104+105</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>101</td>
<td>101</td>
</tr>
<tr>
<td>187</td>
<td>107</td>
<td>107</td>
<td>107</td>
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<tr>
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<tr>
<td>125</td>
<td>125</td>
<td>125</td>
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<td>126BCD... (4) OR 127B-E OR 128B-E... (2)</td>
<td>126BCD... (4) OR 127B-E OR 128B-E... (2)</td>
<td>126BCD... (4) OR 127B-E OR 128B-E... (2)</td>
<td>126BCD... (4) OR 127B-E OR 128B-E... (2)</td>
<td>126BCD... (4) OR 127B-E OR 128B-E... (2)</td>
</tr>
</tbody>
</table>

#### State of California Child Permit Matrix

**Child Development**

- **Associate:** 16 General Education Units
- **Teacher:** 36 General Education Units
- **Master Teacher:** 24+ Units
- **Site Supervisor:** 150 units or 36 General Education Units
- **Early Interventionist:** 154 units

#### Early Start Community College Personnel Preparation Project

<table>
<thead>
<tr>
<th>Permit Name</th>
<th>Associate</th>
<th>Teacher</th>
<th>Master Teacher</th>
<th>Site Supervisor</th>
<th>Early Interventionist</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>16 General Education Units</td>
<td>36 General Education Units</td>
<td>24+ Units</td>
<td>150 units or 36 General Education Units</td>
<td>154 units</td>
</tr>
</tbody>
</table>

#### 6-UNIT OPTIONS (required for AS Degree and Master Teacher Certificate)

- **Music:**
  - (CLASS) 294 (3 or 4)
  - (CLASS) 293 (2 or 3)

- **Administration:**
  - 150... (3 or 4)

- **Creative Activities:**
  - 209... (3 or 4)
  - 160... (3 or 4)
  - 262... (3 or 4)

- **Early Intervention:**
  - 250... (3 or 4)
  - 262... (3 or 4)

- **Families and Culture:**
  - 262... (3 or 4)
  - 212... (3 or 4)

- **Family Child Care:**
  - 212... (3 or 4)

- **Infant/Toddler:**
  - 274... (3 or 4)

- **Literacy and Language:**
  - 279, OR... (3 or 4)
  - 262BCD... (3 or 4)

- **Psychology:**
  - SPCOM 133 or ENGL 166B or ENGL 169

**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**

REV 01/13/2012 LSM
Skills Recognition Award: CLART 301

- The Skills Recognition Award is awarded through the Culinary Arts program. Upon completion, proof of completion will be granted by the instructor.

REQUIRED COURSE – COMPLETE 14 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CLART 301</td>
<td>Culinary Academy 1</td>
<td>14</td>
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</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD ........................................... 14

Certificate of Achievement: Culinary Arts

EXPECTED STUDENT-LEARNING OUTCOMES

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Culinary Arts will be able to:

1. Perform mathematical computations of recipe calculations, scaling, and conversions, as well as basic record keeping relating to the food service industry.
2. Demonstrate proper sanitation techniques and food handling for use in the food service industry.
3. Demonstrate proper use and handling of several types of knives, tools, and equipment for a variety of food products and preparations.
4. Match and select the appropriate ingredients, cooking methods, and preparation techniques to achieve the desired finished product and presentation.
5. Demonstrate the ability to apply basic knowledge of cooking fundamentals to the preparation of desserts, protein dishes, and other baked goods.
6. Demonstrate cost control procedures for forecasting income, costs, and profitability through operating budgets, food labor, and other expenses; and for calculating recipe costing and ceiling price of menu items.
7. Use computer technology for various aspects of management for the food service industry.
8. Use the critical thinking skills necessary for planning and organization of a station, production, management, and solving and correcting problems within food production.

CERTIFICATE REQUIREMENTS

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

REQUIRED COURSES – COMPLETE 28 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
</table>
| A.S. Degree: Culinary Arts

Lab Practicum - Complete A Minimum of 3 Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDV 109</td>
<td>Child-Family-Community</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 111</td>
<td>Health, Safety, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 125</td>
<td>Infant and Toddler Development</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 154</td>
<td>Adult Relationships &amp; Mentoring in Schools</td>
<td>2</td>
</tr>
<tr>
<td>CLDV 160</td>
<td>Atypical Development</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 163</td>
<td>Working with Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 165</td>
<td>Children at Risk</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 167</td>
<td>Observation and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>CLDV 262</td>
<td>Diversity in Educational Settings</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................... 32-40

- Completing the Early Interventionist Assistant certificate along with an AS degree in Child Development qualifies a student to work at the Early Intervention Assistant Level of the California Early Start Personnel Model. The California Interagency Coordinating Council has recommended the California Early Start Personnel Model for the professional field of early intervention. The California Interagency Coordinating Council is the statewide advisory body for California’s Early Start Program.

Interior Design

PROGRAM

The Interior Design program has a comprehensive curriculum based upon a nationally accepted professional body of knowledge, reflected in the skills and competencies required to become a Certified Interior Designer (CID), and included in the California Community College Program Plan for Interior Design. The application of the principles and elements of design are incorporated into every course and the content addresses the critical issues affecting the built environment: technology, universal design, and sustainability. Product knowledge, communication, and presentation skills, consumer trends, and the utilization of technology are embedded in the curriculum. Participation in professional development opportunities is encouraged.

The program focuses on the design of both residential and non-residential environments in response to the specific needs of the client, considering the factors of function, materials and structures, and aesthetics. The incorporation of professional practice issues such as ethics, licensing, and management provide a solid preparation for success in the workplace. Through the coursework, students are given the opportunity to prepare for self-employment as well as for careers in residential design, retail sales, and specialties such as kitchen and bath design. The department has an extensive resource center, professional library, and computer lab. It benefits from the support of the community of professional designers, fabricators, and manufacturers’ representatives.

Additionally, the program offers an excellent opportunity for design professionals, who are currently working in the field, to update their skills and to acquire the required design-related academic units necessary to apply for the following certification examinations: NCIDQ, NKBA, CQRID and/or the IDEX exam. Please consult www.CCIDC.org for requirements to become a Certified Interior Designer (CID) in California.

Careers in Interior Design/ Merchandising include:

- Residential, Commercial or Institutional Design
- Kitchen and Bath Design
- Health Care, Retail, or Hospitality Design
- Education
- Product Design
- Universal or Special Population Design
- Historic Preservation
- System Space Planning

Color Legend:

CHANGE FROM PROG REVISION NEW/MODIFIED REQUIREMENT INACTIVATED UNCHANGED FROM 2011-2012 CATALOG
Professional Development and Lifelong Learning:
Due to the dynamic nature of interior design, students are encouraged to maintain a commitment to professional development and lifelong learning. Also, eligibility for the NCIDQ examination for certifications as a Certified Interior Designer requires a minimum of 40 semester hours that culminates in a certificate or degree.

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn...

Certificate of Achievement: Interior Design

To earn a Certificate of Achievement in Interior Design, the student must complete the requirements for certificate detailed in the matrix.

<table>
<thead>
<tr>
<th>REQUIRED COURSES - COMPLETE 20 UNITS.</th>
</tr>
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<tbody>
<tr>
<td>INTDS 100 [NP] Careers in Design ....... 3</td>
</tr>
<tr>
<td>INTDS 120 [NP] Color Theory and Application ...... 3</td>
</tr>
<tr>
<td>ART 124 [NP] Color and Design 1 ............... 3</td>
</tr>
<tr>
<td>INTDS 150 [NP] History of Interiors/Decorative Arts 1 ...... 3</td>
</tr>
<tr>
<td>INTDS 155 [NP] History of Interiors/Decorative Arts 1 ...... 3</td>
</tr>
<tr>
<td>INTDS 200 [NP] Interior Design Fundamentals ... 3</td>
</tr>
<tr>
<td>INTDS 210 [NP] Introduction to Sales and Marketing for Design ...... 3</td>
</tr>
<tr>
<td>INTDS 270 [NP] Business and Professional Practices ...... 3</td>
</tr>
<tr>
<td>INTDS 220 [NP] Interior Finishes and Construction Materials ...... 3</td>
</tr>
<tr>
<td>INTDS 230 [NP] Drafting for Interiors ............... 3</td>
</tr>
<tr>
<td>INTDS 250 [NP] CAD/D for Interiors ............... 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTIVE COURSES - COMPLETE 5 UNITS.</th>
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</thead>
<tbody>
<tr>
<td>INTDS 120 [NP] Color Theory and Application* .......... 3</td>
</tr>
<tr>
<td>INTDS 130 [NP] Fabrics for Interiors ............... 3</td>
</tr>
<tr>
<td>INTDS 140 [NP] Rendering and Rapid Visualization .......... 3</td>
</tr>
<tr>
<td>INTDS 150 [NP] History of Interiors/Decorative Arts 1* ........ 3</td>
</tr>
<tr>
<td>INTDS 155 [NP] History of Interiors/Decorative Arts 2* ........ 3</td>
</tr>
<tr>
<td>INTDS 160 [NP] Asian Design and Decorative Arts .......... 3</td>
</tr>
<tr>
<td>INTDS 180 [NP] Universal Design for Health Safety and Wellness ........ 3</td>
</tr>
<tr>
<td>INTDS 190 [NP] Sustainable and Green Design .......... 3</td>
</tr>
<tr>
<td>INTDS 210 [NP] Introduction to Sales and Marketing for Design* .......... 3</td>
</tr>
<tr>
<td>INTDS 215 [NP] Interior Design Studio 1 ............... 3</td>
</tr>
<tr>
<td>INTDS 230 [NP] Drafting for Interiors* ............... 3</td>
</tr>
<tr>
<td>INTDS 235 [NP] Space Planning ............... 3</td>
</tr>
<tr>
<td>INTDS 245 [NP] Kitchen and Bath Design ............... 3</td>
</tr>
<tr>
<td>INTDS 250 [NP] CAD/D for Interiors ............... 3</td>
</tr>
<tr>
<td>INTDS 270 [NP] Business and Professional Practices* ........ 3</td>
</tr>
<tr>
<td>INTDS 298 [NP] Special Topics in Design ............... 3</td>
</tr>
<tr>
<td>INTDS 398 [NP] Community Design Project ............... 3</td>
</tr>
<tr>
<td>ART 120 [NP] Basic Drawing ............... 3</td>
</tr>
<tr>
<td>ART 124 [NP] Color and Design* ............... 3</td>
</tr>
<tr>
<td>ART 150 [NP] Gallery Operation and Management ............... 3</td>
</tr>
<tr>
<td>BUSAD 210 [NP] Business Communication ............... 3</td>
</tr>
<tr>
<td>BUSAD 218 [NP] Business Law ............... 3</td>
</tr>
<tr>
<td>BUSAD 249 [NP] Business Internship ............... 4</td>
</tr>
<tr>
<td>CMPGR 215 [NP] Business Presentation Graphics ............... 3</td>
</tr>
<tr>
<td>ENGT 210 [NP] Introduction to Computer Assisted Drafting ............... 1</td>
</tr>
</tbody>
</table>

*May be taken as an elective, if not taken as a core requirement.

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT ........................................ 27

A.A. Degree: Interior Design

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

| REQUIRED COURSES - Complete the 22 required units for Certificate of achievement |
| ELECTIVE COURSES - Complete 2 units from the list of electives for the Certificate of Achievement |

UNITs IN A.A. MAJOR .......................................................... 34

A.S. Degree: Interior Design

The Associate of Arts degree is appropriate for students who plan to transfer to a four-year university to earn a bachelor’s degree. Students are advised to consult with an academic counselor regarding requirements specific to various colleges and universities.

- To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

| REQUIRED COURSES - Complete the 22 required units for Certificate of achievement |
| ELECTIVE COURSES - Complete 12 units from the list of electives for the Certificate of Achievement |

UNITs IN A.S. MAJOR .......................................................... 34
To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed below.

**DEGREE REQUIREMENTS**

To earn an Associate in Arts Degree in this major, the student must complete the requirements below.

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate's Degree in English will be able to:

1. Read, comprehend, and evaluate a variety of texts and various forms of media.
2. Write clear, organized work in a style suited for its purpose and audience.
3. Create professional-looking written work that shows careful editing and properly document sources.
4. Demonstrate an appreciation of literature by reading and analyzing works from various genres, periods, and cultures.

**REQUIRED COURSES - COMPLETE 9 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>Composition and Reading</td>
</tr>
<tr>
<td>ENGL 102</td>
<td>3</td>
<td>Advanced Composition &amp; Introduction to Literature</td>
</tr>
<tr>
<td>ENGL 103</td>
<td>3</td>
<td>Advanced Composition and Critical Thinking</td>
</tr>
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</table>

**ELECTIVE COURSES - COMPLETE 11 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENGL 105</td>
<td>3</td>
<td>Creative Writing: Poetry</td>
</tr>
<tr>
<td>ENGL 106</td>
<td>3</td>
<td>Creative Writing: Short Fiction</td>
</tr>
<tr>
<td>ENGL 108</td>
<td>3</td>
<td>Creative Writing: Autobiography</td>
</tr>
<tr>
<td>ENGL 109</td>
<td>3</td>
<td>Creative Writing: Scriptwriting</td>
</tr>
<tr>
<td>ENGL 112</td>
<td>3</td>
<td>Introduction to the Novel and Short Story</td>
</tr>
<tr>
<td>ENGL 114</td>
<td>3</td>
<td>Introduction to Poetry</td>
</tr>
<tr>
<td>ENGL 116</td>
<td>3</td>
<td>Introduction to Drama</td>
</tr>
<tr>
<td>ENGL 131</td>
<td>3</td>
<td>Introduction to World Literature to 1500</td>
</tr>
<tr>
<td>ENGL 132</td>
<td>3</td>
<td>Introduction to World Literature from 1500 to Present</td>
</tr>
<tr>
<td>ENGL 135</td>
<td>3</td>
<td>Survey of American Literature to 1850</td>
</tr>
<tr>
<td>ENGL 136</td>
<td>3</td>
<td>Survey of American Literature: 1700 to Present</td>
</tr>
<tr>
<td>ENGL 137</td>
<td>3</td>
<td>Survey of English Lit to 18th Century</td>
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<td>ENGL 138</td>
<td>3</td>
<td>Survey of English Lit. 18th Century - Present</td>
</tr>
<tr>
<td>ENGL 151</td>
<td>3</td>
<td>Introduction to Folklore</td>
</tr>
<tr>
<td>ENGL 156</td>
<td>3</td>
<td>The Bible as Literature — The Hebrew Canon and Intertestamental Writings</td>
</tr>
<tr>
<td>ENGL 157</td>
<td>3</td>
<td>The Bible as Literature — The New Testament</td>
</tr>
<tr>
<td>ENGL 161</td>
<td>3</td>
<td>Film Appreciation</td>
</tr>
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<td>ENGL 162</td>
<td>3</td>
<td>History of Cinema</td>
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<td>ENGL 163</td>
<td>3</td>
<td>Introduction to Shakespeare</td>
</tr>
<tr>
<td>ENGL 168</td>
<td>3</td>
<td>Adolescent Literature</td>
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<td>ENGL 169</td>
<td>3</td>
<td>Children's Literature</td>
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<tr>
<td>ENGL 171</td>
<td>3</td>
<td>Introduction to African-American Literature</td>
</tr>
<tr>
<td>ENGL 172</td>
<td>3</td>
<td>Introduction to Chicano/a Literature</td>
</tr>
<tr>
<td>ENGL 173</td>
<td>3</td>
<td>Introduction to Latin American Literature</td>
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<tr>
<td>ENGL 174</td>
<td>3</td>
<td>Introduction to Modern Asian Literature</td>
</tr>
<tr>
<td>ENGL 175</td>
<td>3</td>
<td>Introduction to Women's Literature</td>
</tr>
<tr>
<td>ENGL 176</td>
<td>3</td>
<td>Introduction to Mexican Literature</td>
</tr>
<tr>
<td>ENGL 178</td>
<td>3</td>
<td>Mass Media and the Public</td>
</tr>
<tr>
<td>ENGL 179</td>
<td>3</td>
<td>Introduction to Native American Literature, Mythology, and the Oral Tradition</td>
</tr>
<tr>
<td>ENGL 183</td>
<td>2</td>
<td>Introduction to Tutoring Composition</td>
</tr>
<tr>
<td>ENGL 184</td>
<td>2</td>
<td>Advanced Tutoring of Composition</td>
</tr>
<tr>
<td>ENGL 198</td>
<td>3</td>
<td>Special Topics in English</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR**

| units | 20 |

**Color Legend:**

- **CHANGE FROM PROG REVISION**
- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**
## Language Studies PROGRAM

**A.A. Degree: University Preparation, Emphasis in Language Studies** (p. 173)

## Shakespeare Academy PROGRAM

**Skills Recognition Award: Shakespeare Academy**

- To earn a Skills Recognition Award, the student must complete the coursework that follows. Each course must be completed with a C or better.

**REQUIRED COURSES – COMPLETE 6 UNITS**
- ENGL 163 [2] Introduction to Shakespeare ........................................... 3
- THER 100 [1] Introduction to Theatre Arts .............................................. 3

**ELECTIVE COURSES – COMPLETE 11 UNITS**
- HUMAN 101 [1] Introduction to the Humanities ........................................ 3
- ENGL 116 [3] Introduction to Drama .......................................................... 3
- ENGL 137 [4] Survey of English Lit to 18th Century ................................ 3
- THER 120 [2] Oral Reading and Interpretation ......................................... 3

**MINIMUM UNITS FOR SKILLS RECOGNITION AWARD** .............................................. 17

## Spanish PROGRAM

The Department of Spanish offers various courses that provide students with the foundation for Spanish language study. Knowledge of Spanish is highly desirable in the many fields, such as health, service, business, travel and interpreting. Beyond the immediate practical advantages of learning a foreign language, there is also the profound personal enrichment that comes from firsthand knowledge of other cultures. Students majoring in Spanish have the opportunity to become acquainted with the history, literature, and art of the Spanish-speaking world. Students are urged to discuss their plans with faculty and counselors regarding the specific lower-division requirements at the four-year colleges and universities they plan to attend.

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn a...

**[PLOs PENDING AT CURRICULUM COMMITTEE]**

**A.A. Degree: Spanish**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED PREPARATORY COURSES – COMPLETE 8 UNITS**
- SPAN 102 [1] Spanish 2 .............................................................................. 5
- SPAN 103 [1] Spanish 3 .............................................................................. 5
- SPAN 104 [1] Spanish 4 .............................................................................. 5
- SPAN 110 [NP] Spanish for Spanish Speakers 2 ....................................... 5

**REQUIRED COURSES – COMPLETE 6 UNITS**
- SPAN 112 [NP] Intro. to Chicano/a Literature .......................................... 3
- SPAN 173 [NP] Survey of Latin American Literature ............................... 3
- HIST 125 [NP] History of Mexico ............................................................... 3
- HIST 145 [NP] History of Latin America .................................................. 3
- SOCIO 156 [NP] Mexican Culture in the United States ......................... 3

**MINIMUM UNITS IN A.A. MAJOR** ................................................................................. 20
Educational Programs in Physical Education

A.S. Degree: Athletic Training/Sports Medicine

- To earn an Associate in Science degree, students must complete the following coursework and meet the MJC Associate Degree Requirements. Courses should be selected with the assistance of an Athletic Training faculty advisor.

**REQUIRED COURSES - COMPLETE 31 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 111</td>
<td>2</td>
<td>Applications of Sports Medicine</td>
</tr>
<tr>
<td>PE 109</td>
<td>4</td>
<td>Peak Performance through Mental Training</td>
</tr>
<tr>
<td>PE 141</td>
<td></td>
<td>Supervision in Athletic Training</td>
</tr>
<tr>
<td>PE 108</td>
<td>1</td>
<td>Care and Prevention of Athletic Injuries</td>
</tr>
<tr>
<td>HE 110</td>
<td></td>
<td>Healthful Living</td>
</tr>
<tr>
<td>ANAT 125</td>
<td>3</td>
<td>Human Anatomy</td>
</tr>
<tr>
<td>HE 101</td>
<td>1</td>
<td>Emergency Response CPR FPR</td>
</tr>
<tr>
<td>PHY 101</td>
<td>4</td>
<td>Introductory Human Physiology</td>
</tr>
<tr>
<td>CHEM 143</td>
<td>1,2</td>
<td>Introduction to College Chemistry</td>
</tr>
<tr>
<td>FDTR 219</td>
<td>1</td>
<td>Food and Nutrition</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>1,2</td>
<td>General Psychology</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS FOR A.S. MAJOR** .................................................. 31

A.A. Degree: University Preparation, Emphasis in Health & Physical Education (p. 172)

**Physial Education PROGRAM**

**A.A. Degree: Physical Education**

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate Degree in Physical Education will be able to:

1. Use effective written, electronic, and verbal communication techniques regarding physical education.
2. Apply critical thinking to utilize protocols in regard to safely designing and monitoring the various parameters of physical activity.
3. Demonstrate competence in the major concepts, theoretical perspectives, and current research dealing with physical activity and sport.
4. Synthesize the personal, socio-cultural aspects of sport and physical activity.
5. Identify and apply basic rules and strategies of various physical activities.

**MAJOR REQUIREMENTS**

To earn an Associate in Arts Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 57) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 15 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 100</td>
<td>1</td>
<td>Introduction to Physical Education</td>
</tr>
<tr>
<td>PE 108</td>
<td>2,3</td>
<td>Care and Prevention of Athletic Injuries</td>
</tr>
<tr>
<td>PE 109</td>
<td>2,3,4</td>
<td>Peak Performance through Mental Training</td>
</tr>
<tr>
<td>PE 110</td>
<td>1</td>
<td>Officiating: Spring Sports</td>
</tr>
<tr>
<td>PE 115</td>
<td>2,4</td>
<td>Officiating: Fall Sports</td>
</tr>
<tr>
<td>HE 101</td>
<td></td>
<td>Emergency Response CPR FPR</td>
</tr>
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</table>

**ELECTIVE COURSES - COMPLETE 5 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 101</td>
<td>1,3</td>
<td>Basketball Theory</td>
</tr>
<tr>
<td>PE 102</td>
<td>1,3</td>
<td>Offensive Football Theory</td>
</tr>
<tr>
<td>PE 103</td>
<td>2,4</td>
<td>Track and Field Theory</td>
</tr>
<tr>
<td>PE 104</td>
<td>1</td>
<td>Wrestling Theory</td>
</tr>
<tr>
<td>PE 105</td>
<td>1</td>
<td>Defensive Football Theory</td>
</tr>
<tr>
<td>PE 106</td>
<td>1</td>
<td>Offensive Baseball Theory</td>
</tr>
<tr>
<td>PE 107</td>
<td>2,4</td>
<td>Defensive Baseball Theory</td>
</tr>
<tr>
<td>PE 111</td>
<td>3,4</td>
<td>Application of Sports Medicine</td>
</tr>
<tr>
<td>PE 110</td>
<td>1,3</td>
<td>Officiating: Spring Sports</td>
</tr>
<tr>
<td>PE 113</td>
<td>2,4</td>
<td>Offensive/Defensive Softball Theory</td>
</tr>
<tr>
<td>PE 114</td>
<td>1</td>
<td>Cross Country Concepts</td>
</tr>
<tr>
<td>PE 115</td>
<td>2,4</td>
<td>Officiating: Fall Sports</td>
</tr>
<tr>
<td>PE 116</td>
<td>1,3</td>
<td>Football Team Play Concepts</td>
</tr>
<tr>
<td>PE 120</td>
<td>2,4</td>
<td>Sports and Society</td>
</tr>
</tbody>
</table>

**Color Legend:**

- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG
<table>
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<tr>
<th>Code</th>
<th>(NP)</th>
<th>Course Name</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PEM 162</td>
<td>[NP]</td>
<td>Soccer</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 196</td>
<td>[NP]</td>
<td>Advanced Wrestling</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 164</td>
<td>[NP]</td>
<td>Women’s Indoor-Outdoor Soccer</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 166</td>
<td>[NP]</td>
<td>Women’s Self-Defense</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 167</td>
<td>[NP]</td>
<td>Women’s Beginning Judo</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 180</td>
<td>[NP]</td>
<td>Women’s Softball</td>
<td>½, 1</td>
</tr>
<tr>
<td>PEM 192</td>
<td>[NP]</td>
<td>Women’s Weight Training</td>
<td>1</td>
</tr>
<tr>
<td>PENV 100</td>
<td>[NP]</td>
<td>Varsity Baseball</td>
<td>3</td>
</tr>
<tr>
<td>PENV 105</td>
<td>[NP]</td>
<td>Men’s Varsity Basketball (Fall)</td>
<td>3</td>
</tr>
<tr>
<td>PENV 106</td>
<td>[NP]</td>
<td>Men’s Varsity Basketball (Spring)</td>
<td>½, 1</td>
</tr>
<tr>
<td>PENV 110</td>
<td>[NP]</td>
<td>Men’s Varsity Cross-Country</td>
<td>3</td>
</tr>
<tr>
<td>PENV 115</td>
<td>[NP]</td>
<td>Varsity Football</td>
<td>3</td>
</tr>
<tr>
<td>PENV 120</td>
<td>[NP]</td>
<td>Men’s Varsity Golf</td>
<td>3</td>
</tr>
<tr>
<td>PENV 122</td>
<td>[NP]</td>
<td>Men’s Varsity Soccer</td>
<td>3</td>
</tr>
<tr>
<td>PENV 125</td>
<td>[NP]</td>
<td>Men’s Varsity Swimming and Diving</td>
<td>3</td>
</tr>
<tr>
<td>PENV 130</td>
<td>[NP]</td>
<td>Men’s Varsity Tennis</td>
<td>3</td>
</tr>
<tr>
<td>PENV 135</td>
<td>[NP]</td>
<td>Men’s Varsity Track-Field</td>
<td>3</td>
</tr>
<tr>
<td>PENV 140</td>
<td>[NP]</td>
<td>Men’s Varsity Water Polo</td>
<td>3</td>
</tr>
<tr>
<td>PENV 145</td>
<td>[NP]</td>
<td>Varsity Wrestling</td>
<td>3</td>
</tr>
<tr>
<td>PENV 148</td>
<td>[NP]</td>
<td>Women’s Varsity Basketball (Fall)</td>
<td>3</td>
</tr>
<tr>
<td>PENV 150</td>
<td>[NP]</td>
<td>Women’s Varsity Basketball (Spring)</td>
<td>½, 1</td>
</tr>
<tr>
<td>PENV 151</td>
<td>[NP]</td>
<td>Women’s Varsity Cross-Country</td>
<td>3</td>
</tr>
<tr>
<td>PENV 155</td>
<td>[NP]</td>
<td>Women’s Varsity Golf</td>
<td>3</td>
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<tr>
<td>PENV 159</td>
<td>[NP]</td>
<td>Women’s Varsity Softball</td>
<td>3</td>
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<tr>
<td>PENV 160</td>
<td>[NP]</td>
<td>Women’s Varsity Volleyball</td>
<td>3</td>
</tr>
<tr>
<td>PENV 172</td>
<td>[NP]</td>
<td>Women’s Varsity Volleyball</td>
<td>3</td>
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<tr>
<td>PENV 175</td>
<td>[NP]</td>
<td>Women’s Varsity Track and Field</td>
<td>3</td>
</tr>
<tr>
<td>PENV 180</td>
<td>[NP]</td>
<td>Women’s Varsity Volleyball</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.A. MAJOR** ....................................................... 20
Emergency Medical Technician (EMT) PROGRAM

EMS 390: Emergency Medical Technician (EMT) 1 prepares students for certification as an Emergency Medical Technician I in the State of California. This one semester, 6 unit course is offered year round. EMT 390 is a comprehensive course that includes classroom instruction, laboratory, and clinical experience. Students are trained to provide emergency care (basic life support level) as an emergency medical service responder (police, fire, ambulance, ranger, rescue squad or industrial emergency operations). Additional lab and clinical hours are required. Contact the Regional Fire Training Center at (209) 549-7028.

Course expenses vary for each individual. The estimated cost for EMS 390 is $250-450 which includes enrollment and materials fees, health clearance, books, and certification examination. For information on Financial Aid, call 575-7700.

Eligibility And Preparation for EMT Program

- High school graduation or equivalent with transcripts on file in the MJC Records Office OR
- High school student, 18 years of age or older, with a minimum GPA of 3.0, verified by transcripts on file in the MJC Records Office.
- Transcripts must be on file in the MJC Records Office prior to the first day of class.

Program Requisites

All of the requisites must be valid through the end of the course and the EMT certification examination.

EMS 350 First Responder with Health Care Provider CPR.............................................. 3
CPR A valid health care provider CPR card.

Skills Recognition Award:

Emergency Medical Technician

- To earn a Skills Recognition Award, the student must complete the following required course with a grade of C or better.
  EMS 390 [NP] Emergency Medical Technician 1.............................................. 6

TOTAL UNITS FOR SKILLS RECOGNITION AWARD.............................................. 6

POLICY FOR DENIAL OF CERTIFICATION

The law provides for denial of certification for crimes or acts that may in any way be related to pre-hospital medical care i.e., sex crimes, drug crimes and crimes of violence or dishonesty. In such cases it is the applicant’s responsibility to present sufficient evidence of rehabilitation to the Mountain-Valley Emergency Medical Services Agency prior to applying for certification. The Mountain-Valley EMS Agency will evaluate applicants individually. Any student considering a career as an Emergency Medical Technician, who might be denied certification, is advised to address this issue with this Agency prior to taking this course.

Mountain-Valley Emergency Medical Services Agency

1101 Standiford Ave., Suite D1
Modesto, CA 95350
(209) 529-5085
Fire Academy

PROGRAM

Skills Recognition Award: Fire Academy

The Fire Academy Skills Recognition Award verifies the satisfactory completion of the educational standards for Fire Fighter 1. The Academy does not meet the experience requirement for State Fire Marshal certification, but it does meet the educational and training requirements. Completion will be provided by the Public Safety division.

REQUIRED PREPARATION

- Satisfactory completion of FSCI 301 and EMS 350 or EMS 390 with a grade of C or better
- Satisfactory completion of a physical agility test with a valid CPAT card.
- Physician’s statement of student health

REQUIRED COURSE - COMPLETE 17 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSCI 362</td>
<td>[2]</td>
<td>Basic Fire Academy</td>
</tr>
</tbody>
</table>

TOTAL UNITS FOR SKILLS RECOGNITION AWARD........................................... 17

Fire Science

PROGRAM

Certificate of Achievement: Fire Science

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

REQUIRED COURSE - COMPLETE 3 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
</table>

ELECTIVE COURSES - COMPLETE 27 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSCI 305</td>
<td>[1]</td>
<td>Fire Behavior and Combustion</td>
</tr>
<tr>
<td>FSCI 309</td>
<td>[NP]</td>
<td>Fire Management 2E</td>
</tr>
<tr>
<td>FSCI 311</td>
<td>[NP]</td>
<td>Rescue Systems 1</td>
</tr>
<tr>
<td>FSCI 312</td>
<td>[NP]</td>
<td>Fire Investigation 2A</td>
</tr>
<tr>
<td>FSCI 322</td>
<td>[4]</td>
<td>Fire Science Career Development/Promotions</td>
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<tr>
<td>FSCI 323</td>
<td>[4]</td>
<td>Fire Hydraulics</td>
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<tr>
<td>FSCI 328</td>
<td>[4]</td>
<td>Investigation of Fires</td>
</tr>
<tr>
<td>FSCI 341</td>
<td>[NP]</td>
<td>Fire Command 1C: I-Zone Firefighting</td>
</tr>
<tr>
<td>FSCI 346</td>
<td>[NP]</td>
<td>Instructional Methods for Fire Training Officers</td>
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<tr>
<td>FSCI 347</td>
<td>[NP]</td>
<td>Fire Prevention 1C</td>
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<tr>
<td>FSCI 348</td>
<td>[NP]</td>
<td>Public Fire Education 1</td>
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<td>FSCI 350</td>
<td>[NP]</td>
<td>Fire Command 1A</td>
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<tr>
<td>FSCI 352</td>
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<td>Training Instructor 1A</td>
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<tr>
<td>FSCI 353</td>
<td>[NP]</td>
<td>Training Instructor 1B</td>
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<td>FSCI 354</td>
<td>[NP]</td>
<td>Fire Prevention 1A</td>
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<td>FSCI 355</td>
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<td>FSCI 356</td>
<td>[NP]</td>
<td>Fire Management 1</td>
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<tr>
<td>FSCI 357</td>
<td>[NP]</td>
<td>Fire Investigation 1</td>
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<td>FSCI 362</td>
<td>[2]</td>
<td>Basic Fire Academy</td>
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<tr>
<td>FSCI 364</td>
<td>[NP]</td>
<td>Driver/Operator 1A</td>
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<tr>
<td>FSCI 368</td>
<td>[NP]</td>
<td>Fire Apparatus Driver/Operator 1B</td>
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<td>FSCI 369</td>
<td>[NP]</td>
<td>Emergency Aid Fire Responder</td>
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<td>FSCI 371</td>
<td>[NP]</td>
<td>Fire Command 2A</td>
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<tr>
<td>FSCI 372B</td>
<td>[NP]</td>
<td>Fire Management 2B</td>
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<tr>
<td>FSCI 373</td>
<td>[NP]</td>
<td>Fire Instructor 2A</td>
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<td>FSCI 374</td>
<td>[NP]</td>
<td>Fire Instructor 2B</td>
</tr>
<tr>
<td>FSCI 376</td>
<td>[NP]</td>
<td>Emergency Fire Special Topics</td>
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<td>FSCI 310XABC</td>
<td>[NP]</td>
<td>Rescue Systems and Operations</td>
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<td>EMS 350</td>
<td>[1]</td>
<td>First Responder with Health Care Provider CPR</td>
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<td>EMS 380</td>
<td>[1]</td>
<td>Basic ECG Interpretation</td>
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<td>EMS 389</td>
<td>[1]</td>
<td>Emergency Medical Technician 1 LAB</td>
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<td>EMS 390</td>
<td>[1]</td>
<td>Emergency Medical Technician 1</td>
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<tr>
<td>EMS 391</td>
<td>[NP]</td>
<td>Emergency Medical Tech. 1 (Rescuer)</td>
</tr>
<tr>
<td>NR 379</td>
<td>[NP]</td>
<td>Wildland Fire Control</td>
</tr>
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</table>

TOTAL UNITS FOR CERTIFICATE OF ACHIEVEMENT............................................ 30

A.S. Degree: Fire Science

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements for certificate of achievement in Fire Science.

MINIMUM UNITS IN AS MAJOR ........................................................................ 30

Color Legend:

- CHANGE FROM PROG REVISION
- NEW/MODIFIED REQUIREMENT
- INACTIVATED
- UNCHANGED FROM 2011-2012 CATALOG
The Architecture program prepares students to transfer to four-year college and university programs. The programs at most universities vary somewhat. The student should consult closely with the architecture staff to ensure that required transfer courses are completed for the specific college that the student selects.

The work of an architect is very complex. Architecture includes the total responsibility for the planning, design, and observation of construction of all types of buildings. Also included is the knowledge of engineering principles, construction methods, materials, new techniques, and procedures related to the client's needs. The architecture program is directed to provide the student with the architectural, engineering, mathematics, and general education courses. See advisor for required mathematics and science courses.

A.S. Degree: Architecture

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below. A minimum of 30 units must be completed from required mathematics, science, and Elective Courses for an Associate in Science Degree. See advisor for selection of courses.

**REQUIRED COURSES - COMPLETE 23 UNITS**

- **ARCH 100** [1] Introduction to Engineering & Architecture .................................................. 1
- **ARCH 121** [1] Beginning Graphics & Design 1 ..................................................................... 4
- **ARCH 122** [2] Beginning Graphics & Design 2 ..................................................................... 4
- **ARCH 131** [2] Architectural Drafting 1 ................................................................................. 4
- **ARCH 152** [3] Architectural Design 1 .................................................................................. 5

**ELECTIVE COURSES - COMPLETE 7 UNITS**

- **ARCH 106** [1] Materials of Construction ........................................................................... 2
- **ARCH 107** [2] Materials of Construction Lab .................................................................. 1
- **ARCH 117** [NP] History of Architecture 1 ......................................................................... 3
- **ARCH 118** [NP] History of Architecture 2 ......................................................................... 3
- **ARCH 132** [3] Architectural Drafting 2 ............................................................................. 3
- **ENGR 101** [4] Plane Surveying ............................................................................................ 1
- **ENGTC 210** [NP] Introduction to CAD ............................................................................ 3
- **ENGTC 211** [NP] Intermediate Topics in CAD ................................................................. 1

**MINIMUM UNITS IN AS MAJOR ........................................................................................................... 30**

A.A. Degree: University Preparation, Emphasis in Biological Sciences (p. 170)
### Chemistry Program

**A.A. Degree: University Preparation, Emphasis in Chemistry (p. 170)**

### City & Regional Planning Program

The City & Regional Planning program prepares students to transfer to four-year college and university programs. The programs at most universities vary somewhat. The student should consult closely with the architecture staff to ensure that required transfer courses are completed for the specific college that the student selects.

The work of a city and regional planner is part of the newer awareness of society to protect our environment. Planning includes opportunities with both private industry and/or federal, state, or local governmental agencies. The city and regional planning program is directed to provide the student with undergraduate architectural, engineering, mathematics, and general education courses. See advisor for required mathematics and science courses.

### A.S. Degree: City & Regional Planning

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

#### REQUIRED COURSES - COMPLETE 18 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 100 [1]</td>
<td></td>
<td>Introduction to Engineering &amp; Architecture</td>
</tr>
<tr>
<td>ARCH 121 [1]</td>
<td></td>
<td>Beginning Graphics &amp; Design 1</td>
</tr>
<tr>
<td>ARCH 131 [1]</td>
<td></td>
<td>Architectural Drafting 1</td>
</tr>
<tr>
<td>ARCH 152 [3]</td>
<td></td>
<td>Architectural Design 1</td>
</tr>
</tbody>
</table>

#### ELECTIVE COURSES - COMPLETE 12 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 110 [NP]</td>
<td></td>
<td>History of Architecture</td>
</tr>
<tr>
<td>ENGR 101 [4]</td>
<td></td>
<td>Plane Surveying</td>
</tr>
<tr>
<td>ENGR 210 [NP]</td>
<td></td>
<td>Introduction to CAD</td>
</tr>
<tr>
<td>ENGR 211 [NP]</td>
<td></td>
<td>Intermediate Topics in CAD</td>
</tr>
<tr>
<td>GEOL 161 [NP]</td>
<td></td>
<td>Physical Geology</td>
</tr>
<tr>
<td>ECON 101 [NP]</td>
<td></td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECON 102 [NP]</td>
<td></td>
<td>Economic Principles: Microeconomics</td>
</tr>
<tr>
<td>MATH 122 [NP]</td>
<td></td>
<td>Functions &amp; Analytic Geometry</td>
</tr>
</tbody>
</table>

#### MINIMUM UNITS IN A.S. MAJOR ................................................................. 30

### Construction Management Program

The Construction Management program prepares students to transfer to four-year college programs in the same major. Construction managers plan, direct and coordinate a wide variety of construction projects. Construction managers apply engineering principles and manage project resources to execute architectural designs.

Transfer institutions offer a wide variety of programs with varying requirements, so students must work closely with their counselors and engineering faculty to assure a smooth transition.

### A.S. Degree: Construction Management

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

#### REQUIRED COURSES — COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 100 [1]</td>
<td></td>
<td>Introduction to Engineering &amp; Architecture</td>
</tr>
<tr>
<td>ARCH 131 [2]</td>
<td></td>
<td>Architectural Drafting 1</td>
</tr>
</tbody>
</table>

#### ELECTIVE COURSES — COMPLETE 22 UNITS

**Complete a minimum of 5 units from the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 134 [NP]</td>
<td></td>
<td>Elementary Statistics</td>
</tr>
<tr>
<td>MATH 170 [3]</td>
<td></td>
<td>Calculus: First Course</td>
</tr>
<tr>
<td>MATH 172 [4]</td>
<td></td>
<td>Calculus: Second Course</td>
</tr>
</tbody>
</table>

**Complete a minimum of 5 units from the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 143 [1]</td>
<td></td>
<td>Introductory College Chemistry</td>
</tr>
</tbody>
</table>

**Complete a minimum of 7 units from the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 201 [NP]</td>
<td></td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>BUSAD 202 [NP]</td>
<td></td>
<td>Managerial Accounting</td>
</tr>
<tr>
<td>BUSAD 218 [NP]</td>
<td></td>
<td>Business Law</td>
</tr>
</tbody>
</table>

**Remainder of elective units may be selected from the three sections above or from the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 121 [1]</td>
<td></td>
<td>Beginning Graphics &amp; Design 1</td>
</tr>
<tr>
<td>ENGR 101 [3]</td>
<td></td>
<td>Introduction to Surveying and Topography</td>
</tr>
<tr>
<td>GEOL 161 [NP]</td>
<td></td>
<td>Physical Geology</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR ................................................................. 30**
**Drafting Technology Program**

The Drafting Technology program combines coursework in both Architectural and Engineering Drafting. The program prepares students to enter the field of drafting at the entry level as a drafter, plan checker, engineering aide, estimator, etc.

A variety of electives are available depending on a student’s interest in architectural or engineering topics. It is important that students consult with an advisor to select coursework within their area of choice.

### A.S. Degree: Drafting Technology

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

#### REQUIRED COURSES — COMPLETE 18 UNITS

- **ARCH 123 [4]** Beginning Graphics & Design I
- **ARCH 123 [3]** Architectural Drafting I
- **ARCH 122 [4]** Architectural Drafting II
- **ARCH 100 [3]** Intro to Engineering & Architecture
- **ENGR 100 [3]** Intro to Engineering & Architecture
- **ENGTC 322 [3]** Engineering Graphics
- **ENGTC 310 [3]** Intro to Computer Assisted Drafting
- **ENGTC 323 [3]** Intermediate Computer Assisted Drafting

#### ELECTIVE COURSES — COMPLETE 12 UNITS

**Complete a minimum of 2 units from the following:**

- **ENGTC 375 [NP]** Construction Blueprint Reading
- **INTEC 340 [NP]** Uniform Building Code, Structural
- **INTEC 341 [NP]** Uniform Building Code, Non-Structural
- **INTEC 344 [NP]** Uniform Mechanical Code

**Complete a minimum of 3 units from the following:**

- **CMSPC 293 [NP]** General Computer Literacy
- **CMSPC 278 [NP]** Spreadsheet Software
- **CMSPG 202 [NP]** Introduction to Computer Graphics
- **CMSPG 235 [NP]** Beginning Photoshop

**Remainder of elective units may be selected from the two sections above or from the following:**

- **ARCH 106 [3]** Materials of Construction
- **ARCH 107 [4]** Materials of Construction Laboratory
- **ARCH 322 [4]** Beginning Graphics & Design II
- **ARCH 322 [3]** Architectural Design I
- **ARCH 322 [3]** Architectural Design II
- **ENGTC 303 [NP]** Introduction to Surveying and Topography
- **ENGTC 332 [NP]** Advanced Computer Assisted Drafting
- **ENGTC 235 [NP]** Introduction to Solid Modeling
- **MATH 121 [3]** Pre-Calculus I
- **MATH 122 [4]** Pre-Calculus II
- **MATH 231D [NP]** Machine Tool Technology I

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

---

**Engineering Program**

The Engineering program prepares students to transfer to four-year college and university programs. Most universities have several common undergraduate core classes regardless of the student’s eventual area of specialization (i.e. civil, mechanical, electrical/electronic, aeronautical, agricultural, chemical, industrial, etc.). However, the A.S. program is flexible enough to allow students to tailor their coursework to fit the specific requirements of their selected transfer institution. Students must work closely with their counselors and engineering faculty to assure a smooth transition.

### A.S. Degree: Engineering

**EXPECTED STUDENT LEARNING OUTCOMES**

In addition to demonstrating the abilities listed as General Education Student Learning Outcomes, students who complete the Associate’s Degree in Engineering will be able to:

1. Develop an educational plan and strategy for success in continued undergraduate education at a university.
2. Perform appropriately as a member of a team, completing tasks and assuming appropriate roles.
3. Design and conduct experiments as well as analyze and interpret data.
4. Present projects professionally using effective oral presentation skills.
5. Research, analyze, and write effectively on engineering and science-related topics.
6. Develop engineering drawings according to professional standards and industry conventional (“best”) practices.
7. Identify, analyze, and formulate solutions to engineering problems using skills obtained in mathematics, physics, chemistry, and engineering-related courses.
8. Recognize the need for engaging in life-long learning and professional development.

**MAJOR REQUIREMENTS**

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

#### REQUIRED COURSES — COMPLETE 16 UNITS

- **ENGR 100 [1]** Introduction to Engineering
- **MATH 171 [1]** Calculus: First Course
- **MATH 172 [2]** Calculus: Second Course
- **PHYS 101 [2]** General Physics

#### ELECTIVE COURSES — COMPLETE 15 UNITS

**Complete 6 units minimum Engineering coursework**:  

- **ENGR 101 [NP]** Introduction to Surveying & Topography
- **ENGR 127 [2]** Engineering Graphics
- **ENGR 130 [3]** Properties of Materials
- **ENGR 135 [3]** Engineering Mechanics-Statics
- **ENGR 141 [4]** Intro to Circuit Analysis (w/ Lab)
- **PHYS 102 [3]** General Physics
- **PHYS 103 [4]** General Physics
- **CHEM 101 [1]** General Chemistry 1
- **CHEM 102 [2]** General Chemistry 2
- **MATH 173 [3]** Calculus: Third Course
- **MATH 174 [4]** Calculus: Intro to Linear Algebra and Ordinary Differential Equations

* Electrical Engineering students may take ENGR 141 only (4 units) and substitute 2 units of approved electives. See faculty advisor for approval.

**MINIMUM UNITS IN A.S. MAJOR** ................................................................. 31
A.S. Degree: Engineering Technology

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUISITE COURSES — COMPLETE 20 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CHEM 143</td>
<td>Introductory College Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>ENGR 100</td>
<td>Intro to Engineering &amp; Architecture</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 127</td>
<td>Engineering Graphics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 134</td>
<td>Elementary Statistics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>General Physics: Mechanics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>Mechanics: Heat and Waves</td>
<td>5</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES — COMPLETE 11 UNITS**

Complete a minimum of 6 units from the following:

- CMPSC 201 [NP] General Computer Literacy
- MACH 211D [NP] Machine Tool Technology I
- WELD 200 [NP] Arc & Gas Welding

Any ELEC 100 or 200 series course

Any INTEC 100 or 200 series course

Remainder of elective units may be selected from the section above or from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 106</td>
<td>Materials of Construction</td>
<td>2</td>
</tr>
<tr>
<td>ARCH 107</td>
<td>Materials of Construction Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 131</td>
<td>Architectural Drafting 1</td>
<td>4</td>
</tr>
<tr>
<td>ENGR 101</td>
<td>Introduction to Surveying and Topography</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 130</td>
<td>Properties of Materials</td>
<td>4</td>
</tr>
<tr>
<td>ENGT 210</td>
<td>Intro to Computer-Assisted Drafting</td>
<td>1</td>
</tr>
<tr>
<td>ENGT 211</td>
<td>Intermediate Computer-Assisted Drafting</td>
<td>1</td>
</tr>
<tr>
<td>ENGT 215</td>
<td>Introduction to Solid Modeling</td>
<td>1</td>
</tr>
<tr>
<td>MATH 138</td>
<td>Calculus for Business &amp; Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 143</td>
<td>Electricity, Magnetism, Optics, Atomic &amp; Nuclear Structure</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL UNITS IN A.S. MAJOR** ................................................................. 31

A.A. Degree: University Preparation, Emphasis in Environmental Science (p. 171)

---

A.S. Degree: Landscape Architecture

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES — COMPLETE 19 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 106</td>
<td>Materials of Construction</td>
<td>2</td>
</tr>
<tr>
<td>ARCH 107</td>
<td>Materials of Construction Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>ARCH 131</td>
<td>Architectural Drafting 1</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 132</td>
<td>Architectural Drafting 2</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 133</td>
<td>Architectural Drafting 2</td>
<td>4</td>
</tr>
<tr>
<td>ARCH 153</td>
<td>Architectural Design 2</td>
<td>5</td>
</tr>
<tr>
<td>ENGT 210</td>
<td>Introduction to CAD</td>
<td>5</td>
</tr>
<tr>
<td>ENGTE 211</td>
<td>Intermediate Topics in CAD</td>
<td>3</td>
</tr>
<tr>
<td>ENGTE 215</td>
<td>Introduction to Environmental Horticulture</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR** ................................................................. 39

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Mathematics for Transfer Program

This program is designed to prepare students who wish to transfer to a California State University or University of California campus to complete a bachelor's degree in mathematics or a related field of study. It will provide training to master the techniques of integration and differentiation and use these techniques to model real-world applications.

The Associate in Science in Mathematics for Transfer degree includes curriculum which focuses on the mastery of integration and differentiation and using these techniques to model real-world applications.

The Associate in Science in Mathematics for Transfer degree is intended for students who plan to complete a bachelor’s degree in Mathematics or a related field of study offered at various campuses in the University of California system. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students transferring to a CSU campus that accepts this degree will be required to complete no more than 60 units after transfer to earn a bachelor’s degree. This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system.

The Associate in Science in Mathematics for Transfer degree also offers the appropriate preparation for students who plan to complete a bachelor’s degree in Mathematics at various campuses in the University of California system. However, students completing this degree are not guaranteed admission to the UC system.

In all cases, students should consult with a counselor or visit www.ASSIST.org for more information on
AS-T Degree: **Mathematics for Transfer**

**EXPECTED STUDENT LEARNING OUTCOMES**

Students who earn an Associate of Science degree in Mathematics will be able to:

9. Successfully complete upper division coursework in mathematics.
10. Master the techniques of integration and differentiation.
11. Use these techniques to model real-world applications.

- To earn an Associate in Science for Transfer degree in this major, the student must complete the requirements detailed the Transfer Model Curriculum pathway (p. 9 of the 2011-12 addendum only). All courses must be completed with a C or better.

**COMPLETE 25 UNITS:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 173</td>
<td>Calculus: Third Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 174</td>
<td>Introduction to Linear Algebra and Differential Equations</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>General Physics: Mechanics</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL UNITS IN AS-T. MAJOR**

Note: Double counting courses in GE and the major is permissible

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**A.S. Degree: Physical Science**

This curriculum plan is intended for those interested in transferring to a four-year college or university. However, the courses in this program do not necessarily fulfill the prerequisites for the major at any particular institution. Students are encouraged to consult with the physical science and counseling staff in order to choose courses satisfying the prerequisites of the major and addressing the student's career goals.

To earn an Associate in Science Degree in this major, the student must complete the requirements detailed in the Career Technical Education Pathway (p. 67) or the University Preparation Pathway (p. 65) which include completion of the requirements below.

**REQUIRED COURSES - COMPLETE 30 UNITS**

Complete all of the following courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
</tbody>
</table>

Complete one of the following Physics sequences

**Sequence A**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>General Physics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 102</td>
<td>General Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

**Sequence B**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 101</td>
<td>General Physics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 103</td>
<td>General Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

**Sequence C**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat, and Waves</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 143</td>
<td>Electricity, Magnetism, Optics, Atomic and Nuclear Structure</td>
<td>5</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES - COMPLETE 4 UNITS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTRO 141</td>
<td>Introduction to Astrophysics</td>
<td>3</td>
</tr>
<tr>
<td>ASTRO 151</td>
<td>Introduction to Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 113</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>GEOL 161</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>EASCI 161</td>
<td>Earth Science</td>
<td>4</td>
</tr>
<tr>
<td>MATH 173</td>
<td>Calculus: Third Course</td>
<td>5</td>
</tr>
</tbody>
</table>

(Either of the following Physics courses that has not been completed above)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 102</td>
<td>General Physics</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 103</td>
<td>General Physics</td>
<td>5</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN A.S. MAJOR**

A.A. Degree: University Preparation, Emphasis in Physics (p. 175)

Color Legend:

- **NEW/MODIFIED REQUIREMENT**
- **INACTIVATED**
- **UNCHANGED FROM 2011-2012 CATALOG**

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**ACADEMIC PROGRAMS**
The Associate of Arts in General Studies with Emphasis provides an opportunity for you to earn an Associate of Arts (AA) degree in a comprehensive area of study. This degree is intended for students who may not be planning to transfer to a university in the near future. The General Studies degree is intended to provide both breadth and depth of education. Breadth is achieved by completion of the 18-unit MJC-GE Pattern for the Associate's Degree. Depth is achieved when you complete an additional 18-unit Emphasis in one of four areas: Natural Sciences, Social and Behavioral Sciences, Humanities, or Language and Rationality. By completing this pattern of study, you will have a "well rounded" education in addition to lower-division course work in related disciplines which can be used as preparation for a field of study.

To earn an A.A. in General Studies with an emphasis:

1. Follow the Career and Technical Education Pathway for associate degree on page 71 of the 2011-2012 MJC Catalog. Satisfactory completion of this pathway will result in an associate degree from Modesto Junior College.

2. In fulfillment of the Career and Technical Education Pathway degree requirements, select and complete a General Studies emphasis from the following pages. Coursework completed in fulfillment of a General Education requirement cannot be reapplied toward a General Studies emphasis.

A.A. Degree:
General Studies, Emphasis in Humanities

ABOUT THIS EMPHASIS

Courses in the humanities are those that study the cultural activities and artistic expressions of human beings. Students will develop an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves and the world around them in artistic and cultural creations and develop aesthetic understanding, and an ability to make value judgments.

REQUIRED COURSES

- For this non-transfer emphasis, complete a minimum of 18 units from the list below. Of that 18 units, select two disciplines. Complete 6 units in each. Students may not double-count units with General Education courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 104</td>
<td>Linguistic Anthropology (SU07)</td>
<td>3</td>
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<tr>
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<td>ART 124</td>
<td>Color and Design 1 (SU07)</td>
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<td>ART 160</td>
<td>Appreciation of Art</td>
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<td>ART 163</td>
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<td>ART 168</td>
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<td>ART 169</td>
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<td>CMPGRA 201</td>
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FILM 154 Movies with a Message (FO1) .................................................................................. 3
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SPAN 101 Spanish 1 ............................................................................................................ 5
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SPAN 103 Spanish 3 ............................................................................................................ 5
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SPCOM 124 Advanced Readers’ Theatre (FOO) ..................................................................... 3
THEAT 100 Introduction to Theatre Arts ................................................................................ 3
THEAT 120 World Theatre (FO1) .......................................................................................... 3
THEAT 123 Oral Reading/Interpretation ................................................................................. 3
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THEAT 150 Elements of Playwriting ....................................................................................... 3
THEAT 165 History of American Music Theatre .................................................................... 3
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**A.A. Degree:**

**General Studies, Emphasis in Natural Sciences**

**ABOUT THIS EMPHASIS**

Courses in the natural sciences are those that examine the physical universe, its life forms, and its natural phenomena. Students will develop an appreciation and understanding of the scientific method and an understanding of the relationships between science and other human activities.

**REQUIRED COURSES**

- For this non-transfer emphasis, complete a minimum of 18 units from the list below. Of that 18 units, select two disciplines. Complete 6 units in each. Students may not double-count units with General Education courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>AG 376</td>
<td>Basic Science and Laboratory Techniques</td>
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<tr>
<td>ANAT 125</td>
<td>Human Anatomy (SU07)</td>
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<tr>
<td>ANSC 200</td>
<td>Introduction to Animal Science</td>
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<tr>
<td>ANTHR 101</td>
<td>Physical Anthropology</td>
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<td>AP 105</td>
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<td>AP 50</td>
<td>Elementary Human Anatomy-Physiology (FO6)</td>
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<td>AP 150</td>
<td>Integrative Anatomy &amp; Physiology</td>
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<td>BIO 114</td>
<td>General Ecology (SU10)</td>
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<td>BIO 115</td>
<td>Genetics, Evolution, and Society (FO9)</td>
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<td>BIO 116</td>
<td>Biology: A Human Perspective (SU10)</td>
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<tr>
<td>BIO 125</td>
<td>Introduction to Marine Zoology (FO5)</td>
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<tr>
<td>BIO 130</td>
<td>Introduction to Marine Zoology at Lab P2, 110FOO</td>
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<td>BIO 140</td>
<td>Introduction to Marine Biology</td>
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<td>BIO 145</td>
<td>Introduction to Freshwater Biology</td>
</tr>
<tr>
<td>BOT 101</td>
<td>General Botany (SU10)</td>
</tr>
</tbody>
</table>
A.A. Degree: **General Studies, Emphasis in Language and Rationality**

**ABOUT THIS EMPHASIS**

Courses in language and rationality are those that focus on the study of English composition, communication, and analytical thinking. Students will develop the principles and applications of language toward logical thought, clear and precise expression, and critical evaluation of communication. Whatever system the students use.

**REQUIRED COURSES**

For this non-transfer emphasis, complete a minimum of 18 units from the list below. Of that 18 units, select two disciplines and complete 6 units in each discipline. Students may not double-count units with General Education courses.

- ENGL 101 Composition and Reading .......................... 3

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A.A. Degree: **General Studies, Emphasis in Social & Behavioral Sciences**

**ABOUT THIS EMPHASIS**

Courses in the social and behavioral sciences are those that focus on people as members of society. Courses will stimulate critical thinking about the ways people act and have acted in response to their societies and will promote appreciation of how societies and social subgroups operate.

**REQUIRED COURSES**

- For this non-transfer emphasis, complete a minimum of 18 units from the list below. Of that 18 units, select two disciplines and complete 6 units in each discipline. Students may not double-count units with General Education courses.

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**PROGRAMS IN GENERAL STUDIES AND UNIVERSITY PREPARATION**
### Programs in General Studies and University Preparation

<table>
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<th>Code</th>
<th>Course Title</th>
<th>Location</th>
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<td>Elements of Agricultural Economics</td>
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<td>AGGE 146</td>
<td>Agriculture, Environment &amp; Society (F97)</td>
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<td>Cultural Anthropology</td>
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<td>ANTHR 104</td>
<td>Linguistic Anthropology (SU07)</td>
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<td>ANTHR 140</td>
<td>Magic, Witchcraft, and Religion (F97)</td>
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<td>BUSAD 240</td>
<td>Principles of Management</td>
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<td>CLDIV 103</td>
<td>Child Growth and Development</td>
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<td>CLDIV 104</td>
<td>Child Growth and Development - Conception Through Early Childhood (SU10)</td>
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<td>Child Growth and Development - Late Childhood Through Adolescence (SU10)</td>
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<td>Diversity in Educational Settings (SU09)</td>
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<td>Economic Principles: Macroeconomics</td>
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<td>Economic History of the United States</td>
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<td>California Water (F98)</td>
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<td>Western Civilization to 1650</td>
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<td>Western Civilization Since 1650</td>
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<td>Women in American History</td>
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<td>Social and Cultural History of 20th Century America (F00)</td>
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<td>History of Mexico</td>
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<td>History of the American Far Western Frontier</td>
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<td>History of California</td>
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<td>HIST 145</td>
<td>History of Latin America</td>
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<td>HIST 155</td>
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<td>POLSC 101</td>
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<td>POLSC 102</td>
<td>The Constitution and the Rights of Americans</td>
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<td>POLSC 110</td>
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<td>PSYCH 51</td>
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<td>PSYCH 101</td>
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<td>PSYCH 104</td>
<td>Social Psychology (SU08)</td>
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<td>PSYCH 105</td>
<td>Abnormal Psychology (SU07)</td>
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<td>Psychology of Gender (SU07)</td>
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<td>SOCIO 101</td>
<td>Introduction to Sociology</td>
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<td>SOCIO 102</td>
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<td>SOCIO 131</td>
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<td>SOCIO 150</td>
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<td>SOCIO 154</td>
<td>African-American Cultures and Communities</td>
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<td>SOCIO 156</td>
<td>Mexican Culture in the United States</td>
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</table>

**Students can take advantage of numerous study groupwork environments around campus.**
What is the University Preparation degree?

The University Preparation degree, distinctive of the University Preparation “pathway,” is designed to prepare you for transfer to a California State University (CSU) or University of California (UC) campus. While completion of this program does not guarantee admission to a specific college or university, it allows you to complete preparatory courses that may apply toward the area of study in which you plan to major at your targeted transfer university, and to complete general education requirements required by CSU and UC for bachelor’s (baccalaureate) degree. It entails an interdisciplinary approach to learning that will allow you to simultaneously meet your unique transfer goals and and fulfill lower division requirements for bachelor’s degree at many CSU or UC institutions. You will do this by completing a rigorous general education experience with either the CSU-GE or IGETC general education patterns, in addition to completing an emphasis in a particular field or program.

How does it work?

Each emphasis has been crafted to help you prepare for upper-division coursework in a baccalaureate major at a four-year university. By fulfilling the requirements of the MJC emphasis, you will also be completing some or all lower-division preparation for baccalaureate major at the university. ASSIST (www.assist.org) is a statewide database of recorded transfer agreements between community colleges and universities. You are advised to use ASSIST in selecting courses from the emphasis to ensure that the coursework applies to your baccalaureate major.

To earn an A.A. in University Preparation with an Emphasis

1. Complete the requirements for the University Preparation Pathway as listed on page 65 of the 2010-11 MJC Catalog. Satisfactory completion of this pathway will result in an associate degree from Modesto Junior College.

2. In fulfillment of those requirements, complete a AA or AS major from this catalog or an emphasis from the following pages.
   - If you complete an AA or AS major, your degree will read: “AA or AS in _______”
   - If you complete an emphasis, your degree will read: “AA in University Preparation, Emphasis in ______.”

Prepare for transfer with some majors at MJC

Not every program at MJC offers a degree designed for transfer-oriented students. However, many programs do offer AA or AS majors which function like the emphasis for transfer-oriented students. Those majors are included on the following pages to help you make the right decision when determining the best transfer-oriented path of study.
University Preparation Program

Certificate of Achievement: CSU-GE Pattern

To earn a Certificate of Achievement in CSU General Education, the student must complete the requirements detailed in the CSU-GE Pattern. Each course must be completed with a grade of C or better. Students who plan to transfer to CSU should consult with a counselor about proper selection of courses, and General Education certification.

Certificate of Achievement: IGETC Pattern

To earn a Certificate of Achievement in IGETC, the student must complete the requirements detailed in the IGETC Pattern. Each course must be completed with a grade of C or better. Students who plan to transfer to CSU or UC should consult with a counselor about proper selection of courses and General Education certification.

A.A. Degree: University Preparation, Emphasis in Agricultural Sciences

ABOUT THIS EMPHASIS

Agricultural Science emphasis includes disciplines related to the management of soil, water, air, plant and animal resources, particularly pertaining to the agricultural industry. Students can expect to gain a general understanding of science-related topics such as biology, animal science, crop, soil and water science, horticulture, and toxicology, and often humanities-related topics, such as communications, public relations, social services, marketing, education and economics. More advanced topics often cover pests and diseases, plant physiology, animal health and management, soil and water engineering, ranching and agribusiness, and education.

EXPECTED STUDENT LEARNING OUTCOMES

IN ADDITION TO DEMONSTRATING THE ABILITIES LISTED AS GENERAL EDUCATION STUDENT LEARNING OUTCOMES, STUDENTS WHO COMPLETE THE ASSOCIATE'S DEGREE IN UNIVERSITY PREPARATION, EMPHASIS IN AGRICULTURAL SCIENCES WILL BE ABLE TO:

1. Describe the basic workforce readiness skills needed to be successful in agriculture careers today.
2. Describe the importance of the agriculture industry to the local, state and national economy.
3. Give specific examples of careers in the general agriculture area and briefly describe the prerequisites for these careers.

EMPHASIS REQUIREMENTS

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

REQUIRED COURSES - TAKE 4 COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
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<tr>
<td>AGEC 210 [NP]</td>
<td>3</td>
<td>Elements of Agricultural Economics</td>
</tr>
<tr>
<td>ANSC 200 [NP]</td>
<td>3</td>
<td>Introduction to Animal Science</td>
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<tr>
<td>NR 200 [NP]</td>
<td>4</td>
<td>Soils</td>
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<tr>
<td>PLSC 200 [NP]</td>
<td>3</td>
<td>Introduction to Plant Science</td>
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ELECTIVE COURSES - TAKE 5 UNITS.

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>AGEC 200 [NP]</td>
<td>3</td>
<td>Agricultural Accounting and Analysis</td>
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<tr>
<td>AGEC 225 [NP]</td>
<td>3</td>
<td>Agriculture Computing Applications</td>
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</tbody>
</table>

A.A. Degree: Architecture

STUDENTS INTENDING TO TRANSFER FROM MJC TO A COLLEGE OR UNIVERSITY AS ARCHITECTURE MAJORS ARE ADVISED TO CONSULT WITH A COUNSELOR OR THE MJC ARCHITECTURE DEPARTMENT TO ENSURE PROPER SELECTION OF COURSES.

A.A. Degree: University Preparation, Emphasis in Art and Design

ABOUT THIS EMPHASIS

The study of art and design includes drawing, painting, printmaking, sculpture/installation (wood, metal, ceramics, mixed media), photography, digital art, and art history.

EMPHASIS REQUIREMENTS

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

REQUIRED COURSES – TAKE 12 UNITS.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 120 [NP]</td>
<td>3</td>
<td>Basic Drawing 1</td>
</tr>
<tr>
<td>ART 124 [NP]</td>
<td>3</td>
<td>Color and Design 1</td>
</tr>
<tr>
<td>ART 140 [NP]</td>
<td>3</td>
<td>Sculpture 1</td>
</tr>
<tr>
<td>ART 164 [NP]</td>
<td>3</td>
<td>History of Art 1</td>
</tr>
<tr>
<td>ART 165 [NP]</td>
<td>3</td>
<td>History of Art 2</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES – TAKE 2 COURSES.

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select two courses from the following list of electives. Additional courses may be required by your transfer university.

- The student cannot count Art 164 or 165 for both required and elective units but may count one class as required and the other as elective.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 102/COMPGR 102 [NP]</td>
<td>3</td>
<td>Introduction to Computer Graphics</td>
</tr>
<tr>
<td>ART 108 [NP]</td>
<td>3</td>
<td>Ceramics 1</td>
</tr>
</tbody>
</table>
Programs in General Studies and University Preparation

A.A. Degree: University Preparation, Emphasis in Biological Sciences

About This Emphasis

The study of biology includes various aspects of life, including basic organization (molecular, cellular, tissues, organs), how organisms function, their roles in the natural environment, how hereditary information is transferred, and development of biotechnology.

Emphasis Requirements

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

Required Courses – Complete 13 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat, and Waves</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 143</td>
<td>Electricity, Magnetism, Optics, Atomic and Nuclear Structure</td>
<td>5</td>
</tr>
</tbody>
</table>

Elective Courses – Complete 10 Units

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select 2 courses within one area from the following list of electives. Additional courses may be required by your transfer university.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 112</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 113</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 173</td>
<td>Calculus: Third Course</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat, and Waves</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 143</td>
<td>Electricity, Magnetism, Optics, Atomic and Nuclear Structure</td>
<td>5</td>
</tr>
</tbody>
</table>

Units Required in Area of Emphasis .................................................. 18

A.A. Degree: University Preparation, Emphasis in Chemistry

About This Emphasis

Chemistry is the branch of physical science that deals with the elementary substances, or forms of matter, of which all bodies are composed, the laws that regulate the combination of these elements in the formation of compound bodies, and the various phenomena that accompany their exposure to diverse physical conditions.

Emphasis Requirements

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

Required Courses – Complete 10 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Basic Drawing 2</td>
<td>3</td>
</tr>
<tr>
<td>ART 123</td>
<td>Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 125</td>
<td>Color and Design 2</td>
<td>3</td>
</tr>
<tr>
<td>ART 147</td>
<td>Painting 1 (in Acrylic)</td>
<td>3</td>
</tr>
<tr>
<td>ART 148</td>
<td>Painting 1 (in Oil)</td>
<td>3</td>
</tr>
<tr>
<td>ART 164</td>
<td>History of Art 1</td>
<td>3</td>
</tr>
<tr>
<td>ART 165</td>
<td>History of Art 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Units Required in Area of Emphasis .................................................. 21-25

A.A. Degree: Communication

About This Emphasis

The study of communication focuses on how people produce and process messages, and how their message options and decisions affect others’ thoughts, attitudes, and behaviors.

To earn an Associate in Arts Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

Required Courses – Complete 9 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCOM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 103</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 104</td>
<td>Argumentation</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses – Complete 9 Units

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select 2 units from the following list of electives. Additional courses may be required by your transfer university.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>JRNAL 100</td>
<td>Reporting and Writing for the Media</td>
<td>3</td>
</tr>
<tr>
<td>RATV 121</td>
<td>Television Studio Production</td>
<td>3</td>
</tr>
<tr>
<td>RATV 125</td>
<td>Introduction to the Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 102</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 105</td>
<td>Forensic Workshop</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 106</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 130</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Units Required in Area of Emphasis .................................................. 20

A.A. Degree: Computer Science

About This Emphasis

Students intending to transfer as Computer Science majors are advised to complete the requirements of the AA-T in Computer Science on (p. 128) in the MJC Catalog. This major has been specifically designed to prepare students for transfer.

Required Courses – Complete 10 Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Elective Courses – Complete 10 Units

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select 2 courses within one area from the following list of electives. Additional courses may be required by your transfer university.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 112</td>
<td>Organic Chemistry 1</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 113</td>
<td>Organic Chemistry 2</td>
<td>5</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 173</td>
<td>Calculus: Third Course</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat, and Waves</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 143</td>
<td>Electricity, Magnetism, Optics, Atomic and Nuclear Structure</td>
<td>5</td>
</tr>
</tbody>
</table>

Units Required in Area of Emphasis .................................................. 18

A.A. Degree: University Preparation,
Emphasis in Earth Sciences

ABOUT THIS EMPHASIS
The study of earth science focuses on the physical, chemical, and biological aspects of the natural processes that govern natural resources, natural hazards, weather, and climate of the Earth system. Students should consult with a counselor or visit www.ASSIST.org for more information on university admission and transfer requirements.

EXPECTED STUDENT LEARNING OUTCOMES
Students who earn an Associate of Arts degree in University Preparation, Emphasis in Earth Sciences will be able to:

1. Successfully complete upper division coursework in mathematics.
2. Identify physical features of the Earth system and relate them to processes operating within the Earth system.
3. Identify the basic rock-forming minerals, and the most common igneous, sedimentary and metamorphic rocks.
4. Analyze topographic and geologic maps for evidence of tectonic and erosional processes.
5. Identify and describe the properties of minerals, fossils, and rocks, and evaluate the tectonic and geologic environment that they formed in.
7. Identify and apply the vocabulary and principles of mechanics, wave theory, and thermodynamics to solve problems and explain natural phenomena.
8. Use the skills and concepts of differentiation and integration to solve applied problems in physics.
9. Effectively utilize the principles of chemistry including measurements and significant figures, chemical reactions, stoichiometry, gas laws and theory, thermodynamics, atomic structure and quantum mechanics, periodic properties, chemical bonding, molecular structure, intermolecular attractions and properties of liquids and solids, and properties of solutions.

EMPHASIS REQUIREMENTS
To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

REQUIRED COURSES: COMPLETE 23 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO1 61</td>
<td>Physical Geology</td>
<td>4 OR</td>
</tr>
<tr>
<td>EASCI 161</td>
<td>Earth Science</td>
<td>4</td>
</tr>
<tr>
<td>GEO1 66</td>
<td>Historical Geology</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 142</td>
<td>Mechanics, Heat &amp; Waves</td>
<td>5 OR</td>
</tr>
<tr>
<td>PHYS 101</td>
<td>General Physics: Mechanics</td>
<td>5</td>
</tr>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
</tbody>
</table>

ELECTIVE COURSES: COMPLETE 8 UNITS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 106</td>
<td>Introduction to Modern Astronomy</td>
</tr>
<tr>
<td>ASTR 151</td>
<td>Introduction to Astronomy Laboratory</td>
</tr>
<tr>
<td>BIO 101</td>
<td>Basic Biology</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>MATH 161</td>
<td>Introduction to Meteorology</td>
</tr>
<tr>
<td>NR 200</td>
<td>Soils</td>
</tr>
<tr>
<td>EASCI 162</td>
<td>Introduction to Earth Science</td>
</tr>
<tr>
<td>MATH 143</td>
<td>Electricity, Magnets, Optics</td>
</tr>
<tr>
<td>PHYS 102</td>
<td>General Physics: Waves, Thermodynamics, &amp; Optics</td>
</tr>
<tr>
<td>ZOO 101</td>
<td>Geology Field Studies</td>
</tr>
</tbody>
</table>

2-3 units of:

| Course   | Title                                      | Units |
|----------|--------------------------------------------|
| GEO1 61  | Geology Field Studies                      | 1½ - 2|
| GEO1 74  | Geology Summer Field Studies               | 3     |

TOTAL UNITS IN AA MAJOR ........................................... 31

A.S. Degree: Engineering

Students intending to transfer as Engineering majors are advised to complete the requirements for the AS in Engineering (p. 161) in the MJC Catalog. This major has been specifically designed to prepare students for transfer.

A.A. Degree: English

Students intending to transfer as English majors are advised to complete the requirements for the AA in English (p. 153) in the MJC Catalog. This major has been specifically designed to prepare students for transfer.

A.A. Degree: University Preparation, Emphasis in Environmental Science

ABOUT THIS EMPHASIS
Environmental Science is a field of inquiry exploring living systems and their complex relationships with the world’s diverse human cultures. Understanding such relationships is an inherently interdisciplinary endeavor, requiring insights from the Environmental and Social Sciences, as well as the Humanities.

EMPHASIS REQUIREMENTS
To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

REQUIRED COURSES – COMPLETE 18 UNITS.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 101</td>
<td>Biological Principles</td>
<td>5</td>
</tr>
<tr>
<td>BOT 101</td>
<td>General Botany</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 101</td>
<td>General Chemistry 1</td>
<td>5 OR</td>
</tr>
<tr>
<td>CHEM 143</td>
<td>Introductory College Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>GEO 161</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN AREA OF EMPHASIS .................. 18
A.A. Degree: University Preparation, Emphasis in **Geography**

### ABOUT THIS EMPHASIS

Geography is the study of global patterns created through Earth processes and human behaviors. Geographers utilize a unique holistic approach which examines interrelationships found within the culture, economics, politics, history, and physical environment of specific geographical regions.

### EMPHASIS REQUIREMENTS

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the **University Preparation Pathway** (p. 65) which include completion of the requirements below. See advisor for selection of courses.

### REQUIRED COURSES – COMPLETE 9 UNITS.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 101 [NP] Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 102 [NP] Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 105 [NP] Economic Geography</td>
<td>3</td>
</tr>
</tbody>
</table>

### ELECTIVE COURSES – COMPLETE 9 UNITS.

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select three courses from the following list of electives. Additional courses may be required by your transfer university.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 101 [NP] Economic Principles: Macroeconomics</td>
<td>3 OR</td>
</tr>
<tr>
<td>ECON 102 [NP] Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 109* [NP] Introduction to Geographic Information Systems</td>
<td>3 OR</td>
</tr>
<tr>
<td>GEOG 110 [NP] World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>HIST 104 [NP] Western Civilizations</td>
<td>3</td>
</tr>
<tr>
<td>HIST 105 [NP] Western Civilization</td>
<td>3</td>
</tr>
<tr>
<td>HIST 125 [NP] History of Mexico</td>
<td>3</td>
</tr>
<tr>
<td>HIST 129 [NP] History of California</td>
<td>3</td>
</tr>
<tr>
<td>HIST 145 [NP] History Of Latin America</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 110 [NP] International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 111 [NP] War and Peace: from Lenin to Al Qaeda</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 140 [NP] Comparative Politics</td>
<td>3</td>
</tr>
</tbody>
</table>

**UNITS REQUIRED IN AREA OF EMPHASIS** .......................... 18

---

A.S. Degree: University Preparation, **(PENDING)** Emphasis in **Health and Physical Education**

### ABOUT THIS EMPHASIS

Health Science draws from the biological, environmental, psychological, social, physical and medical sciences to develop individual, group, institutional, community and systemic strategies to improve health knowledge and attitudes as well as skills and behavior.

Physical Education is a multifaceted field of study in which movement or physical activity is the intellectual focus. Kinesiology is a common name for college and university academic departments that examine physical activity.

### EMPHASIS REQUIREMENTS

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the **University Preparation Pathway** (p. 65) which include completion of the requirements below. See advisor for selection of courses.

### REQUIRED COURSES – COMPLETE THE FOLLOWING FOUR COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 125 [NP] Human Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>BIO 111 [NP] General Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIO 116 [NP] Biology: A Human Perspective</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 143 [NP] Introductory College Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>PHYSYO 101 [NP] Introductory Human Physiology</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED IN AREA OF EMPHASIS** ...................... 19*

*In the past, ANAT 125 and PHYSYO 101 were only 4 units. Students may use these courses as substitutes for those above but must achieve a minimum of 18 units total. If needing an additional unit, students may use MICRO 101 or CHEM 144. Students should visit the Science, Mathematics, and Engineering division office (Science 126) to petition for these substitution options.

---

A.A. Degree: University Preparation, Emphasis in **Humanities**

### ABOUT THIS EMPHASIS

The humanities include, but are not limited to, history; literature; philosophy and ethics; foreign languages and cultures; linguistics; jurisprudence or philosophy of law; archaeology; comparative religion; the history, theory, and criticism of the arts; and those aspects of the social sciences (anthropology, sociology, psychology, political science, government, and economics) that use historical and interpretive rather than quantitative methods. The humanities enable us to reflect upon our lives and ask fundamental questions of value, purpose, and meaning in a rigorous and systematic way.

### EMPHASIS REQUIREMENTS

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the **University Preparation Pathway** (p. 65) which include completion of the requirements below. See advisor for selection of courses.

### REQUIRED COURSES – COMPLETE 2 COURSES.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMAN 105 [NP] Early Humanistic Traditions</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 106 [NP] Humanities in the Modern World</td>
<td>3</td>
</tr>
</tbody>
</table>

### ELECTIVE COURSES – COMPLETE 12 UNITS.

Please refer to www.assist.org for your chosen transfer university and specific major, and use that information to select 12 units from the following list of electives. Additional courses may be required by your transfer university. (Units for each course indicated by parentheses.)
### A.A. Degree: University Preparation, Emphasis in Language Studies

**Students interested in teaching in public and private elementary schools.** The program provides a broad overview of the fields of natural science, social sciences, humanities, composition, mathematics, and critical thinking in order to prepare the future teacher for the standards-based curriculum required in public schools. Further education at the university level will be required to fulfill all requirements for a teaching credential authorizing service in California public schools.

**Note to students:** If you are interested in transferring to a four-year college or university other than CSU Stanislaus to pursue a bachelor’s degree in this major, it is critical that you meet with a Modesto Junior College counselor and/or refer to the ASSIST website (www.assist.org) to select and plan the courses for your major. Schools vary widely in terms of the required preparation for this major. The courses that MJC requires for this Area of Emphasis may be different from the preparation requirements needed for the Bachelor’s degree at a different university.

**1. 60 UNITS – COMPLETE 60 UNITS NUMBERED 100-299**

**2. GPA – EARN AN OVERALL GPA OF 2.0 OR HIGHER BASED ON ALL COURSEWORK ATTEMPTED IN COLLEGE COURSES NUMBERED 50-399**

**3. GUIDANCE REQUIREMENT**

Complete ONE of the following courses to fulfill the GUIDANCE requirement for Associate Degree:

- **GUIDE 109 (NP)** International Student/New American Focus
- **GUIDE 110 (NP)** Educational Planning
- **GUIDE 111 (NP)** Career Awareness
- **GUIDE 112 (NP)** Job Hunting Skills
- **GUIDE 116 (NP)** Orientation for Re-Entry Adults
- **GUIDE 120 (NP)** Success Strategies for Transfer Students

**4. ACTIVITIES REQUIREMENT** – fulfill the activities requirement for associate degree. Complete ONE of the following courses (Double-counts with Area C 1 below):

- **ART 102 (NP)** Introduction to Computer Graphics
- **ART 120 (NP)** Basic Drawing
- **ART 124 (NP)** Color and Design
- **ART 140 (NP)** Sculpture
- **CMPGR 202 (NP)** Introduction to Computer Graphics

---

**TAKE ONE COURSE FROM EACH OF THE TWO GROUPS:**

**GROUP 1:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 116</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 131</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 132</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 135</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 136</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**GROUP 2:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 137</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 138</td>
<td>[NP]</td>
</tr>
<tr>
<td>FREN 104</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 104</td>
<td>[NP]</td>
</tr>
<tr>
<td>HIST 104</td>
<td>[NP]</td>
</tr>
<tr>
<td>HIST 105</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**COMPLETE UP TO TWO FROM THE FOLLOWING HUMANITIES COURSES:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMAN 101</td>
<td>[NP]</td>
</tr>
<tr>
<td>HUMAN 110</td>
<td>[NP]</td>
</tr>
<tr>
<td>HUMAN 130</td>
<td>[NP]</td>
</tr>
<tr>
<td>HUMAN 140</td>
<td>[NP]</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>[NP]</td>
</tr>
<tr>
<td>PHIL 120</td>
<td>[NP]</td>
</tr>
<tr>
<td>PSYCH 101</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**UNITS REQUIRED IN AREA OF EMPHASIS**

**18**

**A.A. Degree: Journalism, Radio, or Television**

Students intending to transfer to mass communications majors are advised to complete the requirements of the AA in Journalism, AA in Radio Broadcasting, or AA in Television Production in the MJC Catalog. These majors have been specifically designed to prepare students for transfer. See advisor for selection of courses.

**A.A. Degree: University Preparation, Emphasis in Liberal Studies**

Students who complete the AA in University Preparation Emphasis in Language Studies will enhance their communication abilities, cultural awareness, and critical thinking skills in English as well as one or two other languages.

**EMPHASIS REQUIREMENTS**

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

**REQUIRED COURSES – COMPLETE 17 UNITS**

**COMPLETE 3 UNITS:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 103</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**COMPLETE 14 UNITS IN ONE OR TWO LANGUAGES FROM THE FOLLOWING:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 101</td>
<td>[NP]</td>
</tr>
<tr>
<td>FREN 102</td>
<td>[NP]</td>
</tr>
<tr>
<td>FREN 103</td>
<td>[NP]</td>
</tr>
<tr>
<td>FREN 104</td>
<td>[NP]</td>
</tr>
<tr>
<td>GERM 101</td>
<td>[NP]</td>
</tr>
<tr>
<td>GERM 102</td>
<td>[NP]</td>
</tr>
<tr>
<td>ITAL 101</td>
<td>[NP]</td>
</tr>
<tr>
<td>SIGN 125</td>
<td>[NP]</td>
</tr>
<tr>
<td>SIGN 126</td>
<td>[NP]</td>
</tr>
<tr>
<td>SIGN 127</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 101</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 102</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 103</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 104</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 109</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 110</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**ELECTIVE COURSES – COMPLETE 3 UNITS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 102</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 131</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 175</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 176</td>
<td>[NP]</td>
</tr>
<tr>
<td>ENGL 179</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 112</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPAN 173</td>
<td>[NP]</td>
</tr>
<tr>
<td>SPANCOM 130</td>
<td>[NP]</td>
</tr>
</tbody>
</table>

**MINIMUM UNITS IN EMPHASIS**

**20**
### 5. General Education Requirement

- Fulfill the general education requirement for associate degree by completing the CSU-GE Transfer Pattern as specified below with a C or better in each course.

#### CSU-GE: Area A
**Communication in the English Language and Critical Thinking**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCM 100</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>SPCM 102</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Area B.1 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EASCI 161</td>
<td>Earth Science</td>
<td>4</td>
</tr>
</tbody>
</table>

(Double-counts for Area of Emphasis below)

#### Area B.2 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111</td>
<td>General Biology</td>
<td>4</td>
</tr>
</tbody>
</table>

(Double-counts for Area of Emphasis below)

#### AREA B.3 – (Fulfilled Through Satisfactory Completion of Areas B.1 and B.2)

#### AREA B.4 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 105</td>
<td>Structure of Mathematics 1</td>
<td>4</td>
</tr>
</tbody>
</table>

#### CSU-GE: Area B
**Physical Universe, Its Life Forms & Mathematical Concepts**

#### AREA B.1 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EASCI 161</td>
<td>Earth Science</td>
<td>4</td>
</tr>
</tbody>
</table>

(Double-counts for Area of Emphasis below)

#### AREA B.2 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111</td>
<td>General Biology</td>
<td>4</td>
</tr>
</tbody>
</table>

(Double-counts for Area of Emphasis below)

#### AREA B.3 – (Fulfilled Through Satisfactory Completion of Areas B.1 and B.2)

#### AREA B.4 – Complete the Following Course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 105</td>
<td>Structure of Mathematics 1</td>
<td>4</td>
</tr>
</tbody>
</table>

#### CSU-GE: Area C
**Arts, Literature, Philosophy, and Foreign Language**

#### AREA C.1 – Met with Fulfillment of MIC Activities Requirement Above

#### AREA C.2 – Complete One of the Following Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 169</td>
<td>Children’s Literature (Preferred by CSU Stanislaus)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 168</td>
<td>Adolescent Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

#### AREA C.3 – Complete One of the Following Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUMAN 101</td>
<td>Introduction to the Humanities</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 105</td>
<td>Early Humanistic Traditions</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 106</td>
<td>Humanities in the Modern World</td>
<td>3</td>
</tr>
<tr>
<td>HUMAN 110</td>
<td>East Meets West</td>
<td>3</td>
</tr>
<tr>
<td>MUSG 101</td>
<td>Music Appreciation (Preferred by CSU Stanislaus)</td>
<td>3</td>
</tr>
<tr>
<td>MUSG 121</td>
<td>History of Western Music 1</td>
<td>3</td>
</tr>
<tr>
<td>MUSG 122</td>
<td>History of Western Music 2</td>
<td>3</td>
</tr>
<tr>
<td>MUSG 111</td>
<td>Introduction to American Popular Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSG 102</td>
<td>Introduction to World Music</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 101</td>
<td>Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>Ethics: Theory and Application</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 113</td>
<td>Religion: A Philosophical and Comparative Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 121</td>
<td>History of Philosophy: Modern</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 123</td>
<td>20th Century Philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

#### CSU-GE: Area D
**Social, Political, and Economic Institutions and Behavior**

#### Area D – Complete Three Courses, One from Each Area:

**CSU-GE Area D.1 – Complete the Following Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>History of the U.S. to 1877</td>
<td>3</td>
</tr>
</tbody>
</table>

**CSU-GE Area D.2 - Complete One Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 102</td>
<td>History of the U.S. post Civil War</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 101</td>
<td>American Politics</td>
<td>3</td>
</tr>
</tbody>
</table>

**CSU-GE Area D.3 - Complete One Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 102</td>
<td>Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 105</td>
<td>Economic Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 110</td>
<td>World Regional Geography</td>
<td>3</td>
</tr>
</tbody>
</table>

**CSU-GE Area E. - Complete One of the Following Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 141</td>
<td>Human Lifespan</td>
<td>3</td>
</tr>
<tr>
<td>CLDEVD 103</td>
<td>Child Growth and Development</td>
<td>3</td>
</tr>
</tbody>
</table>

(Total Units Required to Fulfill General Education: 42 ½ - 45)

#### 6. Complete the Liberal Studies Emphasis

Complete the required and elective courses for the Area of Emphasis in Liberal Studies with a C or better in each course.

**Required Courses – Complete 16 Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCSC 109</td>
<td>Intro to Education – Practicum</td>
<td>2</td>
</tr>
<tr>
<td>SOCSC 110</td>
<td>Intro to Education</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 110</td>
<td>Biology (Double-counts with Area B.2)</td>
<td>3</td>
</tr>
<tr>
<td>EASCI 161</td>
<td>Earth Science (Double-counts with Area B.1)</td>
<td>4</td>
</tr>
<tr>
<td>HIST 106</td>
<td>History</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses – Complete One Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMPSC 201</td>
<td>General Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>CMPSC 203</td>
<td>Technical Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>HIST 129</td>
<td>History of California</td>
<td>3</td>
</tr>
<tr>
<td>MATH 106</td>
<td>Structure of Mathematics 2</td>
<td>4</td>
</tr>
</tbody>
</table>

**Units in Area of Emphasis**

19-20

### A.A. Degree: University Preparation; Emphasis in Mathematics

**About this emphasis**

Mathematics is the science of number and their operations, interrelations, combinations, generalizations, and abstractions and of space configurations and their structure, measurement, transformation, and generalizations.

To earn an Associate in Arts Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

**Required Courses – Complete 20 Units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 171</td>
<td>Calculus: First Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 172</td>
<td>Calculus: Second Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 173</td>
<td>Calculus: Third Course</td>
<td>5</td>
</tr>
<tr>
<td>MATH 174</td>
<td>Introduction to Linear Algebra and Ordinary Diff. Equations</td>
<td>5</td>
</tr>
</tbody>
</table>

**Units in Area of Emphasis**

20
A.S.-T: Mathematics

Students intending to transfer as Mathematics majors are advised to complete the requirements of the Associate of Science for Transfers (AS-T) in Mathematics (p. 163). This major has been specifically designed to prepare students for transfer.

A.A. Degree: Music

Students intending to transfer as music majors are advised to complete the requirements of the Associate of Arts (AA) in Music (p. 113). This major has been specifically designed to prepare students for transfer. Be sure to work with your counselor and a member of the music faculty in designing your program.

A.S. Degree: Physical Science

Students intending to transfer as Physical Science majors are advised to complete the requirements of the Associate of Science (AS) in Physical Science (p. 163). This major has been specifically designed to prepare students for transfer.

A.A. Degree: University Preparation, Emphasis in Physics

**EMPHASIS REQUIREMENTS**

To earn an Associate Degree with this emphasis, the student must complete the requirements detailed in the University Preparation Pathway (p. 65) which include completion of the requirements below. See advisor for selection of courses.

**REQUIRED COURSES — COMPLETE 20 UNITS.**

Complete two of the following physics courses:

- PHYS 101 [NP] General Physics: Mechanics ........................................ 5
- PHYS 102 [NP] General Physics: Waves, Thermodynamics, and Optics .... 5
- PHYS 103 [NP] General Physics: Electricity, Magnetism, & Modern Physics ... 5

Complete two of the following mathematics courses:

- MATH 171 [NP] Calculus: First Course ........................................ 5
- MATH 172 [NP] Calculus: Second Course ....................................... 5
- MATH 173 [NP] Calculus: Third Course ......................................... 5
- MATH 174 [NP] Introduction to Linear Algebra and Ordinary Diff Equations ... 5

**UNITS IN AREA OF EMPHASIS ........................................... 20**

A.A. Degree: Theatre

Students intending to transfer as theatre majors are advised to complete the requirements of the Associate of Arts in Theatre (p. 116). This major has been specifically designed to prepare students for transfer. Be sure to work with your counselor and a member of the theatre faculty in designing your program.
Courses Offered at Modesto Junior College

PROOF

Edits to this document are derived from course descriptions from the CurricUNET Word Report. You are encouraged to proof ALL data herein, including data that has rolled - unchanged-from the previous publication.
**How to read course descriptions**

**Course Prefix and Number**

Subheadings will contain one or more of the following:

- **Prerequisite**
- (Prior course work required before you may enroll)
- **Corequisite** or **Concurrent enrollment** (Course to be taken concurrently if not prior to the listed course)
- **Formerly listed as**
  - (Previous course prefix and/or number, or title)
- **Also offered as**
  - (Course offered in another division)
- **Recommended for Success**
  - (Course, ability, or skill level strongly advised for success)
- **Non degree course**
  - (Units do not apply toward degree)

**Unit Value**

**Course Description**

**Lecture and/or Laboratory.**

**Hours arranged** (Laboratory time arranged on an individual basis)

- **(A-F Only)** Letter grade only for course completion.
- **(P/NP Only)** Pass/No Pass only, no letter grade given
- **(A-F or P/NP)** Option to complete course for letter grade or on a Pass/No Pass basis

Parentheses will contain one or more of the following:

- **Transfer:** indicates the transferrability of a course to Columbia College, California State University (CSU) or University of California (UC), and/or whether or not the course has TCSU (LDTP) articulation, or equivalencies with Columbia College.
- **General Education:** identifies whether or not a course fulfills a General Education requirement area specified in one of the three General Education patterns

---

**PHYS 176**

**HOW TO READ COURSE DESCRIPTIONS**

**PHYS 165—INTRODUCTORY PHYSICS**

5 Units

Prerequisite: Successful completion of MATH 122 or eligibility for enrollment in MATH 123 as determined by the MJC Assessment Process.

Introduction to physics through the study of laboratory measurement in selected topics to include mechanics, wave motion, thermodynamics, and electricity and magnetism. Develops the theoretical and experimental foundation for PHYS 171 and PHYS 172. Lecture/Laboratory. (A-F or P/NP) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

**PHYS 180—CONCEPTUAL PHYSICS: A HANDS-ON APPROACH**

4 Units

Prerequisite: Satisfactory completion of MATH 120 or eligibility for enrollment in MATH 123 or MATH 122 as determined by the MJC Assessment Process.

A survey course of electricity in physical inquiry to include motion, waves, light, energy, electricity, magnetism, and modern physics. Physical theory is explained on a conceptual level with emphasis placed on applying physical principles to everyday phenomena. To include a weekly activity-laboratory session designed to provide students with practical experience in applying physical concepts. (A-F or P/NP) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PLSC**

**PLSC 50—PREPARATORY PLANT SCIENCE**

3 Units

Preparation in plant science including structure, growth processes, propagation, physiology, growth media, biological competition, and pest management of food, fiber, and ornamental plants. Lecture (A-F or P/NP) Lecture/Laboratory.

**PLSC 200—INTRODUCTION TO PLANT SCIENCE**

3 Units

Introduction to plant science including structure, growth processes, propagation, physiology, growth media, biological competition, and pest management: ornamental, food, fiber, and forest crops. Lecture (A-F or P/NP) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PLSC 205—FIELD CROPS**

3 Units

Economic crops: lucerne, sorghum, alfalfa, dry beans, forage, crops, grasses, sugarcane, alfalfa, cotton, and vegetable crops. Lecture and/or Laboratory. (A-F Only) Transfer: CSUC, UC General Education: (MJC-GE A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PLSC 215—VEGETABLE CROPS**

3 Units

Vegetable crops common to the area: economics; importance, cultural sequence, fertilization, irrigation, cultivation, integrated pest control, harvest and related factors; marketing, cost analysis, risks, environmental relationships in production, temperature, soil and water in the production of vegetable crops. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PLSC 214—FRUIT SCIENCE**

3 Units

Study of fruit crops related to and not including grapes: economic importance, characteristics, adaptation, environmental factors influencing local fruit production, grading, and marketing procedures. Intended for students interested in the behavioral and biological sciences. (A-F and P/NP) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PLSC 255—PLANT PROPAGATION/PRODUCTION**

3 Units

Recommended for Success: Satisfactory completion of PLSC 200 and/or PHYS 170. Also offered as MJC 235. Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, fertilization, transplanting, irrigation, plant pest and disease control, structure and type of plant. Preparation and use of propagating and planting media. Use and maintenance of common tools and equipment. Regulations pertaining to plant production. Field trips required. Option to complete course for letter grade. Lecture/Laboratory. Not offered every semester. (A-F Only) Transfer: CSUC, UC

---

**PLSC 257—INTEGRATED PEST MANAGEMENT**

1 Unit

Current topics and discussion on integrated pest management, design, and the development of pest management regulation requirements for the proposed pesticide continues to evolve. Lecture. (A-F or P/NP) Transfer: CSUC, UC

---

**PLSC 355—PRUNING**

1 Unit

Pruning of deciduous fruits, nuts and vines. Care and maintenance of tools and equipment. Prune irregularities, fertilization, and vineyard management also included. Field trips required. Lecture/Laboratory. Saturday only. (A-F Only)

---

**PHYSO 101—INTRODUCTORY HUMAN PHYSIOLOGY**

5 Units

Study of body function, organ system interaction, communication, and thermoregulation at the biochemical, cellular, and systems level. Includes control of cardiomyocytes, protein synthesis, and cellular metabolism. Introduces the communication, neural information processing, blood movement and circulation, fluid balance, expansion and digestion, reproduction, sensory perception and control of movement, and behavior. (A-F or P/NP) Lecture/Laboratory. Not offered every semester. (A-F Only) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PHYSO 103—INTRODUCTION TO NEUROSCIENCE**

3 Unit(s)

Study of structure and function of the nervous system, electro-neurotransmission, neurochemistry, psychopharmacology, as applied to the understanding of perceptional processes, psychopharmacological drugs, memory, perception of hunger and thirst, sensation, learning and memory; language, emotion, reward and stress. Neurophysiology. Appropriate for all students interested in the behavioral and biological sciences. (A-F or P/NP) Transfer: CSUC, UC General Education: (MGE-A GE CSU-GE B1, B2, B3; GER6; SA)

---

**PHYSO 260—PLANT DISEASE CONTROL**

3 Units

Study of crop mites and insects and their morphology, identification, life cycles, host and habitat relationships, and methods and materials of control. Lecture/Laboratory. (A-F Only) Transfer: CSUC, UC

---

**PHYSO 270—PLANT PEST CONTROL**

3 Units

Study of weeds and insects, their morphology, identification, life cycles, host and habitat relationships, and methods of control. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSUC, UC

---

**PHYSO 278—INTEGRATED PHYSIOLOGY**

1 Unit

Formerly listed as PLSC 207. Lecture and/or Laboratory. (A-F Only) Transfer: CSUC, UC

---

**PHYSO 292—PRUNING**

1 Unit

Pruning of deciduous fruits, nuts and vines. Care and maintenance of tools and equipment. Prune irregularities, fertilization, and vineyard management also included. Field trips required. Lecture/Laboratory. Saturday only. (A-F Only)
<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
<th>UNITS</th>
</tr>
</thead>
</table>
| ADJU 144 — COMMUNITY AGENCY SERVICE | Formerly listed as: ADJU 145  
Prerequisite: Satisfactory completion of ADJU 201.  
Corequisite: Concurrent enrollment in ADJU 201.  
Analysis of field experiences of students concurrently enrolled in ADJU 145A, 145B, 145C, or 145D. Class time is devoted to sharing and evaluating problems that develop, and ways of resolving them will be sought by class members. Three maximum completions. Field trips may be required. (A-F Only) Lecture. Transfer: (CSU) | 1 |
| ADJU 145 — A, B, C, D — COMMUNITY SERVICE FIELDWORK | Formerly listed as: ADJU 201  
Concurrent enrollment: ADJU 145  
Supervised field experience in a variety of community social agencies. Weekly lab: 75 hours of work experience or 60 hours of volunteerism in a community service/social agency are required for every unit earned each semester. May be repeated up to 16 units in any combination. Discussion. Transfer: CSU | 1-4 |
| ADJU 201 — INTRODUCTION TO ADMINISTRATION OF JUSTICE | 2 UNITS  
History and philosophy of the administration of justice in America; Overview of its sub-systems, including their role expectations and interrelationships. Overview of theories to account for crime, punishment and rehabilitation. Introduction to professional education, training and ethics in the administration of justice field. Field trips may be required. Lecture. (A-F Only) Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D8) (IGETC: 4H) | |
| ADJU 202 — PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM | 3 UNITS  
Recommended for Success: Satisfactory completion of ADJU 201  
Role and responsibilities of each Administration of Justice system segment; Law enforcement, judicial, corrections. Past, present and future exposure to each sub-system procedure from initial entry to final disposition, relationship each segment maintains with its system members. Field trips may be required. Lecture. (A-F Only) Transfer: CSU | |
| ADJU 203 — CONCEPTS OF CRIMINAL LAW | 3 UNITS  
Recommended for Success: Satisfactory completion of ADJU 201 and 202.  
Historical development, philosophy of law and constitutional provisions; definitions, classification of crime and their application to administration of justice system; legal research, case law, methodology and concepts of law as a social force. Field trips may be required. Lecture. (A-F Only) Transfer: (CSU, UC) | |
| ADJU 204 — LEGAL ASPECTS OF EVIDENCE | 3 UNITS  
Recommended for Success: Satisfactory completion of ADJU 201 and 202.  
Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure, kinds and degrees of evidence and rules governing admissibility, judicial decisions interpreting individual rights and case studies. Field trips may be required. Lecture. (A-F Only) Transfer: CSU | |
| ADJU 205 — COMMUNITY RELATIONS | 3 UNITS  
Roles of administration of Justice practitioners and agencies. Inter-relationships and role expectations among the various agencies and the public. Principal emphasis on the professional image of Administration of Justice system and development of positive relationships between system members and the public. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D8) (IGETC: 4H) | |
| ADJU 206 — MULTICULTURAL ISSUES WITHIN PUBLIC SAFETY | 3 UNITS  
Overview of multicultural concepts and issues, application of those concepts and issues to the four public safety disciplines: corrections, fire safety, hazardous materials, law enforcement. Identification of problems related to an increasingly diverse population. Examination of strategies to overcome these problems, particularly in relation to the maintenance of social order. Field trips required. Lecture. (A-F Only) Transfer: CSU | |
| ADJU 210 — COMMUNICATIONS IN CRIMINAL JUSTICE | 3 UNITS  
| ADJU 210 — COMMUNICATIONS IN CRIMINAL JUSTICE | 3 UNITS  
Survey of the existing policies and principles affecting report writing in American criminal justice. Emphasis: preparation, oral presentation, and thoroughness necessary for judicial acceptance. Field trips are not required. (A-F Only) Transfer: CSU | |
| ADJU 212 — CRIMINAL INVESTIGATION | 3 UNITS  
Fundamentals of investigation, crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; interviews and interrogation; follow-up and case preparation. Lecture. Field trips may be required. (A-F Only) Transfer: CSU | |
| ADJU 213 — PATROL PROCEDURES | 3 UNITS  
Responsibilities, techniques, and methods of police patrol. Field trips may be required. (A-F Only) Transfer: CSU | |
| ADJU 215 — INTRODUCTION TO FIREARMS | 1½ UNITS  
Limitation on Enrollment: This course is restricted under California Penal Code Section 12021, course requires handling and possessing of firearms. Convicted felons, persons addicted to any narcotic or convicted of any offense involving the violent use of a firearm are not allowed to enroll in the course based on Penal Code Section 12021. Prior to the use of a firearm in the course, each student must sign a declaration to the effect that he or she is not prohibited from | |

**Color Legend:**
- NEW COURSE
- UPDATED COURSE
- INACTIVATED/HISTORICAL COURSE
- COURSE UNCHANGED FROM 2011-2012 CATALOG
ADJU 216—ADVANCED FIREARMS AND RANGE APPLICATION  1½ UNITS
Prerequisites: Satisfactory completion of ADJU 215 or LENF 388.
Limitation on Enrollment: This course is restricted under California Penal Code Section 12021.
Course requires handling and possesses firearms. Convicted felons, persons addicted to any narcotic or convicted of any offense involving the violent use of a firearm are not allowed to enroll in the course based on Penal Code Section 12021. Prior to use of a firearm in the course, each student must sign a declaration to the effect that he or she is not prohibited from such use by Penal Code Section 12021.
A continuation of ADJU 215. In-depth review of legal aspects of firearms. Range firing of various weapons; usage of non-lethal weapons. Students must provide own ammunition, hearing protectors, and safety glasses. The instructor reserves the right to remove a student from the firing range due to a safety violation. Lecture/Laboratory. Three maximum completions. Field trips may be required. Materials fee required. (A-F Only) Transfer: CSU

ADJU 217—SUBSTANCE ABUSE  3 UNITS
Recommended for Success: Satisfactory completion of ADJU 201 and 202
Basic understanding of controlled substances, including identification, physiological effects, testing, and use detection, methods of control and investigation, applicable laws controlling use, treatment processes, and patient rights to confidentiality. Lecture. (A-F Only) Transfer: CSU

ADJU 219—CORRECTIONS FIREARMS TRAINING  1½ UNITS
Prerequisite: Satisfactory completion of ADJU 215.
Limitation on Enrollment: This course is restricted under California Penal Code Section 12021.
Convicted felons, persons addicted to any narcotic or convicted felons, persons addicted to any narcotic or convicted of any offense involving the violent use of a firearm are not allowed to enroll in the course.
Laws, policies, and ethical considerations with specialized training in weaponry used by correctional agencies. Range firing of rifles, shotguns, and handguns. Students must provide safety glasses and hearing protectors, and ammunition. Course is restricted under state and federal laws. Instructor reserves the right to remove a student from the firing range due to a safety violation. Students may repeat any combination of ADJU 215/216 or 219 for a maximum of 4 completions. Lecture/Laboratory. Field trips may be required. Materials fee required. (A-F Only) Transfer: CSU

ADJU 222—PROFILING TERRORISM  3 UNITS
Recommended for success: Satisfactory completion of ADJU 201.
Discuss the most significant theories by the best terrorist analysts in the world, while still focusing on the domestic and international threat of terrorism and the basic security issues surrounding terrorism today. Social-historical origins of terrorism, criminal, legal, and social response to terrorism, at-risk populations, prevention, and intervention strategies. Lecture. Two maximum completions. (A-F Only) Transfer: CSU

ADJU 232—JUVENILE JUSTICE PROCEDURES  3 UNITS

ADJU 234—CRIME CAUSATION  3 UNITS
Principal theories commonly utilized in accounting for many known facts of criminality. Emphasis on implications and logic of certain theoretical positions common to much thinking and writing in the field. Lecture. (A-F Only) Transfer: CSU

ADJU 235—INTRODUCTION TO CORRECTIONS  3 UNITS
Introduction to the correctional field. Covers historical development of correctional processes, current trends, and future directions of the correctional field. Examines local, state and federal systems. Field trips may be required. Lecture. (A-F Only) Transfer: CSU, UC. General Education: (MUC-GE B)

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

ADJU 240—DRUG AWARENESS  ½ UNIT
Basic understanding of current drugs of abuse including psychological and physical symptomology, appearance, and social implications. Lecture. (A-F Only) Transfer: CSU

ADJU 242—DOMESTIC VIOLENCE PREVENTION  ½ UNIT

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

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

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

AG (Agriculture, Vocational & Technical)

(Dean: Mark A. Anglin
Division Office: Agriculture, Room 100
Phone: (209) 575-6200
Division website: www.mjc.edu/prospective/programs/ags/index.html
Instructors: David Baggett, Marilies Boyd, Gail Brumley, John Mendes)

For degrees and certificates that can be earned in Agriculture: Vocational & Technical, see the Agriculture and Environmental Sciences Division on page 83.

Vocational Agriculture courses are designed to prepare for occupational entry into skilled or semi-professional fields of agriculture. Technical Agriculture courses are designed to prepare for occupational entry into the technical fields of agriculture.

AG 100A, B—LEADERSHIP IN AGRICULTURE  1, 2 UNITS
Lecture and supervised activities relating to student participation in agricultural competitions, judging contests, livestock exhibitions, recruitment programs, award and scholarship applications, and youth activity planning. Field trips required. Lecture/Leadership activities. Students may not exceed a total of 2 units in AG 100A only. Transfer: CSU, MJC Activities

AG 115—INTRODUCTION TO AGRICULTURAL EDUCATION AND CAREERS  1 UNIT
Introduction to educational and agricultural employment opportunities, includes portfolio and educational plan development and curriculum requirements that pertain to educational goals as they relate to agriculture majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in agriculture careers. Current events that impact agriculture and society will be discussed. Lecture. (A-F Only) MJC Guidelines. Transfer: CSU

Color Legend:

NEW COURSE
UPDATED COURSE
INACTIVATED/HISTORICAL COURSE
COURSE UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
AG 115—INTRODUCTION TO AGRICULTURAL EDUCATION & CAREERS 1 UNIT
Introduction to educational and agricultural employment opportunities. Includes portfolio and educational plan development and curriculum requirements that pertain to educational goals as they relate to agriculture majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in agriculture careers. Current events that impact agriculture and society will be discussed. Field trips are not required. (A-F Only) Lecture. Transfer: (CSU) General Education: (MJC-GE: Guidance)

AG 120—INTRODUCTION TO AGRICULTURE EDUCATION 2 UNITS
Overview of agricultural education and agricultural education programs from a teaching perspective, including goals and purposes, kinds of classes, types of programs, and qualifications essential to successful agriculture teaching. Field trips may be required. Lecture plus participation in agricultural events, leadership activities and FFA involvement. (A-F Only) Transfer: CSU

AG 120—INTRODUCTION TO AGRICULTURE EDUCATION 2 UNITS
Overview of agricultural education and agricultural education programs from a teaching perspective, including goals and purposes; kinds of classes, types of programs, and qualifications essential to successful agriculture teaching. Field trips might be required. (A-F Only) Transfer: (CSU)

AG 130—AGRICULTURE EDUCATION EARLY FIELD EXPERIENCE 2 UNITS
Creates awareness of opportunities for prospective agriculture teachers through observation, participation in the field and through analysis of field experiences. Students will be expected to complete 20 hours of observation/field activities. The off-campus activities shall be supervised by the course instructor and shall take place in an approved agriculture department. Field trips required. Lecture/Laboratory. (A-F Only). Transfer: CSU

AG 240—AGRICULTURE INTERNSHIP 4 UNITS
Designed for agriculture majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at an internship site on a paid or volunteer basis. Internship experiences must directly relate to the student’s area of study. (P/NP Only) Lab. Transfer: CSU

AG 280—AGRICULTURAL COMPUTATIONS 3 UNITS
Practical problems in production agriculture, agriculture mechanics, agriculture business, and natural resources. Includes problems in algebra, geometry, money and interest, equipment calibration, metrics, and graphics. Field trips are not required. (A-F Only) Lecture. Transfer: CSU

AG 285—AGRICULTURAL COMMUNICATIONS 3 UNITS
Fundamentals of agricultural communication, including written, electronic, graphic, and oral communication methodologies. Field trips are required. (A-F Only) Lecture. Transfer: CSU

AG 305—SUPERVISION IN AGRICULTURE 2 UNITS
Training for student interns/unit managers of MJC agricultural farm facilities in the principles of supervision, demonstrating practical skill application, handling personnel problems, instructing new personnel on job performance, analyzing job efficiency and making management decisions. (Designed for West Campus Student Interns and Cooperative Association of States for Scholarships (CASS) International Students.) Lecture/Lab. May be completed up to four times. (A-F Only)

AG 349 A,B,C,D—WORK EXPERIENCE 1, 2, 3 AND 4 UNITS
AGRICULTURE—SUPERVISED PRACTICE
Corequisite: Enrollment in a minimum of 7 units, which may include Cooperative Vocational Work Experience. Designed for agriculture majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Maximum of 4 units may be earned per semester. May be repeated to a maximum of 16 units Work Experience credit (Cooperative General Work Experience is included in this maximum.) (A-F Only)

AG 376—BASIC SCIENCE AND LABORATORY TECHNIQUES 3 UNITS
Essential laboratory techniques and basic science principles and information designed to qualify students for service in agriculture at technical levels. Field trips are required. Lecture/Laboratory. (A-F Only) General Education: (MJC-GE: A)

AG 390 A,B,C,D—AGRICULTURAL SKILLS TRAINING ½, 1, 2, 3, 4 UNITS
Emphasis on developing or upgrading skills of agricultural employees. Field trips are required. Four completions allowed. Total number of AG 390 A,B,C,D units not to exceed eight total units. Lecture/Laboratory. (A-F Only)

AGEC (Agricultural Economics)

Dean: Mark A. Anglin
Division Office: Agriculture, Room 100
Phone: (209) 575-6200
Division website: www.mjc.edu/prospective/programs/agens/index.html
Instructors: Marlies Boyd, Gail Brumley, Bill Hobby, Amanda Schnoor

AGEC 50—SURVEY OF AGRICULTURAL ECONOMICS 3 UNITS
A preparatory course designed to further agricultural business knowledge and prepare for entry level employment and further agricultural business course pursuits. Field trips required. Lecture/Laboratory/Other.

AGEC 55—PREPARATORY AGRICULTURE COMPUTER APPLICATIONS 3 UNITS
Preparation for computer use in the workplace, emphasizing agricultural situations; use of computer applications software, including word processors, spreadsheets, and databases. Includes information accessing, telecommunications, and other software appropriate to agribusiness. Lecture/Laboratory.

AGEC 55—PREPARATORY AGRICULTURE COMPUTER APPLICATIONS 3 UNITS
Formerly listed as: AGEC - 55: Preparatory Agriculture Computer Applications
Introduction to computer use in the workplace, emphasizing agribusiness situations, use of computer applications software, including word processors, spreadsheets, and databases. Suitable for those with no previous computer experience. Field trips are not required. (A-F or P/NP - Student choice) Lecture/Lab

AGEC 200—AGRICULTURAL ACCOUNTING AND ANALYSIS 3 UNITS
Study of the principals of agricultural accounting systems and types of records, how to compute and use measures of earnings and costs of production to improve efficiency in agricultural operations. Field trips are not required. (A-F Only) Lecture. Transfer: CSU

AGEC 208—INTRODUCTION TO INTERNATIONAL BUSINESS 3 UNITS
Recommended for Success: Satisfactory completion of BUSAD 248
Also offered as BUSAD 208
A comprehensive overview of international business. Offers a global perspective of international trade, international marketing, international accounting, the operation of multinational companies, economic theories and forces, international organizations and the political and cultural impact of world trade. Lecture. Field trips are required. Transfer: CSU

AGEC 208—INTRODUCTION TO INTERNATIONAL BUSINESS 3 UNITS
Also offered as: BUSAD - 208: Introduction to International Business
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete BUSAD 248.
A comprehensive overview of international business. A global perspective of international trade, international marketing, international accounting, the operation of multinational companies, economic theories and forces, international organizations and the political and cultural impact of world trade. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Transfer (CSU)

AGEC 209—IMPORT/EXPORT FUNDAMENTALS 3 UNITS
Recommended for Success: Satisfactory completion of AGEC 208
Also offered as BUSAD 209
Overview of processes and procedures involved in importing and exporting products and services. Special emphasis on finance and financial documentation. Lecture. Field trips required. Transfer: CSU

AGEC 209—IMPORT/EXPORT FUNDAMENTALS 3 UNITS
Also offered as: BUSAD - 209: Import/Export Fundamentals
Overview of processes and procedures involved in importing and exporting products and services. Special emphasis on finance and financial documentation. Field trips might be required. (A-F Only) Lecture. Transfer: (CSU)
AGEC 210—ELEMENTS OF AGRICULTURAL ECONOMICS  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to be
enrolled in or have satisfactorily completed MATH 70.
The place of agriculture and agribusiness in the economic system; basic economic concepts, and
problems of agriculture; supply and marketing problems, factors of production; state and federal
agriculture programs affecting agriculture’s economic position. Field trips might be required. (A-F
Only) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D2)

AGEC 215—AGRICULTURAL MARKETING  3 UNITS
Structure and framework of agricultural marketing, history and present trends; marketing prin-
ciples, policies, channels, institutions, regulatory agencies, cooperative marketing orders, cyclical
and seasonal price variations, integration, and foreign and domestic trade; consideration of specific
marketing problems affecting area commodities. Field trips required. Lecture/Laboratory. (A-F
Only) (Spring) Transfer: CSU

AGEC 220—AGRICULTURAL BUSINESS MANAGEMENT  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to
satisfactorily complete AGEC 200 and satisfactorily complete MATH 70 and satisfactorily complete
one 4G production class.
Principles of agricultural management and measures of earnings in determining production
efficiency, property reports, government regulations, agricultural finance, development of a
management plan for a given agribusiness with application of the above principles; term report
and field laboratories required. Lecture/Laboratory. (A-F Only) Transfer: CSU

AGEC 222—AGRICULTURAL COMPUTER APPLICATIONS  3 UNITS
Computer use in the agribusiness work place, with emphasis on using software to solve agribusi-
ess accounting problems, record keeping, creating sales presentations; and authoring business
reports. Field trips may be required. (A-F Only) Lecture /Lab Transfer: (CSU)

AGEC 220—AGRICULTURAL BUSINESS MANAGEMENT  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to
satisfactorily complete AGEC 200 and satisfactorily complete MATH 70 and satisfactorily complete
one 4G production class.
Principles of agricultural management, farm organization and measures of earnings in determining production
efficiency, property reports. Study and reorganization of a given farm with application of above
principles; term report and field laboratories required. Field trips are required. (A-F Only) Lecture /Lab Transfer: CSU

AGEC 230—AGRICULTURAL SALES AND SERVICE  3 UNITS
The sociology of agriculture presented through an examination of relationships between societies
and their environments, economics, and agriculture. Emphasis on the analysis of agriculture’s use
of technology and the corresponding impact on the environment, economy and society. Field trips
might be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:
B) (CSU-GE: D7)

AGEC 145—PARLIAMENTARY PROCEDURE  1 UNIT
Also offered as SPCOM 145
Introduction to Parliamentary Procedure. Preparing for and participating in meetings as a member,
officer, and chairperson. Rank and use of motions. Two completions allowed. Lecture. (A-F or P/
NP) Transfer: CSU

AGGE—AGM

AGGE 146—AGRICULTURE, ENVIRONMENT AND SOCIETY  3 UNITS
Examination of agriculture principles and methods through extended field studies at selected sites
in the United States and abroad. Gain knowledge of and appreciation for the value of agriculture
and agriculture education in other states and countries as a means of developing extended
agriculture relationships. Course is repeatable, four completions allowed. Field trips are required.
Lecture. (A-F or P/NP) Transfer: CSU

AGGE 320—EVALUATION OF AGRICULTURAL PRODUCTS  1 UNIT
Evaluation skills in selecting animal, plant, mechanical, and business products. Four completions
allowed. Field trips required. Lecture. Materials fee required. (A-F Only)

AGM (Agricultural Mechanics)
Dean: Mark A. Anglin
Division Office: Agriculture, Room 100
Phone: (209) 575-6200
Division website: www.mjc.edu/prospective/programs/agens/index.html
Instructors: Steve Amador, Todd Conrado

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

AGM 200—INTRODUCTION TO MECHANICAL TECHNOLOGY*  3 UNITS
Also offered as INTEC 200
Basics in woodworking, cold metal, electrical wiring, plumbing, masonry and welding as related to
agriculture maintenance and repair. Designed for students who seek to develop basic mechanical
skills. Materials Fee Required. Field trips might be required. (A-F or P/NP - Student choice) Lecture /Lab Transfer: CSU

AGM 210—AGRICULTURAL WELDING *  3 UNITS
Introduction and basic instruction in various welding and cutting methods to include: SMAW, GMAW, D-M, GTAW. Coursework to include machine selection and setup. Materials fee required.
(A-F Only) Lecture /Lab Transfer: CSU

AGM 211—ADVANCED AGRICULTURAL WELDING *  3 UNITS
Prerequisite: Satisfactory completion of AGM 210
Advanced welding and other metallurgical techniques such as pipe fitting, hard facing, MIG
(GMAW) and TIG (GTAW) welding on aluminum and stainless steel. Field trips might be required.
Materials fee required. (A-F Only) Lecture /Lab Transfer: CSU

Course with an asterisk are those in which safety glasses* are required per state law.
### COURSES OFFERED

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<td>MECHANICAL SYSTEMS DESIGN &amp; EVALUATION 1</td>
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<tr>
<td>AGM 213</td>
<td>MECHANICAL SYSTEMS DESIGN &amp; EVALUATION 2</td>
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<td>AGM 214</td>
<td>EQUIPMENT SERVICE AND SAFETY</td>
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<td>AGM 220</td>
<td>INDUSTRIAL/AGRICULTURAL MACHINERY*</td>
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<td>AGM 221</td>
<td>EQUIPMENT DIAGNOSIS AND REPAIR</td>
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<td>AGM 262</td>
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<tr>
<td>AGM 280</td>
<td>MOBILE MACHINERY HYDRAULIC SYSTEMS</td>
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</tbody>
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### Field Surveying
- **AGM 230—FIELD SURVEYING**: 2 units
  - Also offered as ENGR 230
  - Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete AG 280 or satisfactorily complete MATH 70.

### Prerequisites
- **AGM 280—MOBILE MACHINERY HYDRAULIC SYSTEMS**: 3 units
  - Recommended for Success: Satisfactory completion of AG 280 and (AGM 215 or 220)
  - Fundamental principles and practices of hydraulic circuitry as applied to mobile hydraulic systems in the Agriculture, Heavy Machinery, and Off-Highway truck industries. Emphasis in system and component design and operation as applied to design and repair of hydraulic systems. Field trips may be required. Lecture/Lab. Materials Fee Required. Transfer: CSU

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

### Transfer Information
- **AGM 240—TRUCK AND TRACTOR POWER TRAINS**: 3 units
  - Operation and repair of truck and tractor transmissions and power transfer systems. Topics include diagnostics and repair of transmissions, clutches and differentials. Field trips might be required. (A-F Only) Lecture /Lab. Transfer: CSU

- **AGM 241—DIESEL ENGINE PRINCIPLES**: 3 units
  - Recommended for Success: Before enrolling in this course, students are strongly advised to complete AGM/AUTEC 289.
  - Also offered as AUTEC 241

- **AGM 242—DIESEL ENGINE OVERHAUL**: 3 units
  - Principles of design and construction of heavy duty engines used in the agriculture, construction, and trucking industries. Principles and theories are studied by running, testing, diagnosis, disassembling, and reassembling components, systems, and engines. Field trips required. Materials fee required. Lec/Lab. (A-F Only) Transfer: CSU

### Additional Information
- **Recommended for Success**: Satisfactory completion of AGM 241 or AUTEC 241

### Color Legend
- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**

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**REVISION:**
- **01/13/2012**
- **LSM**
ANSC (Animal Science)

Dean: Mark A. Anglin
Division Office: Agriculture, Room 100
Phone: (209) 575-6200
Division website: www.mjc.edu/prospective/programs/agens/index.html
Instructors: Marlies Boyd, Bill Hobby, John Mendes, Amanda Schnoor

ANSC 207—EQUINE SCIENCE 3 UNITS
A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics, and epidemiology. Emphasis on the origin, characteristics, adaptations and contributions of livestock to the modern agricultural industry. Field trips may be required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2) (IGETC: SB 5B)

ANSC 203—SHEEP SCIENCE 3 UNITS
A study of the principles and practices of purebred and commercial sheep production throughout California, the U.S., and the world. Emphasis is placed on the importance of breeds, genetic principles, selection, nutrition, environmental management, health, marketing, and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance as applied to sheep and goats. Field trips are required. Lecture/Laboratory. Transfer: (A-F Only). Transfer: (CSU, UC)

ANSC 201—BEEF CATTLE SCIENCE 3 UNITS
A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics and epidemiology. Emphasis on the origin, characteristics, adaptations and contributions of livestock to the modern agricultural industry. Field trips might be required. (A-F Only) Lecture/Transfer. (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2) (IGETC: SB 5B)

ANSC 200—INTRODUCTION TO VETERINARY TECHNOLOGY 3 UNITS
Preparation for veterinary technology courses. Topics include: anatomy and physiology, nutrition, pharmacology, common diseases and disorders, genetics and heredity, and career opportunities. Lecture (A-F Only).

ANSC 55—INTRODUCTION TO VETERINARY TECHNOLOGY 3 UNITS
Preparation for veterinary technology courses. Topics include: anatomy and physiology, nutrition, pharmacology, common diseases and disorders, genetics and heredity, and career opportunities. Lecture (A-F Only).

ANSC 50—PREPARATORY ANIMAL SCIENCES 3 UNITS
A preparatory survey of the livestock industry, supply of animal products and their uses. A special emphasis on the origin, characteristics, adaptation and contributions of farm animals to the agriculture industry. Analyze the economic trends and career opportunities in animal agriculture. Field trips required. (A-F or P/NP) Lecture.

ANSC 50—PREPARATORY ANIMAL SCIENCES 3 UNITS
A preparatory survey of the livestock industry, supply of animal products and their uses. A special emphasis on the origin, characteristics, adaptation and contributions of farm animals to the agriculture industry. Analyze the economic trends and career opportunities in animal agriculture. Field trips required. (A-F or P/NP) Lecture.

ANSC 20—EQUIINE SCIENCE 3 UNITS
A survey of the equine industry: selection, feeding, breeding, facilities, and health management will be emphasized to ensure scientifically-based management decisions and consumer product acceptance. Field trips are required. (A-F Only) Lecture/Transfer. (CSU, UC)

ANSC 202—EQUIINE SCIENCE 3 UNITS
A survey of the equine industry: selection, feeding, breeding, facilities, and health management will be emphasized to ensure scientifically-based management decisions and consumer product acceptance. Field trips are required. (A-F Only) Lecture/Transfer. (CSU, UC)

ANSC 100—INTRODUCTION TO SHEEP SCIENCE 3 UNITS
A survey of the sheep industry including management of commercial, purebred, and small farm flocks; selecting, feeding, breeding and basic care of ewes and lambs. Field trips required. Lecture/Transfer. (A-F Only) Lecture/Transfer. (CSU, UC)

ANSC 102—EQUIINE SCIENCE 3 UNITS
A survey of the equine industry: selection, feeding, breeding, facilities, and health management will be emphasized to ensure scientifically-based management decisions and consumer product acceptance. Field trips are required. (A-F Only) Lecture/Transfer. (CSU, UC)

ANSC 101—BEEF CATTLE SCIENCE 3 UNITS
A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics and epidemiology. Emphasis on the origin, characteristics, adaptations and contributions of livestock to the modern agricultural industry. Field trips might be required. (A-F Only) Lecture/Transfer. (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2) (IGETC: SB 5B)

ANSC 100—INTRODUCTION TO VETERINARY TECHNOLOGY 3 UNITS
Preparation for veterinary technology courses. Topics include: anatomy and physiology, nutrition, pharmacology, common diseases and disorders, genetics and heredity, and career opportunities. Lecture (A-F Only).

ANSC 55—INTRODUCTION TO VETERINARY TECHNOLOGY 3 UNITS
Preparation for veterinary technology courses. Topics include: anatomy and physiology, nutrition, pharmacology, common diseases and disorders, genetics and heredity, and career opportunities. Lecture (A-F Only).

ANSC 50—PREPARATORY ANIMAL SCIENCES 3 UNITS
A preparatory survey of the livestock industry, supply of animal products and their uses. A special emphasis on the origin, characteristics, adaptation and contributions of farm animals to the agriculture industry. Analyze the economic trends and career opportunities in animal agriculture. Field trips required. (A-F or P/NP) Lecture.

ANSC 50—PREPARATORY ANIMAL SCIENCES 3 UNITS
A preparatory survey of the livestock industry, supply of animal products and their uses. A special emphasis on the origin, characteristics, adaptation and contributions of farm animals to the agriculture industry. Analyze the economic trends and career opportunities in animal agriculture. Field trips required. (A-F or P/NP) Lecture.

ANSC 20—EQUIINE SCIENCE 3 UNITS
A survey of the equine industry: selection, feeding, breeding, facilities, and health management will be emphasized to ensure scientifically-based management decisions and consumer product acceptance. Field trips are required. (A-F Only) Lecture/Transfer. (CSU, UC)
ANSC 208—CARE AND HANDLING OF HORSES AND TACK
Basic care of the horse and equipment. Types of equipment. Horse handling skills including training and riding. Students are expected to provide own horse. Field trips required. (A-F Only) Lecture/Lab. Transfer: (CSU)

ANSC 209—EQUINE BREEDING AND REPRODUCTION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ANSC 207.
An advanced level course designed for students interested in learning more about equine reproduction and management. Field trips may be required. (A-F Only) Lecture. Transfer: (CSU)

ANSC 209—EQUINE BREEDING & REPRODUCTION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ANSC 207. An advanced level course designed for students interested in learning more about equine reproduction and management. Field trips are not required. (A-F Only) Lecture Transfer: (CSU)

ANSC 210—LIVESTOCK SELECTION AND EVALUATION
Detailed analysis of various visual and physical methods of appraising beef, sheep, swine and horses concerning functional and economic value. Written and oral summaries of evaluation will be required. Specific reference will be made to performance data and factors determining carcass value. Lecture/Laboratory/required attendance at judging contests: arranged. Two maximum completions. (A-F Only) Transfer: (CSU, UC)

ANSC 211—INTRODUCTION TO MEAT SCIENCE
An introductory course to the meat industry with a special emphasis on meat products and value-added meat processing techniques. Concepts on food safety and sanitation, grading and inspection along with preservation and marketing strategies to meet current consumer demands. Field trips required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC)

ANSC 212—ADVANCED LIVESTOCK SELECTION AND EVALUATION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ANSC 210.
Advanced study of animal conformation as related to its various functions. Evaluation of beef, sheep and swine species using performance and carcass data as well as live animal observation. Oral interpretation of those evaluative criteria. Formal reasoning presentations required. Field trips required. Two maximum completions Lecture/Laboratory/Other. (A-F Only) Transfer: CSU

ANSC 212—ADVANCED LIVESTOCK SELECTION AND CARCASS EVALUATION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ANSC 210.
Advanced study of animal conformation as related to its various functions. Evaluation of beef, sheep and swine species using performance and carcass data as well as live animal observation. Oral interpretation of those evaluative criteria. Formal reasoning presentations required. Two maximum completions. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU, UC)

ANSC 214—LIVESTOCK FEEDING AND NUTRITION
The fundamentals of digestion and absorption in both ruminants and nonruminants are discussed. The nutritive value of feeds as they relate to the formulation of livestock rations will be emphasized, including by-product feeding. Field trips are required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC)

ANSC 214—LIVESTOCK FEEDING AND NUTRITION
The fundamentals of digestion and absorption in both ruminants and non ruminants are discussed. The nutritive value of feeds as they relate to the formulation of livestock rations will be emphasized, including by-product feeding. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU, UC)

ANSC 215—ANIMAL HEALTH AND SANITATION
Common livestock diseases and fundamentals of immunity. Includes coverage of the livestock worker’s role in promoting animal health and the foundation of disease control programs. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

ANSC 216—LIVESTOCK BREEDING AND SELECTION
Anatomy and physiology of male and female reproductive systems, endocrine system, and problems affecting reproductive efficiency, fertilization, gestation, and parturition. Principles of herdity as applied to livestock breeding and improvement; systems of breeding, environmental factors affecting reproduction and performance. Livestock selection programs based on performance and progeny. Field laboratories including some on Saturdays required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

ANSC 217—ADVANCED BREEDING AND ARTIFICIAL INSEMINATION
Recommended for Success: Satisfactory completion of ANSC 210 and 220 and (ANSC 216 or 217).
Advanced study and practical application of breeding principles and artificial insemination of farm animals; the collection, evaluation, and handling of semen; nutritional level and sanitation practices affecting reproductive efficiency; public relations, and the responsibilities of the technician and the management. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

ANSC 218—DEER INDUSTRY/DEER SCIENCE
History, development, and projections of the deer industry. General information on the economics of deer management, the deer meat industry, marketing, and field laboratories required. Field trips required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC)

ANSC 220—DAIRY INDUSTRY/DAIRY SCIENCE
History, development, and projections of the dairy industry. General information on the economics of dairying, facts, trends, selection, culling, fitting, showing, judging, pedigrees, feeding and basic management skills; employment opportunities and requirements. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

ANSC 221—DAIRY CATTLE SELECTION AND EVALUATION
Selection of dairy cattle on type conformation and the correlation between type and production. Pedigree evaluation, animal analysis, linear classification, and body condition scoring. Written and oral evaluation on selection. Field trips required. Two maximum completions Lecture/Laboratory/Other. (A-F Only) Transfer: (CSU, UC)

ANSC 222—MILK PRODUCTION AND TECHNOLOGY
Milk and milk product consumption and the economics of milk production. Discusses the mammary system anatomy, the physiology of milk secretion, the composition and the properties of milk, including factors of production. Evaluation of milking parlors and equipment, systems analysis and operation is also included. Milk testing, sanitation, quality control, udder health, and treatment as well as dairy mathematics. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

ANSC 223—DAIRY CATTLE SELECTION & EVALUATION
Selection of dairy cattle on type conformation and the correlation between type and production. Pedigree evaluation, animal analysis, linear classification, and body condition scoring. Written and oral evaluation on selection. Three maximum completions. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU, UC)

ANSC 224—DAIRY FEEDS AND FEEDING
Fundamentals of digestion and absorption in ruminants. The nutritive value of feeds as they relate to the formulation of dairy rations will be emphasized, including by-product feeding. Term project and field laboratories required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)
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ANSC 224—DAIRY FEEDS & FEEDING  
Fundamentals of nutrient digestion and absorption in ruminants. The nutritive value of feeds as they relate to the formulation of dairy rations will be emphasized with the inclusion of various plant tissue commodities by-product feeding. Term project and field laboratories required. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU)

ANSC 226—DAIRY BREEDING AND SELECTION  
The study of basic genetic principles with the study of the anatomical and physiological aspects of reproduction as they relate primarily to the bovine. Genetically-based selection techniques are emphasized with the inclusion of production decisions and management decisions. Computer-assisted selection techniques, mating systems, heterosis, and performance evaluation. Reproductive aspects include endocrinology, estrus cycles, mating behaviors, gametogenesis, conception, gestation, parturition, and neonatal behavior. Artificial insemination, embryo manipulation, and current innovations in reproductive biotechnology will also be examined. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU)

ANSC 227—ADVANCED DAIRY CATTLE SELECTION & EVALUATION  
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed the ANSC 220, ANSC 221 and/or completed another class in livestock evaluation. Advanced study of dairy conformation as related to the function of milk production. Evaluation of dairy cattle using production data, pedigrees and live animal evaluation. Particular emphasis will be placed on linear classification and selective mating. Oral interpretation of these evaluative criteria and formal reasoning presentations will be required. Evaluation of milk and milk products will be required as well. Two maximum completions. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU)

ANSC 228—DAIRY MANAGEMENT  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ANSC 220 and AGEC 200. Economics of dairy farming, milk production and marketing and their relationship to income, computing production and marketing costs, analyzing dairy enterprises, breeder planning, farm selection, management problems relating to feeding, labor replacements, breeding, work simplification and record keeping. Term problem and field laboratories required. Lecture /Laboratory. (A-F Only) Transfer: CSU

ANSC 230—POULTRY SCIENCE  
A study of the principles and practices of commercial poultry production. Emphasis is placed on poultry nutrition, reproduction, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance. Field trips are required. (A-F Only) Lecture /Lab. Transfer: UC, CSU

ANSC 232—AVIAN PRACTICES  
Practices in avian management including breeders, fryers and layers, incubating, brooding and rearing of chicks; processing and marketing of various avian products. Specific work with game birds and non-commercial species of fowl. Field laboratories required. Lecture /Laboratory. (A-F Only) Transfer: UC

ANSC 232—AVIAN PRACTICES  
Practices in avian management including breeders, fryers and layers; incubating, brooding, and rearing of chicks; feed preparation, recordkeeping, processing, and marketing of avian products. Specific work with game birds and non-commercial species of fowl. Field trips are required. (A-F Only) Lecture /Lab. Transfer: (CSU, UC)

ANSC 234—POULTRY FEEDING  
Economics of poultry feeding. Composition of feeds, nutritional requirements, feed formulation for poultry, computer-assisted feed formulation, and proper feeding techniques. Field laboratories required. Lecture /Laboratory. (A-F Only) Transfer: CSU

ANSC 235—POULTRY DISEASES AND HOUSING  
Anatomy and physiology of poultry; diagnosis, treatment, prevention and control of disease; sanitation; types of housing and equipment; planning housing, and equipment needs; vaccination schedules. Field laboratories required. Lecture /Laboratory. (A-F Only) Transfer: CSU

ANSC 236—POULTRY BREEDING & SELECTION  
Principles of poultry breeding, record analysis, and selection of poultry, incubation, hatching and grading of eggs. Lecture /Laboratory. (A-F Only) Transfer: CSU

ANSC 237—POULTRY FERTILITY AND INCUBATION  
Economics of poultry reproduction. Examination of poultry breeds and their uses. Embryology, egg incubation, hatching and grading. Field trips are required. (A-F Only) Lecture /Lab. Transfer: CSU

ANSC 240—BEEF FITTING AND SHOWING  
Principles of selection, feeding, fitting, and presentation of beef animals for show. Three maximum completions. Lecture/Laboratory/Other. (A-F Only) Transfer: CSU

ANSC 241—SHEEP FITTING AND SHOWING  
Principles of selection, feeding, fitting, and presentation of sheep for show. Three maximum completions. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSU

ANSC 242—SWINE FITTING AND SHOWING  
Principles of selection, feeding, fitting, and presentation of swine for show. Three maximum completions. Lecture/Laboratory. (A-F Only) Transfer: CSU

ANSC 243—EQUINE FITTING AND SHOWING  
 Formerly titled Horse Fitting and Showing  
Principles of selection, feeding, fitting, and presentation of horses for show. Field trips required. Three maximum completions. Lecture/Lab. (A-F Only) Transfer: CSU

ANSC 244—DAIRY FITTING & SHOWING  
Principles of selection, feeding, fitting and presentation of dairy animals for show. Field trips may be required. Three maximum completions. Lecture/Lab. (A-F Only) Transfer: CSU

ANSC 244—DAIRY FITTING AND SHOWING  
Principles of selection, feeding, fitting and presentation of dairy animals for sales and shows. Three maximum completions. Field trips might be required. (A-F Only) Lecture /Lab. Transfer: CSU

ANSC 245—MEAT GOAT FITTING AND SHOWING  
Principles of selection, feeding, fitting and presentation of meat goats for show. Field trips may be required. Three maximum completions. Lecture/Lab. (A-F Only) Transfer: CSU

ANSC 250—VETERINARY PHYSIOLOGY, ANATOMY & TERMINOLOGY  
Recommended for Success: Satisfactory completion of ENGL 103  
Commonly used terminology and biological concepts used in veterinary medicine. Includes study of basic normal anatomy and physiology (in both large and small animals) in a body systems format, along with related vocabulary and spelling. Commonly used veterinary acronyms and abbreviations are woven throughout the course where relevant. Lecture. Transfer: CSU

ANSC 250—VETERINARY PHYSIOLOGY, ANATOMY, & TERMINOLOGY  
Formerly listed as: ANSC - 250: Veterinary Physiology, Anatomy & Terminology  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101. Commonly used terminology and biological concepts used in veterinary medicine. Includes study of basic normal anatomy and physiology (in both large and small animals) in a body systems format, along with related vocabulary and spelling. Commonly used veterinary acronyms and abbreviations are woven throughout the course where relevant. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: CSU
ANSC 251—VETERINARY PHARMACY PROCEDURES 2 UNITS
Recommended for Success: Satisfactory completion of ENGL 50.
Includes discussion of veterinary pharmacology and common items dispensed with emphasis on proper labeling and dispensing instructions. Lecture/Laboratory. Field trips required. Transfer: CSU.

ANSC 251—VETERINARY PHARMACY PROCEDURES 2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete AG 280.
Includes discussion of veterinary pharmacology and common items dispensed with emphasis on proper labeling and dispensing instructions. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU).

ANSC 252—VETERINARY EQUIPMENT: OPERATION, INSTRUMENTATION, AND SAFETY 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 50.
Customer service, medical communication skills, office organization, scheduling, emergency recognition and management, stress management, preventative health programs, and medical record keeping. Field trips required. Lecture/Laboratory. Transfer: CSU.

ANSC 252—VETERINARY EQUIPMENT: OPERATION, INSTRUMENTATION, AND SAFETY 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50. Introduction to diagnostic imaging equipment used in veterinary practices.

ANSC 252—VETERINARY LABORATORY PROCEDURES 1 UNIT
Recommended for Success: Satisfactory completion of ENGL 50.
Introduction to manual and automated veterinary lab techniques and procedures, including work with blood, urine, fecal and skin samples. (A-F or P/NP) Lecture. Transfer: CSU.

ANSC 253—VETERINARY LABORATORY PROCEDURES 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Introduction to manual and automated veterinary lab techniques and procedures, including work with blood, urine, fecal and skin samples. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: CSU.

ANSC 254—VETERINARY MEDICAL OFFICE PROCEDURES 2 UNITS
Introduction to customer service, medical communication skills, office organization, scheduling, emergency recognition and management, stress management, preventative health programs, and medical record keeping. (A-F Only) Lecture. Transfer: CSU.

ANSC 254—VETERINARY MEDICAL OFFICE PROCEDURES 2 UNITS
Formerly listed as: ANSC - 254: Vet Medical Office Procedures
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Customer service, medical communication skills, office organization, scheduling, emergency recognition and management, stress management, preventative health programs, and medical record keeping. Field trips might be required. (A-F Only) Lecture/Lab. Transfer: CSU.

ANSC 255—PREPARATION FOR SURGICAL AND DENTAL ASSISTANCE 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 50.
Preparation for surgery, surgery assistance, surgical and dental instruments and packs, anesthesia induction, monitoring and anesthetic machine maintenance, anatomy of the mouth and dental arcade, dental prophylaxis and extractions. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: CSU.

ANSC 255—PREPARATION FOR VETERINARY SURGICAL AND DENTAL ASSISTANCE 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Veterinary Technician preparation for surgery, surgery assistance, surgical and dental instruments and packs, anesthesia induction, monitoring and anesthetic machine maintenance, anatomy of the mouth and dental arcade, dental prophylaxis and extractions. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: CSU.

ANSC 256—VETERINARY ASSISTANCE AND NURSING 1 UNIT
EMERGENCY PROCEDURES
Emphasis on emergency procedures, monitoring vital signs, taking steps to stabilize patients. Basic nutritional requirements for pets, species requirements, nutritional disorders, feeding methods. Basic animal behavior, detecting signs of stress, and identifying causes of behavioral problems. Field trips required. Lecture/Laboratory. Transfer: CSU.

ANSC 256—VETERINARY ASSISTANCE & NURSING 1 UNIT
EMERGENCY PROCEDURES½
Formerly listed as: ANSC - 256: Vet Assistance & Nursing: Emer Procedure
Emphasis on emergency procedures, monitoring vital signs, taking steps to stabilize patients. Basic nutritional requirements for pets, species requirements, nutritional disorders, feeding methods. Basic animal behavior, detecting signs of stress and identifying causes of behavioral problems. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU).

ANSC 257—VETERINARY ASSISTANCE AND NURSING 2 UNITS
ANIMAL HANDLING
Basic veterinary nursing procedures including animal restraint, administration of medication, catheterization, vaccination techniques, bathing, bandaging, and performing minor medical procedures. (A-F Only) Lecture. Transfer: CSU.

ANSC 257—VETERINARY ASSISTANCE AND NURSING 2 UNITS
ANIMAL HANDLING
Basic veterinary nursing procedures including animal restraint, administration of medication, catheterization, vaccination techniques, bathing, bandaging and performing minor medical procedures. Field trips might be required. (A-F or P/NP - Student choice) Lecture Transfer: (CSU).

ANSC 258—BEGINNING HORSEMANSHIP 3 UNITS
Introduction to riding, saddling, grooming and bridling. Students will acquire basic knowledge of equipment and safety procedures. Course topics include use of riding aids and transitions. May be completed up to 4 times. (A-F Only) Lecture/Lab. Transfer: CSU.

ANSC 259—PACK ANIMAL - WALK/RIDE 2 UNITS
Selection, care, and use of pack animals and equipment. Topics will include safe packing trips and understanding environmental concerns on the trail. Having a horse is not a requirement for this class. Field trips may be required. (A-F Only) Lecture/Lab. Transfer: CSU.

ANSC 260—ADVANCED HORSEMANSHIP 3 UNITS
Introduction to riding, saddling, grooming and bridling. Students will acquire basic knowledge of equipment and safety procedures. Course topics include use of riding aids and transitions. May be completed up to 4 times. (A-F Only) Lecture/Lab. Transfer: CSU.

ANSC 265—INTRODUCTION TO COLT TRAINING 3 UNITS
Basic principles involved in handling and training the young horse. Course includes groundwork, trailering, starting a colt, advancing the green horse, and problem-solving. (A-F Only) Lecture/ Lab. Transfer: CSU.

ANSC 316—FARM PROCESSING OF MEAT ANIMALS 2 UNITS
Economics of producing and harvesting farm-raised animals. Safety factors, local and state regulations as they apply to harvesting live animals. Processing will include poultry, rabbits, sheep or goats, swine and beef. Proper sanitation, harvesting, cutting, wrapping and cutting will be covered for the above-mentioned species. Field trips are required. (A-F Only) Lecture/Lab.

ANSC 379—SMALL ANIMAL MEDICINE AND BEHAVIOR 2 UNITS
Formerly listed as ANSC 377 and ANSC 378
Basic introductory course in normal animal behavior of dogs and cats. The diagnosis and treatment of some of the most common pet behavior problems. Includes history of diseases and parasites in the area, management techniques to prevent diseases and parasites, state and federal regulatory services. Lecture. (A-F Only).

ANTHR (Anthropology)
ANTHR 101—PHYSICAL ANTHROPOLOGY 3 UNITS
Introduction to human evolution. The evidence for human biological and behavioral adaptations is examined. Issues and topics will include the principles of genetics and evolution, human variation, comparative primate anatomy/behavior and an assessment of the human fossil record. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(TCSU ANTH 110) General Education: (MJC-GE: A)(CSU-GE: B2, D1)(IGETC: SB)

ANTHR 102—CULTURAL ANTHROPOLOGY 3 UNITS
Introduction to the methods, theories and insights of cultural anthropology and the application of these to life in a multicultural society. Topics include, but are not limited to: the research and analysis of culture and cultural processes; cross-cultural comparisons of subsistence patterns, economics, religion, kinship, gender, language, sexuality and political organization; and, cultural change in a globalized world. Recommended for people who travel internationally. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC ANTHR 10) (CSU, UC)(TCSU ANTH 120) General Education: (MJC-GE: B)(CSU-GE: D1)(IGETC: 4A)

ANTHR 104—LINGUISTIC ANTHROPOLOGY 3 UNITS
Formerly listed as ANTHR 104 - Language, Culture and Communication
Recommended for Success: Before enrolling in this course, students are strongly advised to complete ENGL 101 with a minimum grade of C.
An introduction to the anthropological study of language. Topics include: a survey of linguistics, including phonetics, phonology, morphology, syntax and semantics; the ethnography of communication; classification and cultural meaning; language, literacy and writing; and, anthropological approaches to the language emergence and change. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(TCSU ANTH 130) General Education: (MJC-GE: B, C)(CSU-GE: C2, D1)(IGETC: 3B, 4A)

ANTHR 105—PHYSICAL ANTHROPOLOGY LABORATORY 1 UNIT
Corequisite: or satisfactory completion of Concurrent enrollment in or satisfactory completion of ANTHR 101.
Laboratory investigation of methods and techniques of human evolution and variation, including use of the scientific method, anthropometrics, and an analysis of the developmental and functional morphology of primates. Lines of examination will include the study of population genetics, comparative anatomy and behavior of primates, forensic anthropology, human fossils and their reconstruction. Field trips may be required. (A-F Only) Lab Transfer: (CSU, UC)(TCSU ANTH 110) General Education: (MJC-GE: A)(CSU-GE: B3)(IGETC: SB)

ANTHR 107—FORENSIC ANTHROPOLOGY INTRODUCTION 3 UNITS
Introduction to forensic anthropology as an applied field of physical anthropology; the methods of solving crimes with anthropological data and applying techniques designed for the analysis of human skeletal remains (personal identification, the determination of population, cause of death, DNA analysis, and issues of collection of physical evidence). Interaction between anthropologists and law enforcement agencies and human rights issues. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

ANTHR 130—ARCHEOLOGY & CULTURAL PREHISTORY 3 UNITS
An introduction to archaeological anthropology including concepts, theories, and methods employed by archaeologists in reconstructing past life ways of humans. Topics include history and interdisciplinary nature of archaeological research; data acquisition, analysis and interpretation with a discussion of applicable data and models; cultural resource management; selected cultural sequences. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC ANTHR 10)(TCSU ANTH 150) General Education: (CSU-GE: D1)(IGETC: 4A)

ANTHR 140—MAGIC, WITCHCRAFT, AND RELIGION 3 UNITS
Formerly listed as ANTHR 140 - Magic, Witchcraft and Religion
Recommended for Success: Before enrolling in this course, students are strongly advised to complete ENGL 101 with minimum grade of C.
A cross-cultural study of the forms, functions and politics of supernatural beliefs and associated rituals in a diverse world. Emphasis on investigating belief systems and rituals within particular cultural contexts, including their emergence and the effect of their practice. Additional emphasis is on broad ethnographic comparison, to derive insight into the power and cultural work of religious and supernatural frameworks in various societies. Religious and supernatural worlds are also analyzed for their local and global connections with other Cultural institutions, movements, forms, politics, and processes. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B)(CSU-GE: D1)(IGETC: 4A)

ANTHR 150—NATIVE PEOPLE OF NORTH AMERICA 3 UNITS
Introductory survey of Native North Americans. Protohistory will be examined, with emphasis on historic and contemporary culture groups and their politics, economics, and religions. The impact of non-Native peoples on indigenous cultures will be explored. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC ANTHR 15) General Education: (CSU-GE: D1)(IGETC: 4A)

ANTHR 174—ANTHROPOLOGY SUMMER FIELD STUDIES 3 UNITS
Application of principles of anthropology through extended field studies at selected sites. Skills developed in cultural field studies, ethnographic data collection, archaeological artifact and site identification. Requires ability to work and study under rigorous conditions. Two maximum completions. Field trips are required. (A-F or P/NP) Lecture. Transfer: CSU

AP (Anatomy & Physiology)
Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeps/sme/
Instructors: David Ward, Michele Moniaux, Pamela Upton, Robert Dioual, Sandra Ueyoshi

AP 50—ELEMENTARY HUMAN ANATOMY-PHYSIOLOGY 3 UNITS
Introduction to the structure and function of the human body, basic terminology, cell biology, and the organ systems. Designed as a preliminary course for allied health students, but open to all students. Field trips are not required. (A-F or P/NP ) Lecture. General Education: (MJC-GE:A)(CC BIOL 10)

AP 150—INTEGRATIVE ANATOMY AND PHYSIOLOGY 5 UNITS
Prerequisite: Satisfactory completion of BIO 116 or BIO 101 or BIO 111.
An intense one semester study of the general structure and function of the human body with an emphasis on integrative functions of the organ systems. Includes organ, tissue and cellular interrelationships; cellular communication; blood movements and hemostasis; fluid balance; respiration; nutrition; digestion, and reproduction. Intended for students entering health professions that accept a one semester course. Field trips are not required. (A-F or P/NP) Lecture/Lab/Discussion Transfers: (CSU, UC) General Education: (MJC-GE: A)(CSU-GE: B2, B3)(IGETC: SB)

AP 150 — INTEGRATIVE ANATOMY AND PHYSIOLOGY 5 UNITS
Prerequisite: Satisfactory completion of BIO 116 or BIO 101 or BIO 111.
An intense one semester study of the general structure and function of the human body with an emphasis on integrative functions of the organ systems. Includes organ, tissue and cellular interrelationships; cellular communication; blood movements and hemostasis; fluid balance, respiration, digestion, and reproduction. Intended for students entering health professions that accept a one semester course. Field trips are not required. (A-F or P/NP - Student choice) Lecture /Lab/Discussion Transfer: (CSU, UC) General Education: (MJC-GE: A)(CSU-GE: B2, B3)(IGETC: SB, SC)

ARCH (Architecture)
Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeps/sme/
Instructors: Dennis Thorpe

ARCH 100—INTRODUCTION TO ENGINEERING AND ARCHITECTURE 1 UNIT
Also offered as ENG 100
Introduction to the vocational and academic opportunities at MJC, with special emphasis on engineering, architecture and related technologies. Topics include: models of student success, characteristics of the professions, development of educational plans. Associate Degree Requirements, importance of teamwork, and self-assessment. Activities include field trips, practice labs, and presentations by MJC counselors and practicing engineers and architects. Lecture. Material fee may be required. (Fall) Transfer: (CSU, UC)
ARCH 106—MATERIALS OF CONSTRUCTION
2 UNITS
Recommended for Success: Concentration enrollment in ARCH 107
Use and application of construction processes and materials pertaining to architecture. Field trips may be required. Lecture. Materials fee may be required. (Fall) Transfer: CSU

ARCH 107—MATERIALS OF CONSTRUCTION LABORATORY
1 UNIT
Recommended for Success: Concurrent enrollment in ARCH 106 or ENGTC 250
Observation and testing of mechanical properties of steel, concrete, and wood. Laboratory and field exercises with basic construction methods using wood and concrete. Field trips to construction sites, materials manufacturing and processing plants. Laboratory. Materials fee may be required. (Spring) Transfer: CSU

ARCH 107—MATERIALS OF CONSTRUCTION LABORATORY
1 UNIT
Corequisite: Concurrent enrollment in or satisfactory completion of ARCH 106
Observation and testing of mechanical properties of steel, concrete, and wood; laboratory and field exercises with basic construction methods using wood and concrete; field trips to construction sites, materials manufacturing and processing plants. Field trips are required. (A-F or P/NP - Student choice) Lecture/Laboratory. Transfer: CSU

ARCH 117—HISTORY OF ARCHITECTURE 1
3 UNITS
The development of architecture, its philosophies and conditions from Prehistoric through Egyptian, Greek, Roman, Early Christian, Medieval, Romanesque, Gothic and Pre-Columbian. Lecture. Materials fee may be required. (Fall) Transfer: (CSU, UC) General Education: (MSC-GE C) (CSU-GE C1, C2, C3)

ARCH 117—HISTORY OF ARCHITECTURE 2
3 UNITS
The development of architecture, its philosophies and conditions from the Renaissance through the Industrial Revolution, the Modern Movement and including the Twentieth Century. ARCH 117 is not a prerequisite. Lecture. Materials fee may be required. (Spring) Transfer: (CSU, UC) General Education: (MSC-GE C1, C2, C3)

ARCH 121—BEGINNING GRAPHICS AND DESIGN 1
4 UNITS
Introduction to the graphic and computer production of architectural drawings pertaining to freehand, orthographic, axonometric and perspective drawings. Basic principles and concepts of two- and three-dimensional design. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (Fall) Transfer: (CSU, UC)

ARCH 121—BEGINNING GRAPHICS AND DESIGN 1
4 UNITS
Introduction to graphic and computer production of architectural drawings pertaining to freehand, orthographic, axonometric and perspective drawings. Basic principles and concepts of two- and three-dimensional design. Materials Fee Required. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Lab. Transfer: (CSU, UC)

ARCH 122—BEGINNING GRAPHICS AND DESIGN 2
4 UNITS
Prerequisite: Satisfactory completion of ARCH 121
Continuation of ARCH 121. Extended development of the content in ARCH 121 plus the introduction of the graphic methods and skills to communicate and represent conceptual ideas, analysis, and design concepts. Field trips may be required. Lecture/Laboratory. Materials fee may be required. (Spring) Transfer: (CSU, UC)

ARCH 122—BEGINNING GRAPHICS AND DESIGN 2
4 UNITS
Prerequisite: Satisfactory completion of ARCH 121 Continuation of ARCH 121.
Extended development of the content in ARCH 121 plus the introduction of the graphic methods and skills to communicate and represent conceptual ideas, analysis, and design concepts. Materials Fee Required. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Lab. Transfer: (CSU, UC)

ARCH 131—ARCHITECTURAL DRAFTING 1
4 UNITS
Recommended for Success: Previous drafting experience.
Techniques and skills of drafting; introduction to building codes and construction methods, and the construction documents used to communicate the light-wood frame building process. Introduction to computer-assisted drafting in architectural applications. Field trips may be required. Lecture/Laboratory. Materials fee may be required. Transfer: CSU

ARCH 132—ARCHITECTURAL DRAFTING 2
3 UNITS
Prerequisite: Satisfactory completion of ARCH 131
Continuation of ARCH 131. Further development of office and drafting practices, contract document preparation, and construction processes with emphasis on heavy timber construction. Introduction to computer-assisted drafting in more complex architectural applications. Field trips may be required. Lecture/Laboratory. (Spring) Transfer: CSU

ARCH 152—ARCHITECTURAL DESIGN 1
5 UNITS
Prerequisites: Satisfactory completion of ARCH 122
Fundamentals of design concepts focusing on architectural form, function, space, and structure. Application of problem solving methods as applied to the relationship of man, building, and environmental concerns. Field trips required. Lecture/Laboratory. Materials fee may be required. (Fall) Transfer: CSU

ARCH 153—ARCHITECTURAL DESIGN 2
5 UNITS
Prerequisite: Satisfactory completion of ARCH 152
Continuation of ARCH 152. Explorations in architectural design within an environmental context. Consideration of projects dealing with buildings, site, climate, and structural issues and their interaction with aesthetic and functional concerns. Field trips required. Lecture/Laboratory. Materials fee may be required. (Spring) Transfer: CSU

ARCH 331—BASIC ARCHITECTURAL DRAFTING 1
2 UNITS
Introduction to architectural drafting and construction techniques for the nonprofessional with major emphasis on residential drawing and design. Topics include: a basic understanding of drafting skills, architectural nomenclature, design presentations, building materials, and a simple understanding of structure. Lecture/Laboratory.

ART
Dean: Michael Sundquist
Division Office: Performing and Media Arts Center, Room 205
Phone: (209) 575-6081
Division website: www.mjc.edu/arts
Instructors: Deborah Barr, Doug Smith, Haleh Nazmand, Paul Berger, Richard Serrano, Rob Stevenson, Terry Hartman, Tom Dutschker

ART 102—INTRODUCTION TO COMPUTER GRAPHICS
3 UNITS
Also offered as CMPGR 202
Introduction to computer graphics using various applications and tools. Topics explored include but are not limited to: original image creation, photographic editing, scanning, printing, two-dimensional animation, sound, digitizing pens, mouse, and digital camera. Field trips required. Materials fee required. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC) General Education: (CSU-GE C1)

ART 103—APPLIED COMPUTER GRAPHICS
3 UNITS
Also offered as CMPGR 213
Recommended for Success: Satisfactory completion of ART 102/CMPGR 202
Formerly listed as Microcomputer Graphics. Concepts and techniques in computer graphics as related to fine and applied art applications. Field trips required. Materials fee required. Lecture/Laboratory. Transfer: CSU

ART 108—CERAMICS 1
3 UNITS
Techniques of elementary clay construction and ornamentation, introduction to throwing techniques. Materials Fee Required. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Lab. MJC Activities. Transfer: (CSU, UC). (CC ART 31)

ART 109—CERAMICS 2
3 UNITS
Prerequisite: Satisfactory completion of ART 108
Hand building and pottery construction. Emphasis on throwing form and design. Materials Fee Required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: (CSU, UC)

ART 110—CERAMICS 3
3 UNITS
Prerequisite: Satisfactory completion of ART 109
Hand building, throwing techniques, and surface decoration; experiments in clay bodies, glazes and loading and unloading of kiln. Materials Fee Required. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: (CSU, UC)
<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
<th>PREREQUISITE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>ART 119—COMPUTER GRAPHICS PORTFOLIO REVIEW</td>
<td>1 UNIT</td>
<td></td>
<td>PREPARATION: This course follows the completed courses of the Computer Graphics majors/ certificate core requirements. Prepares the student majoring or receiving a certificate in Computer Graphics with the necessary visual and business skills to develop a portfolio, emphasizes the creative and applied business needs for individuals entering the professional field of Computer Graphics. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSU</td>
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<tr>
<td>ART 120—BASIC DRAWING 1</td>
<td>3 UNITS</td>
<td></td>
<td>INTRODUCTORY COURSE IN TECHNIQUES USED IN REPRESENTING FORM, LIGHT AND SHADOW, TEXTURE, PERSPECTIVE, COMPOSITION, AND EXPRESSION USING VARIOUS DRAWING MEDIA. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (CSU-GE: C1)</td>
</tr>
<tr>
<td>ART 121—BASIC DRAWING 2</td>
<td>3 UNITS</td>
<td></td>
<td>FURTHER EXPLORE OF THE TECHNIQUES AND MATERIALS USED IN ART 120. EMPHASIS ON COMPOSITION AND DEVELOPMENT OF A PERSONAL APPROACH TO DRAWING. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC)</td>
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<tr>
<td>ART 123—FIGURE DRAWING</td>
<td>3 UNITS</td>
<td></td>
<td>SFART 120. FOUNDATIONAL DRAWING OF THE HUMAN FIGURE. DRAWING OF BOTH THE NAKED AND DRAPEFIGURE IN VARIOUS MEDIA. TWO FIELD TRIPS REQUIRED. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) (CC ART 9A)</td>
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<tr>
<td>ART 124—COLOR AND DESIGN 1</td>
<td>3 UNITS</td>
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<td>RECOMMENDED FOR SUCCESS: Before enrolling in this course, students are strongly advised to satisfactorily complete ART 120 with a minimum grade of C or better or previous drawing experience. Design principles and color theory. Problems in two-dimensional form using various media. Field trips may be required. (A-F OR P/NP) Lecture/Lab. MJC ACTIVITIES. Transfer: (CSU, UC) (CC ART 10A)</td>
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<tr>
<td>ART 125—COLOR AND DESIGN 2</td>
<td>3 UNITS</td>
<td></td>
<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 124. EXPRESSIONS IN DESIGN. UTILIZATION OF THE ELEMENTS AND PRINCIPLES OF DESIGN IN TWO AND THREE-DIMENSIONAL FORM USING VARIOUS MATERIALS AND TECHNIQUES. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB/or OTHER. (SPRING) MJC ACTIVITIES. Transfer: (CSU, UC)</td>
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<tr>
<td>ART 127—ALTERNATIVE DRAWING METHODS</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 120. THEORY AND PRACTICE OF NONTRADITIONAL DRAWING MATERIALS AND TECHNIQUES. EMPHASIS ON CONTEMPORARY APPROACHES TO DRAWING INCLUDING MIXED MEDIA, COLLAGE, NONTRADITIONAL SURFACE, AND WORKING IN SERIES. FURTHER EXPLORATION OF THE COMPOSITIONAL ISSUES ADDRESSED IN THE BASIC DRAWING COURSES. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC)</td>
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<tr>
<td>ART 140—SCULPTURE 1</td>
<td>3 UNITS</td>
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<td>STUDY OF FORM, STRUCTURE, AND THREE-DIMENSIONAL DESIGN AS RELATED TO SCULPTURE USING MATERIALS SUCH AS STONE, PLASTER, CLAY, PLASTICS, AND METALS. MATERIALS FEE REQUIRED. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (CSU-GE: C1)</td>
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<tr>
<td>ART 141—SCULPTURE 2</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 140. CONTINUATION OF ART 140: IN-DEPTH REALIZATION OF SCULPTURE IN BOTH CONCEPT AND CRAFTSMANSHIP. MATERIALS FEE REQUIRED. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC)</td>
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<tr>
<td>ART 142—SCULPTURE 3</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 141. CONTINUATION OF ART 141 WITH AN EMPHASIS ON EXPERIMENTATION AND DEVELOPMENT OF PERSONAL EXPRESSION APPLIED TO SCULPTURAL PROBLEMS. MATERIALS FEE REQUIRED. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC)</td>
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<tr>
<td>ART 144—WATERCOLOR PAINTING 1</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 120 OR ART 124. THEORY AND PRACTICE OF TRANSPARENT WATERCOLOR PAINTING USING STILL LIFE AND LANDSCAPE SUBJECT MATTER. TRADITIONAL AND EXPERIMENTAL TECHNIQUES WILL BE USED. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 145—WATERCOLOR PAINTING 2</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 144. A CONTINUATION OF THE CONCEPT AND SKILLS DEVELOPED IN ART 144. EMPHASIS IS PLACED UPON EXPERIMENTATION AND DEVELOPMENT OF A PERSONAL PAINTING STYLE. FIELD TRIPS MAY BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) (CC ART 238)</td>
</tr>
<tr>
<td>ART 146—MIXED MEDIA PAINTING</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 120 OR ART 124. THEORY AND PRACTICE OF ACRYLIC OR OIL PAINTING WITH AN EMPHASIS ON EXPERIMENTAL TECHNIQUES AND DIFFERENT MIXED MEDIUMS. FIELD TRIPS MAY BE REQUIRED. TWO FIELD TRIPS ALLOWED. (A-F OR P/NP) MJC ACTIVITIES. Transfer: (CSU, UC) (CC ART 239)</td>
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<tr>
<td>ART 147—PAINTING 1 (IN ACRYLIC)</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 120 OR ART 124. INTRODUCTION TO ACRYLIC PAINTING: BASIC TECHNIQUES AND STYLISTIC APPROACHES. EMPHASIS ON DEVELOPING FORM THROUGH COLOR. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 148—PAINTING 1 (IN OIL)</td>
<td>3 UNITS</td>
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<td>FORMERLY LISTED AS ART 148-OIL PAINTING 1. PREREQUISITE: SATISFACTORY COMPLETION OF ART 120 OR ART 124. INTRODUCTION TO OIL PAINTING: BASIC TECHNIQUES AND STYLISTIC APPROACHES. EMPHASIS ON DEVELOPING FORM THROUGH COLOR. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 149—PAINTING 2</td>
<td>3 UNITS</td>
<td></td>
<td>FORMERLY LISTED AS ART 149-OIL PAINTING 2. PREREQUISITE: SATISFACTORY COMPLETION OF ART 147 OR ART 148. CONTINUED WORK IN OIL AND ACRYLIC PAINTING: BASIC TECHNIQUES AND STYLISTIC APPROACHES. EMPHASIS ON DEVELOPING FORM THROUGH COLOR. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 150—GALLERY OPERATION AND MANAGEMENT</td>
<td>3 UNITS</td>
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<td>PREREQUISITE: SATISFACTORY COMPLETION OF ART 147 OR ART 148. CONTINUED WORK IN OIL AND ACRYLIC PAINTING: BASIC TECHNIQUES AND STYLISTIC APPROACHES. EMPHASIS ON DEVELOPING FORM THROUGH COLOR. FOUR MAXIMUM COMPLETIONS. FIELD TRIPS MIGHT BE REQUIRED. (A-F OR P/NP) LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 149—PAINTING 2</td>
<td>3 UNITS</td>
<td></td>
<td>FORMERLY LISTED AS ART 149-OIL PAINTING 2. PREREQUISITE: SATISFACTORY COMPLETION OF ART 147 OR ART 148. CONTINUED WORK IN OIL AND ACRYLIC PAINTING: BASIC TECHNIQUES AND STYLISTIC APPROACHES. EMPHASIS ON DEVELOPING FORM THROUGH COLOR. FIELD TRIPS MAY BE REQUIRED. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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<tr>
<td>ART 150—GALLERY OPERATION AND MANAGEMENT</td>
<td>3 UNITS</td>
<td></td>
<td>RECOMMENDED FOR SUCCESS: CONCURRENT ENROLLMENT IN ART 160, 164, OR 165. INTRODUCTION TO THE VARIOUS ASPECTS OF OPERATION AND MANAGEMENT OF AN ART GALLERY: EXHIBITION ORGANIZATION, HANGING, PUBLICITY AND PROMOTION. FIELD TRIPS REQUIRED. TWO MAXIMUM COMPLETIONS. LECTURE/LAB. MJC ACTIVITIES. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)</td>
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**Color Legend:**

- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**

**REV 01/13/2012 LSM**
ART 150 GALLERY OPERATION AND MANAGEMENT 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ART 160 or satisfactorily complete ART 164 or satisfactorily complete ART 165.
Introduction to the various aspects of operation and management of an art gallery which entails exhibition organization, hanging, publicity, curation, and jurying. Four Maximum completions. Field trips are required. (A-F or P/NP - Student choice) Lecture/Laboratory. Transfer: (CSU, UC) General Education: (MJC-GE) Activities

ART 160—APPRECIATION OF ART 3 UNITS
Introductory art appreciation for the general student. Illustrated lectures in painting, sculpture, architecture and design. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 161—AMERICAN ART 3 UNITS
Analysis of the arts through the study of painting, sculpture, architecture, and history of North America from pre-historic times to the present. Emphasis will be on the arts of the United States. Field trips required. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 162—HISTORY OF RENAISSANCE ART 3 UNITS
Analysis of the European 14th-16th century drawing, painting, sculpture, and architecture, with an emphasis on the Italian High Renaissance masters. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 163—HISTORY OF MODERN ART 3 UNITS
Analysis of the arts through the study of painting, sculpture, architecture, and the history of Europe and the Americas from c. 1800 to the present. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 164—HISTORY OF ART 3 UNITS
Analysis of great art epochs through study of paintings, sculpture, architecture and history from prehistoric times to the end of the Middle Ages. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 165—HISTORY OF ART 2 3 UNITS
Continuation of study of painting, sculpture and architecture from Renaissance to the present. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (ART 12) General Education: (MJC-GE C) (CSU-GE C1) (IGETC: 3A)

ART 166—SURVEY OF PHOTOGRAPHY 3 UNITS
Recommended for Success: Satisfactory completion of ART 170 or 181.
A survey course dealing with past and present photographic technique and imagery. Field trips required. Lecture. (Spring) Transfer: (CSU, UC) General Education: (MJC-GE C) (CSU-GE C1)

ART 169—HISTORY OF NON-WESTERN ART 3 UNITS
Analysis of the art forms of Africa, Oceania, Asia and the Americas in their relation to their cultural history from prehistoric times to the present. Field trips required. Lecture. Not offered every semester. Transfer: (CSU, UC)(ART 13) General Education: (MJC-GE C)(CSU-GE C1)(IGETC: 3A)

ART 170—BASIC PHOTOGRAPHY 3 UNITS
Introduction to the art and craft of photography: cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. Field trips required. Project card use available. Lecture/Laboratory. Not offered every semester. Materials fee required. MJC Activities. Transfer: (CSU, UC)(ART 40) General Education: (CSU-GE C1)

ART 172—INTERMEDIATE PHOTOGRAPHY 3 UNITS
Prerequisite: Satisfactory completion of ART 170 or 182.
Refinement of basic craft, vision and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. Field trips required. Project card use available. Lecture/Laboratory. Materials fee required. Transfer: (CSU, UC)

ART 173—DIGITAL IMAGING FOR PHOTOGRAPHERS 3 UNITS
Recommended for Success: Satisfactory completion of ART 170
Introductory course in digital imaging and electronic desktop photography. Applications related to the use of fine art photography and publication will be emphasized. The class includes lectures, discussions, critiques, computer laboratory work. Field trips required. Three maximum completions. Material fee required. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

ART 175—COLOR PHOTOGRAPHY 3 UNITS
Prerequisite: Satisfactory completion of ART 172 or 186.
Introduction to color photography. Transparency and negative materials, printing processes, print presentation and aesthetics. Field trips required. Lecture/Laboratory. (A-F Only)(Fall) MJC Activities. Transfer: (CSU, UC)

ART 178B,C,D—ADVANCED PHOTOGRAPHY 2,3,4 UNITS
Prerequisite: Satisfactory completion of ART 172 or 186
Recommended for Success: Satisfactory completion of ART 168
Advanced exploration in the visual and technical areas of either black and white, color, or non-silver photography. Students will design a project and produce a portfolio of finished work. Field trips may be required. Materials fee required. Completions to 8 units maximum. Other - combination seminar, and hours arranged. Transfer: CSU

ART 179—PHOTOJOURNALISM 3 UNITS
Also offered as JRNAL 179
Prerequisite: Satisfactory completion of ART 170
Study of photography as a tool in reporting news, sports, and feature stories in print and online media. Examines work and approaches of professional photojournalists, develops fundamental skills in visual storytelling, camera, lighting and compositional techniques, editorial criteria, page layout, copyright, and ethics. Photographs will be made with film and or digital cameras and processed on computers. May be completed up to 2 times. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: CSU

ART 181—BASIC PHOTOGRAPHY 1 1½ UNITS
Introduction to the art and craft of photography - cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. Field trips required. ART 181 and ART 182 are two semester equivalent of ART 170 but: do not fulfill the CSU-GE requirement. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC) (MJC ART 181+182 = CC ART 40)

ART 182—BASIC PHOTOGRAPHY 2 1½ UNITS
Prerequisite: Satisfactory completion of ART 181
Introduction to the art and craft of photography: cameras, films, papers, basic black and white darkroom operations, composition, print quality, and photographic seeing. ART 181 and ART 182 are the two-semester equivalent of ART 170 but: do not fulfill the CSU-GE requirement. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC) (MJC ART 181+182 = CC ART 40)

ART 185—INTERMEDIATE PHOTOGRAPHY 1 1½ UNITS
Prerequisite: Satisfactory completion of ART 170 or 182.
Refinement of basic craft, vision and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. ART 185 and ART 186 are the two semester equivalent of ART 172. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. Transfer: (CSU, UC)

ART 186—INTERMEDIATE PHOTOGRAPHY 2 1½ UNITS
Prerequisite: Satisfactory completion of ART 185
Refinement of basic craft, vision and aesthetics as they apply to black and white photography. Continued emphasis on visual literacy and personalized seeing. ART 185 and ART 186 are the two semester equivalent of ART 172. Field trips required. Trustee receipt required to purchase course materials as needed. Lecture/Laboratory. Transfer: (CSU, UC)

ART 189—PHOTO LABORATORY TECHNOLOGY 1 UNIT
Recommended for Success: Satisfactory completion of ART 170
Maintenance and operation of a photographic lab facility: equipment, chemistry, scheduling and other related activities. Field trips required. Four completions allowed. Laboratory. MJC Activities. Transfer: CSU

ART 191—PHOTOGRAPHY LAB TECHNOLOGY 2 1 UNIT
Recommended for Success: Before enrolling in this class, students are strongly advised to satisfactorily complete ART 170
Maintenance and operation of a photographic lab facility, equipment, chemistry, scheduling and other related activities. Field trips may be required. Four completions allowed. Laboratory. A-F or P/NP) MJC Activities. Transfer: CSU
### AUTOBDY (Autobody)

**Dean:** Pedro Mendez  
**Office:** John Muir 258W  
**Phone:** (209) 575-6332  
**Department website:** www.mjc.edu/prospective/programs/teched/autobody/  
**Instructors:** Jeff Beebe

**AUBDY 115—INTRODUCTION TO TECHNICAL INDUSTRIES**  
1 UNIT

Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Materials fee required. Lecture/Other. (A-F Only). MJC Guidance. Transfer: CSU

**AUBDY 241—DIESEL ENGINE PRINCIPLES**  
3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to complete AGM/AUTEC 289. Also offered as AGM 241  

**AUBDY 289—PRINCIPLES OF POWER MECHANICS/SMALL ENGINES**  
3 UNITS

Formerly listed as AGM/AUTEC 289  
Also offered as AGM 289  
Introduction to the operation, construction, maintenance, repair and adjustments of two and four-stroke engines. Designed for persons without prior experience in engine repair. Experienced technicians will also benefit. Lecture/Laboratory. Materials fee required. (A-F Only). Transfer: CSU

**AUBDY 291—AUTOMOTIVE SPAY REFINISHING 2**  
5 UNITS

This course is designed for the intermediate student who has successfully completed AUBDY 302 with emphasis on Automotive plastics, structural repairs, corrosion protection, vehicle dimensions, and estimating damage. Materials Fee Required. Field trips may be required. (A-F Only). Lecture/Lab.

**AUBDY 301—AUTOMOTIVE COLLISION REPAIR 1**  
5 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to be concurrently enrolled in AUBDY 321.  
Introduction to automotive collision repair industry with emphasis on shop safety, careers, vehicle designs welding techniques, on-structural steel repairs including straightening and replacement procedures. Materials Fee Required. Field trips may be required. (A-F Only). Lecture/Lab.

**AUBDY 302—AUTOMOTIVE COLLISION REPAIR 2**  
5 UNITS

Prerequisite: Satisfactory completion of AUBDY 301 with a minimum grade of C or better.  
This course is designed for the intermediate student who has successfully completed AUBDY 301 with emphasis on Automotive plastics, structural repairs, corrosion protection, vehicle dimensions, and estimating damage. Materials Fee Required. Field trips may be required. (A-F Only). Lecture/Lab.

**AUBDY 303—AUTOMOTIVE COLLISION REPAIR 3**  
4 UNITS

Prerequisite: Satisfactory completion of AUBDY 302 with a minimum grade of C or better.  
This course is designed for the student who has completed Auto Body 301 and 302 with emphasis on advanced techniques, including repair and replacement of non structural and structural components. This course works towards ASE certification and uses the ICAR live delivery program. At the end of each program the student will take a post test and be eligible for ICAR Training Alliance gold class points. Materials Fee Required. Field trips may be required. (A-F Only). Lecture/Lab.

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### ASTRO (Astronomy)

**Dean:** Brian Sanders  
**Division Office:** Science Building, Room 126  
**Phone:** (209) 575-6173  
**Division website:** www.mjc.edu/prospective/programs/teched/astro/  
**Instructor:** Kenneth Meidl

**ASTRO 141—INTRODUCTION TO ASTROPHYSICS**  
3 UNITS

Prerequisite: Satisfactory completion of PHYS 142 or PHYS 101  
Recommended for Success: Satisfactory completion of MATH 122 or qualification by MJC assessment process.  
Designed for students with a mathematical and/or scientific background. Study of planetary astronomy, stars and stellar evolution, gravity and cosmology, with emphasis on physical principles. Field trips required. Lecture: (A-F or P/NP). Transfer: (CSU, UC). General Education: (MJC-GE: A)(CSU-GE: B1)(IGETC: SA)

**ASTRO 151—INTRODUCTION TO ASTRONOMY LABORATORY**  
1 UNIT

Corequisite: Satisfactory completion of or concurrent enrollment in ASTRO 141 or ASTRO 160. Techniques in experimental astronomy. Determination of the properties of the Sun, and solar system objects, stars and galaxies. Use of the college telescopes and instruments may be incorporated into experiments. Laboratory. (A-F or P/NP). Transfer: (CSU, UC). General Education: (CSU-GE: B1, B3)(IGETC: SA)

**ASTRO 160—INTRODUCTION TO MODERN ASTRONOMY**  
3 UNITS


**ASTRO 161—ADVANCED ASTRONOMY**  
3 UNITS

Prerequisite: Satisfactory completion of ASTRO 160.  
Continuation of ASTRO 160 with further instruction in advanced content. This course is designed for the student who has completed Auto Body 301 and 302 with emphasis on advanced techniques, including repair and replacement of non structural and structural components. This course works towards ASE certification and uses the ICAR live delivery program. At the end of each program the student will take a post test and be eligible for ICAR Training Alliance gold class points. Materials Fee Required. Field trips may be required. (A-F Only). Lecture/Lab.

**ASTRO 162—ADVANCED ASTRONOMY LABORATORY**  
1 UNIT

Corequisite: Satisfactory completion of ASTRO 161.  
Also offered as AGM/AUTEC 241

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### AUTEC (Automotive Technology)

**Dean (Interim):** Pedro Mendez  
**Office:** John Muir 258W  
**Phone:** (209) 575-6332  
**Department website:** www.mjc.edu/prospective/programs/teched/autotech/  
**Instructors:** John Peterson, Gerald Wray

**AUTEC 115—INTRODUCTION TO TECHNICAL INDUSTRIES**  
1 UNIT

Also offered as AUBDY 115 and INTEC 115  
Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Materials fee required. Lecture/Other. (A-F Only). MJC Guidance. Transfer: CSU

**AUTEC 241—DIESEL ENGINE PRINCIPLES**  
3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to complete AGM/AUTEC 289. Also offered as AGM 241  

**AUTEC 289—PRINCIPLES OF POWER MECHANICS/SMALL ENGINES**  
3 UNITS

Formerly listed as AGM/AUTEC 289  
Also offered as AGM 289  
Introduction to the operation, construction, maintenance, repair and adjustments of two and four-stroke engines. Designed for persons without prior experience in engine repair. Experienced technicians will also benefit. Lecture/Laboratory. Materials fee required. (A-F Only). Transfer: CSU

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### Color Legend:

- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**

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**ART 197—FIELD STUDIES IN PHOTOGRAPHY**  
1 UNIT

Preparation of and participation in field studies of various thematic and technical approaches to photography as a fine art. Use of cameras and related equipment. Travel to specific geographic regions to augment the study of particular styles of photography. Geographic areas to be studied will vary from one term to the next. May be completed up to 4 times. (A-F or P/NP). Lecture/Lab. Transfer: CSU
<table>
<thead>
<tr>
<th>COURSES OFFERED</th>
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</thead>
<tbody>
<tr>
<td><strong>BIO (Biology)</strong></td>
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<tr>
<td>Dean: Brian Sanders</td>
</tr>
<tr>
<td>Division Office: Science Building, Room 126</td>
</tr>
<tr>
<td>Phone: (209) 575-6173</td>
</tr>
<tr>
<td>Division website: <a href="http://www.mjc.edu/current/programs/divideps/sme/">www.mjc.edu/current/programs/divideps/sme/</a></td>
</tr>
<tr>
<td>Instructors: Catherine Greene, Derek Madden, Elizabeth McInnes, Joe Zermeno, Teri Curtis</td>
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</tbody>
</table>

All courses are offered for letter grade only unless otherwise stated. Biology majors must take major courses on a letter grade basis. All majors must complete a program of courses approved by the division. Suggested curricula for specific biological sciences majors and related fields may be obtained from the advisors. Clases may sometimes convene at off-campus sites within the YCCD.

**BIO 50—BASIC BIOLOGY**
Introduction to the study of living organisms. Intended as a practical foundation for students interested in a basic knowledge of biological principles, terminology and the scientific process. May serve as a bridge to transfer-level biology courses and is not open to students who have completed a transfer-level biology course. Field trips may be required. (A-F or P/NP) Lecture. **General Education:** (MUC-GE-A)

**AUTEC 311—BASIC AUTOMOTIVE SYSTEMS**
4 UNITS
Introduction to the construction and operating principles of automotive systems to include: engine, cooling, lubrication, fuel, exhaust, and electrical. Proper selection and use of automotive shop manuals, service publications, tools, measuring devices, etc. Materials Fee Required. Field trips may be required. (A–F Only) Lecture/Lab.

**AUTEC 313—A1: ENGINE REPAIR**
3½ UNITS
Prerequisite: Satisfactory completion of AUTEC 311
Use of automotive machine shop equipment. Engine disassembly, cleaning, inspection, measuring, and reassembly procedures. Lecture/Laboratory. Materials fee required. Lecture/Laboratory (A–F Only)

**AUTEC 313—A2: MANUAL TRANSMISSION AND DRIVE AXLES**
3½ UNITS
Prerequisite: Satisfactory completion of AUTEC 311
Prepares students for the Automotive Service Excellence A3 Examination. Construction, operation and diagnosis of manual transmissions and axles, to include service and overhaul. Theory as well as "hands-on" training with clutch systems and drive axle operation and service. (A–F Only) Materials Fee required. Lecture/Lab.

**AUTEC 316—A6: AUTOMOTIVE ELECTRICITY/ELECTRONIC SYSTEMS 1**
3½ UNITS
Formerly listed as AUTEC 368 - A6: Automotive Electricity/Electronic Systems 1
Corequisite: Concurrent enrollment in or satisfactory completion of AUTEC 311.
Introduction to automotive electrical systems. Course covers basic fundamentals: Ohm’s law, starting and charging systems, batteries, alternators and starters. Course also covers principles of operation, testing, adjusting, and rebuilding procedures for electrical systems. Materials Fee Required. Field trips are not required. (A–F Only) Lecture/Lab.

**AUTEC 317—A5: BRAKES SYSTEMS**
3 UNITS
Prerequisite: Satisfactory completion of AUTEC 311
Prepares students for the Automotive Service Excellence A5 Examination Principles of design and operation, techniques for repair, diagnosis and replacement of four-wheel braking systems. Emphasis will be placed on the theory of operation, diagnosis and repair of modern braking systems and their related components. Preparation for the State Brake Test and ASE Certification Test is included. Lecture/Laboratory. Materials fee required. (A–F Only)

**AUTEC 317—A2: AUTOMATIC TRANSMISSION AND TRANSAXLES**
3½ UNITS
Prerequisite: Satisfactory completion of AUTEC 311
Prepares students for the Automotive Service Excellence A2 Examination. A detailed study of the clutch, standard and automatic transmissions, drive lines and differentials, theory of operation including: friction materials, hydraulics, torque converters, gear trains, planetary gears, and controls as well as gear ratios, torque multiplication, speeds, drive line angles and tooth patterns. (A–F Only) Materials fee required. Lecture/Lab.

**AUTEC 318—A8: ENGINE PERFORMANCE**
3½ UNITS
Corequisite: Satisfactory completion of AUTEC 368
Prepares students for Automotive Service Excellence A8 Examination. Comprehensive study of diagnosis and repair applications including general engines, ignition systems, fuel, air induction and exhaust systems, emission control systems, computerized engine controls, and engine electrical systems. Lecture/Laboratory. Materials fee required. (A–F Only).

**AUTEC 319—A8: ENGINE PERFORMANCE**
3½ UNITS
Corequisite: Satisfactory completion of, or concurrent enrollment in AUTEC 369.
Prepares students for Automotive Service Excellence A8 Examination. Comprehensive study of diagnosis and repair applications including general engines, ignition systems, fuel, air induction and exhaust systems, emission control systems, computerized engine controls, and engine electrical systems. Lecture/Laboratory. Materials fee required. (A–F Only).

**AUTEC 320—L1: ADVANCE ENGINE PERFORMANCE**
4 UNITS
Prerequisites: Satisfactory completion of AUTEC 319
Prepares students for the Automotive Service Excellence L1 Examination. Advance engine performance topics including test equipment and diagnostic techniques of powertrain and computerized powertrain controls, fuel system and air induction systems, automotive emission controls and IM failures. Lecture/Laboratory. Materials fee required. (A–F Only)

**AUTEC 321—A6: AUTOMOTIVE ELECTRICITY/ELECTRONIC SYSTEMS 1**
3½ UNITS
Prerequisite: Satisfactory completion of AUTEC 368.
Prepares students for Automotive Service Excellence A6 examination. Fundamentals of automotive electronics and electrical components including ignition, computers, light and horn circuits, indicating devices, electrical accessories and computer-controlled devices. Lab emphasis on testing and servicing electrical equipment. (A–F Only) Materials fee required. Lecture/Laboratory.

**AUTEC 322—A4: STEERING, SUSPENSION AND ALIGNMENT**
3½ UNITS
Prerequisite: Satisfactory completion of AUTEC 311.
Prepares student for the Automotive Service Excellence A4 Examination. Principles of design and operation, techniques for diagnosis and repair of steering and suspension systems. Includes component replacement and alignment theory and procedures using two and four-wheel alignment equipment. Lecture/Laboratory. Materials fee required. (A–F Only)

**AUTEC 323—CLEAN AIR CAR COURSE**
5 UNITS
Formerly listed as AUTEC 373 - 97 B.A.R. Clean Air Course
Corequisite: Satisfactory completion of AUTEC 320.
Recommended for Success: Before enrolling in this course, students are strongly advised to contact the instructor teaching the class. This is a California Bureau of Automotive Repair approved course for the basic (EB) and enhanced (EA) emission control licenses. It is designed especially for the automobile technician preparing for the California Smog License. Students who do not have one year of trade experience in emissions/tune-up or required courses and certificates will not be eligible to take the state licensing examination. Emphasis will be on operational principles of the emission control components and how to test them. B.A.R. requires a minimum of 90% attendance and 70% (C) grade for completion. Materials Fee Required. Three maximum completions. Field trips are not required. (A–F or P/NP) Lecture/Lab.

**AUTEC 324—A3: MANUAL TRANSMISSION AND DRIVE AXLES**
3 UNITS
Prerequisite: Satisfactory completion of AUTEC 311.
Prepares students for the Automotive Service Excellence A3 Examination. Construction, operation and diagnosis of manual transmissions and axles, to include service and overhaul. Theory as well as "hands-on" training with clutch systems and drive axle operation and service. (A–F Only) Materials Fee required. Lecture/Lab.
**BIO 101—BIOLOGICAL PRINCIPLES** 5 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Corequisite: or satisfactory completion of Concurrent enrollment in or satisfactory completion of CHEM 101.
Study of general principles of biology in relationship to the processes of all living organisms. Topics include an introduction to the nature of science, reproduction, development, evolution, energetics, molecular biology, genetics, cellular structure, homeostatic mechanisms, ecology and taxonomy. Core course intended for biology and biology-related majors. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) (CC BIOL 2) (MJC BIO 101 + BOTT101 + ZOOL 101 = CC BIO 2 + 4 + 6) (TCSU BIOL SEQ A) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 111—GENERAL BIOLOGY** 4 UNITS
Introduction to principles of life, including reproduction, heredity, development, evolution, historical development of biology, molecular biology, and ecology. Not open to students who have completed BIO 101. Not a substitute for BIO 101. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) (CC BIOL 17) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 114—GENERAL ECOLOGY** 4 UNITS
Formerly listed as BIO 114—Introduction to Ecology
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Introduction to the biological sciences and the general concepts and principles of ecology. Topics include organization and energetics of nature, natural resources and biological diversity. Includes global and local ecosystems, scientific methods of ecological research, nutrient cycles and conditions of existence, and ecological assessment. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3)

**BIO 115—GENETICS, EVOLUTION, AND SOCIETY** 3 UNITS
Exploration of basic principles of genetics and evolution as unifying themes in the biological sciences. Emphasis on analysis of gene action, mutation, inheritance, natural selection, evolution of life and of species, biotechnologies and their implications for society. Field trips may be required. (A-F or P/NP) Lecture Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 116—BIOLOGY: A HUMAN PERSPECTIVE** 4 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50 and satisfactorily complete MATH 70.
An introduction to the principles of biology with an emphasis on humans. Topics covered include scientific method, cell structure and function, biochemistry, metabolism, heredity, biotechnology, evolution, anatomy and physiology of the human body, development of aging, disease, and ecology. BIO 116 is recommended for allied health students. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3)

**BIO 130—INTRODUCTION TO MARINE VERTEBRATES** 3 UNITS
Recommended for Success: Satisfactory completion of a college-level biology course.
Groups of vertebrates adapted to marine environment, structural, physiological, and behavioral modifications making adaptation possible, species within those groups common to Pacific coast. Field trips may be required. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3)

**BIO 130L—INTRODUCTION TO MARINE VERTEBRATES LABORATORY** 1 UNIT
Recommended for Success: Satisfactory completion of BIO 130 or concurrent enrollment.
In-depth study of selected topics from BIO 130 through the use of specimens, slides, laboratory exercises, and field trips. Laboratory. Field trips required. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B3)

**BIO 140—INTRODUCTION TO MARINE BIOLOGY** 4 UNITS
Introduction to the natural history of plants and animals living in temperate and tropical marine environment including rocky shore, mud flat, sandy beach, salt marsh, coral reef, mangal forest, open ocean, deep ocean, bay/estuary and Sacramento-San Joaquin Delta communities. Arctic and Antarctic marine ecosystems will also be introduced. Field trips may be required. Lecture/Laboratory. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 140 INTRODUCTION TO MARINE BIOLOGY** 4 UNITS
Introduction to the natural history of plants and animals living in temperate and tropical marine habitats, including rocky shore, mudflat, sandy beach, salt marsh, coral reef, mangal forest, open ocean, deep ocean, and bay/estuary. Polar and subpolar marine ecosystems will also be introduced. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 145—INTRODUCTION TO FRESHWATER BIOLOGY** 4 UNITS
Introduction to the natural history of organisms of the freshwater environment along with basic ecological principles, which includes: energy flow, nutrient cycling, population dynamics, and community structure. (A-F or P/NP) Field trips required. Lecture/Laboratory. Materials fee required. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BIO 151X,A,B,C—BIOLOGY FIELD STUDIES** ½,1,2,3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete (BIO 111, BIO 101, ZOOL 101, BOT 101 or other college-level biology course.)
Field trips to representative and unique ecosystems. Emphasis on life histories, adaptations and biological interactions of organisms within the ecosystem studied. Field experiences will include sampling methods, preparation of field notes and field identification of species characteristic of the ecosystem. Field trips are required. Lecture/Laboratory. Four completions allowed in any combination not to exceed 6 units. Materials fee required. Not offered every semester. Transfer: CSU

**BIO 180X,A,B—SPECIAL PROJECTS IN BIOLOGY** ½,1,2 UNITS
Prerequisite: Concurrent enrollment in a college-level biology course.
Individual study, research, or project in the field of biology. Field trips may be required. Four completions allowed not to exceed 2 units in any combination of this course format. Lecture/Laboratory arranged. Materials fee may be required. (A-F or P/NP) Transfer: CSU

**BOT (Botany)**
Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeps/sme/
Instructors: Elizabeth McInnes

**BOT 101—GENERAL BOTANY** 4 UNITS
Prerequisite: Satisfactory completion of BIO 101.

**BOT 110—PLANT BIOLOGY** 3 UNITS
Not open to students who have completed Biology 101. Not a substitute for Botany 101. Lecture/Laboratory. Field trips may be required. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

**BUS AD (Business Administration)**
Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129
Division website: mjc.edu/prospective/programs/bbss/
Instructors: Linda Kopp, James McGary, Nancy Sill
BUSAD 100 — STUDIES IN BUSINESS SUCCESS 1 1/2 UNITS  
Recommended for Success: Satisfactory completion of GUIDE 110  
Discussion of academic and other requisites for success in various business fields. Students will  
create a personal development plan for meeting academic requirements, acquisition of necessary  
skills, and entry into the job market of their elected field. Lecture. Transfer: CSU

BUSAD 200 — SPREADSHEET SKILLS FOR FINANCIAL ACCOUNTING 2 UNITS  
Prerequisite: Concurrent or previous enrollment in BUSAD 201 or 320.  
Introduction to spreadsheet software. Spreadsheet analysis, design, testing and documentation as they relate to the field of accounting will be covered; hands-on experience using a microcomputer. Microsoft Excel or a similar spreadsheet application will be used. Lecture/Laboratory. Transfer: CSU

BUSAD 201 — FINANCIAL ACCOUNTING 4 UNITS  
Recommended for Success: Satisfactory completion of BUSAD 310 and ENGL 101 placement  
eligibility.  
Explores what financial accounting is, why it is important, and how it is used by investors and creditors to make decisions; focusing on a preparer approach. Covers the accounting information system and the recording and reporting of business transactions with a focus on the accounting cycle, the application of generally accepted accounting principles, the classified financial statements, and statement analysis. Includes issues relating to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls and ethics. Lecture. Transfer: (CSU, UC)(TCSU BUS 110) (CC BUSAD 2A)

BUSAD 202 — MANAGERIAL ACCOUNTING 4 UNITS  
Prerequisite: Satisfactory completion of BUSAD 201.  
Examination of how managers use accounting information in decision-making, planning, directing, operations, and controlling. Focus on cost terms and concepts, cost behavior, cost structure, and cost-volume-profit analysis. Examination of profit planning, standard costs, operations and capital budgeting, cost control, and accounting for costs in manufacturing organizations. (A-F or P/NP) Course is not repeatable. Field trips are not required. Lecture. Transfer: (CSU, UC)(TCSU BUS 120) (CC BUSAD 2B)

BUSAD 203 — COMPUTER ACCOUNTING 3 UNITS  
Prerequisite: Satisfactory completion of BUSAD 201 or 310.  
Recommended for Success: BUSAD 320 if BUSAD 310 is used to satisfy the prerequisite.  
Introduction to the use of the computer in accounting/bookkeeping. Practical applications of accounting through hands-on experiences on the personal computer using a variety of current computer accounting software packages. Lecture/Laboratory. Transfer: CSU

BUSAD 204 — COST ACCOUNTING 3 UNITS  
Prerequisite: Satisfactory completion of BUSAD 201 and 202.  
Introduction to cost accounting theory and practice. Control of material, labor and burden costs; methods of applying expenses, job order and process cost system, cost statements. Lecture. Transfer: CSU

BUSAD 208 — INTRODUCTION TO INTERNATIONAL BUSINESS 3 UNITS  
Recommended for Success: Satisfactory completion of BUSAD 248  
Also offered as AGE 208  
A comprehensive overview of international business. Offers a global perspective of international trade, international organizations and the political and cultural impact of world trade. Lecture. Field trips may be required. Transfer: CSU

BUSAD 209 — IMPORT/EXPORT FUNDAMENTALS 3 UNITS  
Recommended for Success: Satisfactory completion of BUSAD 208  
Also offered as AGE 309  
Overview of processes and procedures involved in importing and exporting products and services. Special emphasis on finance and financial documentation. Lecture. Field trips may be required. Transfer: CSU

BUSAD 210 — BUSINESS COMMUNICATION 3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to  
satisfactorily complete ENGL 101  
Principles and applications of written and oral business communications, including routine memo and letter writing, persuasive writing, oral communication, and informative report writing. (A-F or P/NP) Lecture. Transfer: CSU General Education: (MUC-GE D2)

BUSAD 218 — BUSINESS LAW 4 UNITS  
Laws and regulations affecting managerial decisions; legal concepts and case analysis in the areas of ethics, employment, consumer transactions, competition, the environment, business torts and crimes, contracts, agency, business organizations, and international business. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC BUSAD 18)

BUSAD 230 — PERSONAL FINANCE 3 UNITS  
Principles and practices of business from the consumer's point of view; factors involved in intelligent management of income and expenditure and ethical maximization of personal financial gain. Income and wealth distribution; occupational earnings; wise buying; consumer rights and legislation and protective agencies; credit and borrowing; financial services; automobiles; property, liability, health, life, and disability insurance; retirement, social security, pensions, annuities, housing; savings and investment; taxes; estate planning. Lecture. Transfer: CSU

BUSAD 233 — INVESTMENTS 3 UNITS  
Recommended for Success: Satisfactory completion of BUSAD 230, and at least one semester of accounting.  
Thorough study of corporate stocks and bonds, with time deposits, government securities, mutual funds, real estate, commodity futures, options and less common investment media receiving brief consideration. Emphasis on careful, critical investigation of risk and reward—rigorous mathematical analysis expected. Field trips may be required. Lecture. Transfer: CSU

BUSAD 240 — PRINCIPLES OF MANAGEMENT 3 UNITS  
(Not open to those who have completed management telecourse.)  
An introductory study of the basic business management functions: planning, organizing, leading, and controlling. Lecture. Transfer: CSU (CC BUSAD 40) General Education: (MUC-GE B)

BUSAD 245 — PRINCIPLES OF MARKETING 3 UNITS  
Understanding customer needs and behavior, developing a product and/or service mix to satisfy customer needs profitably; determining promotional strategy; selecting channels and methods of distribution; establishing appropriate prices. Legal, political, cultural, social, economic, competitive and ethical aspects of marketing. Field trips may be required. Lecture. Transfer: CSU

BUSAD 248 — INTRODUCTION TO BUSINESS 3 UNITS  
Survey of business principles, problems and operations; legal, ethical, moral, and social issues;  
ownership, human resources, management, production, marketing, finance, managerial controls;  
government regulation, risk management. Lecture. Transfer: (CSU, UC) (CC BUSAD 20)

BUSAD 249 — BUSINESS INTERNSHIP 4 UNITS  
An internship program with selected business firms dealing with either accounting, computer science, marketing, business law, office administration, bookkeeping, or retail management practices in public or private agencies. Student interns will be under joint supervision of the employers and a faculty member. Intended to provide practical applications for students who have developed theoretical knowledge and effective interpersonal skills by completing their discipline's introductory level course(s). See appropriate instructor for required enrollment forms. Lecture. Transfer: CSU

BUSAD 274 — HUMAN RESOURCES MANAGEMENT 3 UNITS  
Principles and methods related to effective utilization of human resources in organizations. Under- 
standing human relations involved in recruitment, selection, and placement of employees with  
regard to training, experience, and abilities. Discussion, illustrations, and case studies to develop  
techniques effective in dealing with personnel problems. Lecture. Transfer: CSU

BUSAD 279A, B — MARKETING PROJECTS 1 1/2 UNITS  
Formerly listed as BUSAD 285A, B – Special Projects  
Independent analysis or design of computer accounting software or work in specialized BUSAD  
topics. Projects must have the approval of instructor. Conference with the instructor: minimum of 1  
per month. Completions up to 4 maximum units. Laboratory. Transfer: CSU

BUSAD 300 — MACHINE CALCULATION 2 UNITS  
Recommended for Success: Satisfactory completion of MATH 20  
Instruction in the operation of the electronic calculator including addition, subtraction, multiplication,  
and division using constant factors and automatic accumulation as applied to business  
applications. Major emphasis on 10-key touch operation. Lecture/Laboratory.
### BUSAD 310 — BOOKKEEPING 1
3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete BUSAD 300 or satisfactorily complete MATH 50.

Essential bookkeeping fundamentals for job entry in business. Basics of double entry bookkeeping: general and special journals, general and subsidiary ledgers, business forms, payroll records, and governmental payroll forms. Recommended as a preparatory course for BUSAD 201, Accounting. Field trips are not required. (A-F or P/NP) Lecture.

### BUSAD 319 — PAYROLL ACCOUNTING
3 UNITS

Prerequisites: Satisfactory completion of BUSAD 310 or 201.

Recommended for Success: Satisfactory completion of BUSAD 320 if BUSAD 310 is used as a prerequisite.

Completing the payroll register. Reporting payroll tax information to the federal and state governments, with emphasis on completing both quarterly and annual reports. Making the necessary journal entries to record payroll transactions. Computing payroll on the microcomputer. Lecture/Laboratory.

### BUSAD 320 — BOOKKEEPING 2
3 UNITS

Prerequisite: Satisfactory completion of BUSAD 310

Entries requiring analysis and interpretation, entries for promissory notes, adjustments for prepaid, unlearning and accrued items; depreciation of assets; property sales, closing of books; partnership and corporate accounting; cash flows and financial analysis. Lecture.

### BUSAD 331 — BEGINNING COMPUTER ACCOUNTING SOFTWARE
1 UNIT

Recommended for Success: Before enrolling in this course, students are strongly advised to know the complete accounting cycle.

A beginning course using features of computerized accounting software package(s). Will enable students to learn and apply the features of computerized accounting software to record, process, and communicate financial accounting data for a service company in the small business setting. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture.

### BUSAD 332 — INTERMEDIATE COMPUTER ACCOUNTING SOFTWARE
1 UNIT

Prerequisites: Satisfactory completion of BUSAD 331

A continuation of the beginning course using features of computerized accounting software package(s). Course is designed to enable students to learn and apply the features of computerized accounting software to record, process, and communicate financial accounting data for a merchandising company in the small business setting. Lecture. Two maximum completions.

### BUSAD 333 — COMPUTER ACCOUNTING SOFTWARE
2 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to know the complete accounting cycle.

Combination of BUSAD 331 and BUSAD 332. Beginning course in the use of computerized accounting software package(s). Students will learn and apply the features of computerized accounting software in order to record, process, and communicate financial accounting data for a service company and merchandising corporation in the small business setting. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture.

### BUSAD 336 — TAX ACCOUNTING
3 UNITS

Recommended for Success: Satisfactory completion of BUSAD 201 or 310

US Federal Income tax to include preparation of Federal Tax Returns, supplemental Federal schedules for individuals and business forms, and computation of social security and other self-employment taxes. (A-F or P/NP) Field trips may be required. Lecture. (Fall)

### BUSAD 358 — SALES AND ADVERTISING PROMOTION
3 UNITS

Fundamentals of personal selling and advertising. The sales process is defined and analyzed. The use of a variety of advertising techniques, methods, and media are explored. Stresses practical application. Lecture.

### BUSAD 364 — TOTAL QUALITY MANAGEMENT
3 UNITS

Recommended for Success: Satisfactory completion of SUPR 351, BUSAD 240 or equivalent.

Also offered as SUPR 364.

(Not open to those who have completed management telecourse.)

This course provides an introduction to W. Edward Deming’s philosophy of Total Quality Management and its implications for improving the competitiveness of American business in the international economy. A variety of related management topics is also presented. Lecture.

### BUSAD 377 — HUMAN RELATIONS IN BUSINESS
3 UNITS

People and their roles in the business and non-profit community. The nature of work, the work environment, personal skills and performance, work groups, and solving human relations problems. Field trips are not required. (A-F or P/NP) Lecture.

### CGR 201 — GRAPHIC ARTS FUNDAMENTALS
3 UNITS

History of major printing process, application of layout and design, hot and cold type composition, proofreading, paste-up, process photography, offset production procedures, paper, printing inks, bindery and photographic legal restrictions. Field trips may be required. Lecture. Material fee required. (Fall) MJC Activities. Transfer: CSU

### CGR 211 — ELECTRONIC PREPRESS
3 UNITS

Recommended for Success: Concurrent enrollment in CGR 211.

Electronic job planning and layout basics, such as: file formats, fonts, imposition, trapping, screen angling, preflight, postscript output, image sets, proofing and output to plates. Techniques of preparing electronic files for output to: postscript printers, image setters, and direct to plate. Procedures for preparing line art, black and white photos, color photos, clip art, and software created illustration. Scaling graphics to layout specs and working with single and multicolored layouts. Note: Illustrator software. Field trips may be required. Lecture/Laboratory. (Fall) MJC Activities. Transfer: CSU

### CGR 214 — BINDERY
3 UNITS

Formerly listed as CGR 214 - Printing Presses and Bindery 1

Introduction to bindery work: planning, paper cutting, folding, assembling, finish work and packaging. Die cutting materials, Scoring, Numbering, Foil stamping, and embossing Field trips may be required. (A-F or P/NP) Lecture/Lab. (Fall) MJC Activities. Transfer: CSU

### CGR 221 — IMAGE CAPTURE AND MANIPULATION
3 UNITS

Image Capture and Manipulation of images for the Communication Graphics field utilizing Digital Cameras, Scanners, and Printing output devices. Manipulation of images to meet client needs using Adobe Photoshop. The digital novice will learn key technical skills involving hardware/software of digital cameras, scanners, printers and image storage. Students will become familiar with digital solutions while retaining knowledge in image editing Adobe Photoshop software, printing technologies and digital imaging devices. Field trips may be required. (A-F or P/NP) Lecture/ Lab. MJC Activities. Transfer: CSU

### CGR 222 — IMAGE ASSEMBLY AND PLATEMAKING
1 UNIT

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OPADM 251 with a minimum grade of C or better satisfactorily complete CGR 214 with a minimum grade of C or better.

Planning for lithograph plate: handling and repair of lithograph negatives, special negative operations, stripping, stripping, retouching, flat layout and imposition, single and multiple negative masking, imposition and step and repeat at the RIP. Addition of marks and color bars in the RIP software. Trapping in the RIP software. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
CGR 223 — LITHOGRAPHIC & FLEXOGRAPHIC PRESSES 3 UNITS
Formerly listed as CGR 223—Printing Presses and Bindery 3
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete CGR 214 with a minimum grade of C or better.
Beginning skills in the operation of Lithographic Offset Presses on Electronic Publishing press. Students will be required to print multiple color work and produce 2,000 or more copies in a final 2-hour lab. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CGR 224 — ILLUSTRATOR AND ELECTRONIC PUBLISHING 3 UNITS
Formerly listed as CGR 224—Electronic Publishing Systems
Illustrator training and introduction to electronic publishing systems, to include text generation, computer designed graphics, typographical applications and output devices, to include imagetellers, wide format, and direct to plate devices. Current options for hardware and software used in the graphic communication industry and the advantages and disadvantages. Postscript and its role in electronic publishing. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CGR 225 — PRODUCTION SCREEN PRINTING 2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to have some experience with illustration, in design, or Photoshop to complete lab projects. Fundamentals of production screen printing on multi-color or multi-process wide format, and direct to plate substrates. Screen printing with single- and multi-color with halftone registration. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CGR 230 — GRAPHIC DESIGN 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MGT 120 and CGR 211 and 224.
Introduces students to graphic design as a form of visual communication through the use of type, image, form, and color. Projects explore design processes in two dimensions, visual identity and communication, creative problem solving, and basic design practices. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CGR 231 — INDESIGN AND TYPOGRAPHY 2 UNITS
Formerly listed as CGR 231—Typography 2
Prerequisite: Satisfactory completion of CGR 211 with a minimum grade of C or better.
InDesign and Typography 2 covers advanced skills in the page layout software InDesign and advanced skills of typography. History of Type, and the use of InDesign to perform advanced typography skills to produce outstanding flyers, brochures, posters, etc. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CGR 232 — GRAPHIC DESIGN PORTFOLIO DEVELOPMENT 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to complete a minimum of 15 units in the CGR major.
Students develop their knowledge and skill for organizing a comprehensive professional portfolio that prepares their work to present career opportunities in the graphic design and printing industry. Portfolios include a collection of individual and group projects, resumes, a professional cover letter, and samples of completed job applications. Students prepare and present their portfolio as a final project. (A-F or P/NP) Lecture / Transfer: CSU

CGR 250 — GRAPHIC COMMUNICATION INTERNSHIP 2 UNITS
Prerequisite: Minimum of 15 units completed in Communication Graphics major. Supervised field experience in graphic communications. Study and research related to job training. Current developments in graphic communications. Initial orientation, two student/instructor conferences and one local work site visit. 150 hours paid or 120 hours non-paid work per semester equals 2 units. Three maximum completions.

CGR 305 — COMMUNICATION GRAPHICS OPEN LAB 1-3 UNITS
Satisfactory completion of CGR 211 and/or CGR 225 and/or CGR 227 and/or CGR 244 and/or CGR 248.
Provides access to Communication Graphics Laboratory for advanced students for the purpose of continued skills development applicable to production processes in Design and Printing. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab.

CHEM (Chemistry)

Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeeps/sme/
Instructors: Joseph Caddell, Laura Maki, Mary Roslaniec, Suzanne Hulsey

CHEM 101—GENERAL CHEMISTRY 1 5 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Recommended for Success: Before enrolling in this course, students are strongly advised to complete CHEM 142 with a grade of C or better or complete High School Chemistry with a grade of B or better.
Principles of chemistry emphasizing measurements and significant figures, chemical reactions, stoichiometry, gas laws and theory, thermodynamics, atomic structure and quantum mechanics, periodic properties, chemical bonding, molecular structure, intermolecular attractions and properties of liquids and solids, and properties of solutions. Field trips are not required. (A-F or P/NP) Lecture/Lab /Discussion. Transfer: (CSU, UC) (TCSU CHEM 110) (CC CHEM 1A) General Education: (MJC-GE-A)(CSU-GE B1, B3)(IGETC 5A)

CHEM 102—GENERAL CHEMISTRY 2 5 UNITS
Prerequisite: Satisfactory completion of CHEM 101.
Continuation of Chemistry 101 emphasizing kinetics, solutions, equilibrium, acids and bases, electrochemistry, thermodynamics, nuclear chemistry, coordination chemistry and descriptive chemistry. Field trips are not required. (A-F or P/NP) Lecture/Lab /Discussion. Transfer: (CSU, UC) (TCSU CHEM 120) (CC CHEM 1B) General Education: (MJC-GE-A)(CSU-GE B1, B3)(IGETC 5A)

CHEM 112—ORGANIC CHEMISTRY 1 5 UNITS
Prerequisite: Satisfactory completion of CHEM 102.
Nomenclature, structure, reactions and spectroscopy of carbon containing compounds. Laboratory emphasizes basic techniques of synthesis, purification, and identification of organic compounds. Field trips are not required. (A-F or P/NP) Lecture/Lab /Discussion. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE B1, B3)(IGETC 5A)

CHEM 113—ORGANIC CHEMISTRY 2 5 UNITS
Prerequisite: Satisfactory completion of CHEM 112.
CHEM 113 is the second semester in a yearlong sequence of an organic chemistry course for science majors. Topics to be covered include nomenclature, physical properties and reactions of aromatic compounds, aldehydes, ketones, carboxylic acids, carboxylic acid derivatives, amines and bio-organic compounds. Mechanisms to be addressed are electrophilic and nucleophilic aromatic substitution and nucleophilic acyl substitution and addition. Oxidation and reduction processes will be investigated more thoroughly. Course concludes with an introduction to biomolecules. Concepts from CHEM 112 will be reinforced. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE B1, B3)(IGETC 5A)
CHEM 142 — PRE-GENERAL CHEMISTRY   3 UNITS
Corequisite: or satisfactory completion of Concurrent enrollment in or satisfactory completion of MATH 90 or qualification by the MJC assessment process. Intended to prepare students for General Chemistry with an emphasis on problem solving using unit analysis. Included are topics on classification of matter, nomenclature, gas laws, chemical formula, molar mass, empirical formula, chemical reactions, atomic and molecular structure, measurements and the metric system, chemical reactions and stoichiometry, aqueous solutions and fundamentals of acids and bases. Field trips are not required. (A-F or P/NP) Lecture /Discussion. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE: B1)(IGETC: 5A)

CHEM 143 — INTRODUCTORY COLLEGE CHEMISTRY   5 UNITS
Prerequisite: Satisfactory completion of CHEM 142. Designed to meet the requirements for certain nursing, dental hygiene, physical therapy, agriculture and forestry programs. Principles of general, inorganic chemistry with an introduction to organic chemistry. Uses the factor-label method of problem solving. Credit not granted to students who have completed CHEM 142. Field trips are not required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE: B1, B3) (IGETC: 5A)

CHEM 144 — FUNDAMENTALS OF ORGANIC & BIOCHEMISTRY   4 UNITS
Prerequisite: Satisfactory completion of CHEM 143. Basic principles of organic and biochemistry. Uses inductive and deductive problem solving methods. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) (TCSU CHEM 140) (TCSU CHEM 210) (CC CHEM 10) General Education: (MJC-GE-A)(CSU-GE: B1, B3) (IGETC: 5A)

CHEM 150 — EXPLORING OUR CHEMICAL ENVIRONMENT   3 UNITS
Chemical perspective of environmental topics including acid rain and global warming. Basic chemical principles are developed in order to understand such items as conventional, nuclear, and alternative energy sources, air and water pollution, fertilizers, pesticides, food preservatives, genetic engineering, and medicines and drugs. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE: B1, B3)(IGETC: 5A)

CHEM 164 — INTRODUCTORY CHEMISTRY LABORATORY   2 UNITS
Corequisite: or satisfactory completion of Concurrent enrollment in or satisfactory completion of CHEM 150. Introductory concepts and techniques used in a chemistry laboratory. Recommended for liberal studies and other non-science majors. Topics include: scientific method, measurements, physical and chemical changes, data analysis, molecular compounds, chemical reactions and energy. No credit will be given for students who have completed CHEM 143 or CHEM 101. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE: B3)(IGETC: 5A)

CLART 211 — FOOD SAFETY AND SANITATION   2 UNITS
Formerly listed as CLART 211. Law and practices related to sanitation and safety in the food preparation industry. Four completion allowed. Materials fee required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE-A)(CSU-GE: B1)(IGETC: 5A)

CLART 301 — CULINARY ACADEMY 1   14 UNITS
An introductory course designed to familiarize the student with basic culinary skills development. The daily production will emphasize techniques of dressing, garnishing and plating menus that reflect American regional cuisine. Introduction to stocks, soups, matter sauces, sauce derivatives, thickening agents, and flavoring agents. Identification and function, purchasing and receiving, and proper storage procedures of ingredients and products will be discussed. The baking module provides students with the opportunity to prepare breads, rolls, biscuits, muffins, pies, tarts and cookies. Field trips may be required. (A-F or P/NP) Fee for food supplies. Not offered every semester. (Fall) Lecture/Lab.

CLART 302 — CULINARY ACADEMY 2   14 UNITS
Prerequisite: Satisfactory completion of CLART 301. Daily production will emphasize techniques of specialty desserts, pastries, garde manger, and advanced cooking techniques that reflect modern American and international cuisine. Areas of specialization include management and supervision, cost control, computers, menu planning, and facility planning. Field trips may be required. (A-F or P/NP) Fee for food supplies. Not offered every semester. (Spring) Lecture/Lab.

CLDDV (Child Development)

Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 157
Phone: (209) 575-6343
Division website: www.mjc.edu/prospective/programs/fcs/index.html
Instructors: Cheryl Williams-Jackson, Deborah Lafranchini, Laurie Prusso, Pam Guerra-Schmidt

CLDDV 48A,B — FUNDAMENTAL COMMUNICATION SKILLS FOR CHILD DEVELOPMENT MAJORS  1-2 UNITS
Formerly listed as CLDDV 50A, B
Recommended for success: Enrollment at least one of the Child Development courses
Emphasis on developing fundamental communication skills including reading comprehension, preparation of written assignments, and spoken communication specific to the terminology utilized in the field of child development. Credit in this course may not be used to satisfy Child Development requirements for graduation from Modesto Junior College. Class can be completed a maximum of four times, for a maximum of 8 units, combined between 48A and 48B. Lecture.

CLDDV 101 — PRINCIPLES AND PRACTICES OF TEACHING YOUNG CHILDREN  3 UNITS
Formerly listed as CLDDV 101 - Introduction to Early Childhood Education
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Examination of the underlying theoretical principles of developmentally appropriate practices applied to educational programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, emotional, creative, and intellectual development for children 0-8. Review of the historical roots of early educational programs and the evaluation of the professional practices promoting advocacy, ethics, and professional identity. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU (CC CHILD 3)

CLDDV 103 — CHILD GROWTH AND DEVELOPMENT  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU (CC CHILD 1) General Education: (MJC-GE: B, E)(CSU-GE: D7, E) (IGETC: 4G)

Color Legend:
NEW COURSE   UPDATED COURSE   INACTIVATED/HISTORICAL COURSE   COURSE UNCHANGED FROM 2011-2012 CATALOG

THE BRAIN TRUST
CLDDV 104 — CHILD GROWTH AND DEVELOPMENT - CONCEPTION THROUGH EARLY CHILDHOOD
Formerly listed as CLDDV 104 - Child Growth and Development - Conception
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
First half of CLDDV 103 - Examines the major physical, psychosocial, and cognitive/linguistic developmental milestones for children, both typical and atypical, from conception through early childhood. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigatory research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. Field trips may be required. (A-F or P/NP) Lecture Transfer: (CSU, UC) General Education: (MJC-GE: B, E)(CSU-GE: E)

CLDDV 105 — CHILD GROWTH AND DEVELOPMENT - LATE CHILDHOOD THROUGH ADOLESCENCE
Formerly listed as CLDDV 105 - Child Growth and Development - Late Childhood
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Second half of CLDDV 103 - Late childhood through late adolescence: Examines the major physical, psychosocial, and cognitive/linguistic developmental milestones for children, both typical and atypical, from late childhood through late adolescence. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigatory research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. Field trips may be required. (A-F or P/NP) Lecture Transfer: (CSU, UC) General Education: (MJC-GE: B, E)(CSU-GE: E)

CLDDV 107 — INTRODUCTION TO CURRICULUM
Formerly listed as CLDDV 107 - Introduction to Child Development Curriculum
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age eight. Examine a teacher’s role in supporting development and fostering the joy of learning for all young children using observation and assessment strategies emphasizing the essential role of play. Overview of content areas will include, but not limited to: principles of learning, models of curricular philosophies and programs, and integration of domains of development emphasizing language and literacy, social and emotional learning, sensory learning, art and creativity, math, and science, supporting inclusion of children with special needs. Field trips may be required. (A-F or P/NP) Lecture Transfer: CSU

CLDDV 109 — CHILD - FAMILY - COMMUNITY
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Examination of the developing child in a societal context focusing on the interrelationship of family, early care and education, elementary education, peer group, community, and media, emphasizing historical and socio-cultural factors including culture, religion, economics, and politics. Processes of socialization and identity development will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower children and their families. Field trips may be required. (A-F or P/NP) Lecture Transfer: CSU (CC CHILD 22)

CLDDV 111 — HEALTH, SAFETY, AND NUTRITION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health, safety, and nutrition. Key components that ensure physical health, mental health, and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning, and program development for all children. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU General Education: (MJC-GE: E)

CLDDV 121 — GUIDANCE OF YOUNG CHILDREN
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50 and satisfactorily complete CLDDV 101 and satisfactorily complete CLDDV 103 or (CLDDV 104 and CLDDV 105).
Introduction to positive guidance and discipline approaches in educational and family settings. Exploration of the underlying causes of misbehavior. Appropriate and effective techniques that support socio-emotional, cognitive, psychological, and physical health and development. Understanding of individual parent, teacher, and caregiving styles and attitudes relative to behavior of children. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 122 — LEARNING ENVIRONMENTS FOR INFANTS AND TODDLERS
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete CLDDV 101 or CLDDV 103 or (CLDDV 104 and CLDDV 105.)
Development and evaluation of the physical and social learning environments for infants and toddlers including goals, curriculum, materials, state regulations, equipment, and interaction of children, staff, and families. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 123 — LEARNING ENVIRONMENTS FOR YOUNG CHILDREN — 3 UNITS
Formerly listed as CLDDV 147
Recommended for success: Satisfactory completion of CLDDV 101, or CLDDV 103, or CLDDV 104 and CLDDV 105.
Development and evaluation of the learning environments for young children including physical, social, emotional, educational, and environmental factors. Appropriate and effective techniques that support socio-emotional, cognitive, psychological, and physical health and development. Understanding of individual parent, teacher, and caregiving styles and attitudes relative to behavior of children. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 125 — INFANT AND TODDLER DEVELOPMENT AND CARE — 3 UNITS
Prerequisite: Satisfactory completion of CLDDV 103 or CLDDV 104 and CLDDV 105.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Infant and toddler developmental milestones and practices for stimulation and learning. Exploration and assessment of the infant and toddler curriculum and environment, family involvement, educational theory, and recent brain research concerning the first three years of life. Health, safety, nutrition, aspects of group care, and the review of Department of Social Services Regulation compliance in infant and toddler programs. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU (CC CHILD 25)

CLDDV 126C,D,E — INCLUSION SPECIAL NEEDS PRACTICUM — 3 - 5 UNITS
Prerequisite: Satisfactory completion of CLDDV 103.
Corequisite: Concurrent enrollment in or satisfactory completion of CLDDV 121.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Limitations on Enrollment: TB clearance is required, Title 22.
Child centered, play-oriented approaches to student teaching experience under guided supervision with toddlers and/or preschool-aged children with an identified disability. Build a comprehensive understanding of children and families through individualized, relationship-based (DIR Floortime) caregiving including the development of relationships with families. Build connections between theory and practice, develop professional behaviors, practice positive and nurturing guidance techniques, and utilize facilitation-based teaching through authentic observation, documentation, screening, and assessment while designing, facilitating, and evaluating curriculum that support an inclusive and culturally diverse environment. Will support IDEA/IEP goals and may include participation in an educational meeting. CLDDV 130 – Supervised Field Experience – may NOT be used as a substitute for lab practicum. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
CLDDV 127B, C,D,E—INFANT/TODDLER PRACTICUM  
2-5 UNITS
Concurrent enrollment in or satisfactory prior completion of CLDDV 125.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Enrollment limited to those who can present evidence of TB clearance.
Child-centered, play-oriented approaches to student teaching experience under guided supervision with infants and toddlers who may have a disability. Build a comprehensive understanding of children and families through individualized, relationship-based caregiving including the development of relationships with families. Build connections between theory and practice, develop professional behaviors, practice positive and nurturing guidance techniques, and utilize facilitation-based teaching through authentic observation, documentation, screening, and assessment while designing, facilitating and evaluating curriculum that support an inclusive and culturally diverse environment. Will support IEP goals and may include participation in an educational meeting. CLDDV 130—Supervised Field Experience—may NOT be used as a substitute for lab practicum. Course is repeatable up to a maximum of 5 units earned. Field trips may be required. (A-F or P/NP)
Lecture/Laboratory. Transfer: CSU (CC CHILD 16)

CLDDV 128B, C,D,E—PRE-SCHOOL PRACTICUM  
2-5 UNITS
Prerequisite: Satisfactory completion of CLDDV 101 or CLDDV 103 or CLDDV 104 and CLDDV 105. Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50 and satisfactorily complete or be concurrently enrolled in CLDDV 121.
Limitations on Enrollment: TB clearance is required.
Child centered, play-oriented approaches to student teaching experience under guided supervision with preschool-aged children who may have a disability. Build a comprehensive understanding of children and families through individualized, relationship-based caregiving including the development of relationships with families. Build connections between theory and practice, develop professional behaviors, practice positive and nurturing guidance techniques, and utilize facilitation-based teaching through authentic observation, documentation, screening, and assessment while designing, facilitating and evaluating curriculum that support an inclusive and culturally diverse environment. Will support IEP goals and may include participation in an educational meeting. CLDDV 130—Supervised Field Experience—may NOT be used as a substitute for lab practicum. Four completions allowed. Field trips may be required. (A-F or P/NP)
Lecture/Lab. Transfer: CSU (CC CHILD 16)

CLDDV 130B, C,D—SUPERVISED FIELD EXPERIENCE  
2-4 UNITS
Formerly listed as CLDDV 260
Limitations on Enrollment: Fingerprints and TB clearances are required.
Designed to combine experience in an infant, toddler, preschool, school-age care facility, or K-12 classroom with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Provides an orientation to the structure of work experience education and develops specific knowledge and skills related to employment situations through the accomplishment of goals. 75 paid hours or 100 volunteer hours of related work experience are required for the 2-unit class; 150 paid hours or 200 volunteer hours of related work experience are required for the 3-unit class; 225 paid hours or 300 volunteer hours of related work experience are required for the 4-unit class. This course may NOT be used as a substitute for lab practicums. Class can be completed a maximum of four times, for a maximum of 16 units. Lecture/Field Experience. Transfer: CSU

CLDDV 150—ADMINISTRATION OF CHILDREN’S PROGRAMS  
3 UNITS
Formerly listed as CLDDV 250
Prerequisite: Satisfactory completion of CLDDV 103, or CLDDV 104 and CLDDV 105
Laws governing private and public programs serving young children in California. Aspects of records, reports, health and safety, finances, staff management, curriculum development, spatial and equipment requirements, and parent-community relationships from the administrator’s point of view. Course is not repeatable. Lecture. Transfer: CSU (CC CHILD 30)

CLDDV 151—ADVANCED ADMINISTRATION OF CHILDREN’S PROGRAMS  
3 UNITS
Formerly listed as CLDDV 270
Prerequisite: Satisfactory completion of CLDDV 150
Management and supervision in Early Care and Education programs. Includes strategic planning, group dynamics, supervision of staff and volunteers, development of motivation and morale, leadership and management skills, functions of personnel, interview skills, evaluations, human resource issues, resolving group conflicts and working with Recommended for Success boards. Designed to provide knowledge of methods and principles for working with adults in a supervisory capacity in Early Care and Education settings. Course is not repeatable. Field trips may be required. (A-F or P/NP)
Lecture. Transfer: CSU (CC CHILD 31)

CLDDV 154—ADULT RELATIONSHIPS AND MENTORING IN SCHOOLS  
2 UNITS
Formerly listed as CLDDV 264
Prerequisite: Satisfactory completion of CLDDV 101; and CLDDV 103, or (CLDDV 104 and CLDDV 105)
Impact of staff interaction on children and adults in the classroom environment. Roles and functions of adults as professionals. Three completions allowed. Field trips may be required. Lecture. Transfer: CSU

CLDDV 160—ATYPICAL DEVELOPMENT  
3 UNITS
Formerly listed as CLDDV 277
Recommended for success: ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105
Examines the interaction of genetic, biological, and environmental influences in the prenatal, perinatal, and postnatal environment that contribute to the development of the atypical child. Identification of a variety of special needs in children from birth to 12 years of age. Factors influencing development will be explored including family, community, and culture as the child is included in all environments. Lecture. Transfer: CSU General Education: (MUC-GE: B)

CLDDV 162—WORKING WITH CHILDREN WITH SPECIAL NEEDS  
3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Introduction to inclusion of children with special needs, from infancy to adolescence in the home, school, and community. Includes laws and policies. Emphasis on cognitive, social, emotional, and physical development for the child with disabilities in care and educational settings. Collaboration with parents as partners and methods for working with professionals. Field trips may be required. (A-F or P/NP)
Lecture. Transfer: CSU

CLDDV 165—CHILDREN AT RISK  
3 UNITS
Recommended for Success: Satisfactory completion of ENGL 50
Examines risk conditions for prenatal, infants, and young children including prenatal drug exposure, very low birth weight, serious congenital infection, congenital anomaly, low Apgar scores at birth, and other potential neurologic problems. Introduces the characteristics and effects of major childhood stress, including parental divorce and remarriage, parental illness and death, childhood illness and disability, child abuse and family violence, and parental incarceration. Field trips may be required. Lecture. Transfer: CSU

CLDDV 166—ADHD: IDENTIFY, ASSESS, INTERVENTIONS  
1 UNIT
Basic description of Attention Deficit Hyperactivity Disorder, causes, identification, assessment, and treatments. (A-F or P/NP)
Lecture. Transfer: CSU

CLDDV 167—OBSERVATION AND ASSESSMENT  
3 UNITS
Prerequisite: Satisfactory completion of CLDDV 103 or CLDDV 104 and CLDDV 105
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Focus on appropriate use of assessment and observation strategies to document development, growth, play, and learning to join with families and professionals in promoting children’s success. Recording strategies, rating systems, portfolios, and multiple assessment tools are explored. Field trips may be required. (A-F or P/NP)
Lecture. Transfer: CSU

CLDDV 173—AUTISM: OVERVIEW AND TREATMENT  
3 UNITS
Basic concepts of autism. Topics include description, identification, interventions and treatments, and DIR Floor Time approach. May be completed up to 4 times. (A-F or P/NP)
Lecture. Transfer: CSU

CLDDV 201—HEALTH AND SAFETY PRACTICES IN PROGRAMS FOR CHILDREN  
3 UNITS
Universal health precautions and other health and safety practices for children’s programs. Health and safety requirements mandated by county and state, including injury prevention, infant and child first aid and CPR (satisfactory completion will earn student the Red Cross certificates in First Aid and CPR), prevention of infectious disease, caring for ill children, and recognizing signs of child abuse. Materials fee required. Lecture. Transfer: CSU

CLDDV 232—HEALTHY CAREGIVER  
3 UNITS
Formerly listed as CSUB 232
Selected topics related to the professional growth of the family child care provider including interpersonal skills, communication styles, prevention of burn-out, and strategies for career success. Lecture. Transfer: CSU

Color Legend:
NEW COURSE  
UPDATED COURSE  
INACTIVATED/HISTORICAL COURSE  
COURSE UNCHANGED FROM 2011-2012 CATALOG
CLDDV 262—DIVERSITY IN EDUCATIONAL SETTINGS 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete CLDDV 103 or satisfactorily complete CLDDV 104 and satisfactorily complete CLDDV 105 and satisfactorily complete ENGL 50.

Examination of the development of social identities in diverse societies including theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Course includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media, and schooling. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU General Education: MUC-GE B/CSU-GE. D7

CLDDV 266—MENTOR TEACHER SEMINAR ½ UNIT
Formerly listed as CLDDV 266 - Mentor Seminar
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.

Master Teachers and Site Supervisors attend seminars to explore issues related to their role as supervisors and mentors of early childhood teachers and child development students. Four completions allowed. Field trips may be required. (Non-Graded course) Lecture. Transfer: (CSU)

CLDDV 267—DIRECTOR SEMINAR ½ UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.

Directors, site supervisors and other administrators of early childhood programs attend monthly seminars to explore issues related to professional duties. Seminars will include quality improvement efforts, advocacy, supervision and mentoring of colleagues. Seminar content will be individualized to meet the needs of participants. Four completions allowed. Field trips may be required. (Non-Graded course) Lecture. Transfer: (CSU)

CLDDV 274—EARLY LITERACY 3 UNITS
Research-based principles and practice for early literacy; development of beginning reading, writing, speaking, listening, and thinking in an early childhood education setting. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 280—SCHOOL-AGE DEVELOPMENT 3 UNITS
A study of the developing child during the school-age years. Developmental characteristics of school-age children, influences on behavior and learning, and the fundamentals of planning and implementing curricula in programs serving school-age children and their families. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 281—SCHOOL-AGE PROGRAM AND CURRICULUM 3 UNITS
The fundamentals of planning, implementing, and evaluating curricula for programs serving school-age children and their families. Developing and providing age-appropriate activities, environment, and relationships in the context of an integrated and active curriculum. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 290C—BRAIN END DEVELOPMENT THROUGH MUSIC AND MOVEMENT ACTIVITIES 3 UNITS
Formerly listed as CLDDV 363
Recommended for Success: Satisfactory completion of ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105

The brain and its connection to motor skill development in young children. Non-competitive group games, movement programs, and educational fitness. Lecture. Transfer: CSU

CLDDV 291—CREATIVE ACTIVITIES FOR YOUNG CHILDREN 3 UNITS
Formerly listed as CLDDV 364
Recommended for Success: Satisfactory completion of ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105

Develop, implement, and analyze creative experiences in the young child’s learning process. Lecture. Transfer: CSU

CLDDV 292—MATH AND SCIENCE CURRICULUM FOR YOUNG CHILDREN 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 50, CLDDV 103, or CLDDV 104 and CLDDV 105

Study of math and science exploration by young children. Evaluation and development of appropriate math and science activities and materials. Discussion of variations in developmental levels, inclusion of children with special needs, and respect of cultural differences. Lecture. Transfer: CSU (CC CHILD 12 & 13)

CLDDV 293—MUSIC, BIRTH TO K: THEORY AND PRACTICE 3 UNITS
Also offered as MUST 103
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 294—MUSIC, BIRTH TO K: APPLICATION 3 UNITS
Also offered as MUST 106
Prerequisite: Satisfactory completion of CLDDV 293/MUST 103.
Application of the methods of teaching music to children (birth to Kindergarten) at an infant/toddler or preschool center with instructor supervision. Students will continue to draw connections between basic music skills, methods of teaching theories, child development, and developmentally appropriate practice. Second in a sequence of two courses. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 295—MUSIC, BIRTH TO K: MUSIC IN THE COMMUNITY 1 UNIT
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 296—MUSIC, BIRTH TO K: MUSIC IN THE FAMILY 1 UNIT
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 297—MUSIC, BIRTH TO K: ENRICHMENT PROGRAM 1 UNIT
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 298—MUSIC, BIRTH TO K: PROFESSIONAL DEVELOPMENT 1 UNIT
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 299—MUSIC, BIRTH TO K: RESEARCH AND APPLICATION 3 UNITS
Also offered as MUST 105
Recommended for Success: Before enrolling in this class students are strongly advised to possess the following basic music skills: ability to read music (note names, melody and rhythm) and define and apply basic music vocabulary, or have successfully completed one or more of the following courses; MUST 101, MUSA 121, MUSA 161, MUSA 151, MUSA 153.

Introduction to the methods of teaching music to children (birth to Kindergarten). Theories on the developing mind and the benefit of musical understanding to musicality as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

CLDDV 357—CURRENT ISSUES: CHILD CARE DIRECTORS 1 UNIT
Study of current issues and planning decisions facing directors of child care programs; examination and analysis of new and proposed state regulations. Lecture.

CLDDV 366—CURRENT ISSUES: INFANT/TODDLER TEACHERS 1 UNIT
Study of current issues in creating infant/toddler environments, evaluating development, and parent interaction. Lecture.

CLDDV 367—CURRENT ISSUES: PRESCHOOL TEACHERS 1 UNIT
Study of current issues in creating preschool environments, evaluating development, and parent interaction. Lecture.

CMPET (Computer Electronics)
Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332
Division website: www.mjc.edu/prospective/programs/teched/elec tech/
Instructors: Adrian De Angelis, Jim Howen, Timothy Vaughan

CMPET 206—PERSONAL COMPUTER ASSEMBLY, UPGRADING AND REPAIRING 3 UNITS
Prerequisite: Satisfactory completion of CMPSC 201 or equivalent.
An introductory course in assembling, upgrading, and repairing of personal computer systems. Emphasis on hands-on laboratory activities with personal computer hardware. Operating principles of computer subsystems and peripheral devices. Use of diagnostic software and hardware tools. Multi-user system setup and maintenance. Lecture/Laboratory. Materials fee required. Transfer: CSU

CMPET 210—INTERMEDIATE PERSONAL COMPUTER SERVICING WITH A + CERTIFICATION TRAINING 3 UNITS
Prerequisite: Satisfactory completion of CMPET 206 or CMPET/ELTEC 214.
Intermediate principles and practices of personal computer systems maintenance, upgrading and repair with an emphasis on preparation for A+ Computer Technician Certification administered by CompTIA. Contents include hardware and operating system setup, adding peripherals, communication and networking fundamentals, disaster recovery and supporting Windows NT. Lecture/Laboratory. Materials fee required. Transfer: CSU
### CMPET 212—DIGITAL PRINCIPLES AND CIRCUITS  
3 UNITS  
Prerequisite: Satisfactory completion of MATH 70 or concurrent enrollment.  
Also offered as ELTEC 212  
Introduction to digital circuits. Use and application of digital components in electronic devices and computers. Interfacing input and output devices to digital circuits. Introduction to programmable logic devices. Materials fee required. Lecture/Laboratory.  
Transfer: CSU

### CMPET 214—MICROPROCESSOR PROGRAMMING AND INTERFACEING  
4 UNITS  
Prerequisite: Satisfactory completion of ELTEC 212/CMPET 212  
Also offered as ELTEC 214  
Introduction to the structure and operation of microprocessors as controllers for today's electronic devices and systems. Basic microprocessor hardware including memories, registers, counters, input/output ports, decoders, and arithmetic logic using the popular PIC RISC microcontroller. Machine language simulation and development on personal computers. Emphasis on interfacing to electronic hardware. Materials fee required. Lecture/Laboratory.  
(A-F Only)  
Transfer: CSU

### CMPET 232—INTRODUCTION TO PROGRAMMABLE LOGIC CONTROLLERS  
2 UNITS  
Also offered as ELTEC 232  
Formerly listed as CMPET 232—Introduction to Programmable Logic  
Introduction to the basic concepts of Programmable Logic Controllers. Installation, programming, maintaining, and trouble shooting of micro-sized programmable logic controller systems. Field trips are not required.  
(A-F or P/NP)  
Transfer: CSU

### CMPET 234—ADVANCED TOPICS IN PROGRAMMABLE LOGIC CONTROLLERS  
2 UNITS  
Recommended for Success: Satisfactory completion of ELTEC 232/CMPET 232 or equivalent course.  
Also offered as ELTEC 234  
Advanced study of programmable logic controllers and controller controller systems. Emphasis on component selection, design and operation of industry-like controller systems.  
Transfer: CSU

### CMPET 269—NETWORK + CERTIFICATION TRAINING LAB  
1 UNIT  
Concurrent Enrollment: Satisfactory completion of CMPSC 263  
Recommended for Success: Satisfactory completion of any introductory computer course.  
Also offered as ELTEC 269  
Network + is quickly becoming the standard for introductory-level industry certification. Designed for those interested in a career in network support, this vendor-neutral certification takes the student through installing and configuring a network client. This laboratory course along with the CMPSC 263 course provides preparation for CompTIA's Network+ certification exam. Extensive network lab projects will be required. Field trips may be required. Laboratory. Materials fee required.  
Transfer: CSU

### CMPET 302—INTRODUCTION TO INDUSTRIAL NETWORKING WITH DEVICE NET  
1 UNIT  
Instruction on DeviceNet which is an open architecture system of smart sensors, controllers, and I/O all linked together on a common network and controlled by a PC that may or may not be networked to other PC's. Exploration of device level hardware and software. Lecture.

## CMPGR (Computer Graphics Applications)

### Instructors: Joel Hagen, Brian Sinclair

### Color Legend:
- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**

### CMPGR 201—ANIMATION: A GLOBAL VIEW ART IN MOTION  
3 UNITS  
History of animation and its relationship to societies and cultures. Explores the development of animation from its earliest attempts in prehistoric times through the present day integration of technology. Strategies for production are presented, including animation techniques, design, layout, editing, timing, composition, color, lighting, music, sound effects, voice, story, concept, content, theme, historical relationship, social context, ethical context, purpose, audience, and philosophy. Field trips may be required.  
(A-F or P/NP)  
Lecture.  
Transfer: CSU  
General Education:  
(MIC-GE)

### CMPGR 202—INTRODUCTION TO COMPUTER GRAPHICS  
3 UNITS  
Also offered as ART 102—Introduction to Computer Graphics  
Recommended for Success: Before enrolling in this course, students are strongly advised to have a basic working knowledge of personal computers including: turning on and off a computer system correctly; starting programs, moving and resizing windows, the Start Menu, understanding how a computer is organized; manipulating a mouse, including selecting, double clicking, and dragging items; naming, saving, and deleting files; using portable flash memory and other common storage devices. Introduction to computer graphics using various applications and tools. Topics explored include but are not limited to: basic compositional concepts, original image creation, photographic editing, scanning, printing, 3D-animating, digital sound editing, and digital drawing. Field trips are not required.  
(A-F or P/NP)  
Lecture/Lab.  
Transfer: CSU  
General Education:  
(CSU-GE: C1)

### CMPGR 213—APPLIED COMPUTER GRAPHICS  
3 UNITS  
Also offered as ART 103  
Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files. Concepts and techniques in computer graphics as related to fine and applied art applications. Three maximum completions. Field trips may be required.  
(A-F or P/NP)  
Lecture/Lab.  
Transfer: CSU

### CMPGR 214—DIGITAL CAPTURE FOR COMPUTER GRAPHICS  
3 UNITS  
Recommended for Success: Satisfactory completion of any previous computer graphics course. Explore digital capture and image editing techniques using such hardware devices as scanners, capture boards, digital cameras and video. Students must have access to a digital camera. Field trips may be required.  
Lecture/Laboratory. Materials fee required.  
Transfer: CSU

### CMPGR 215—BUSINESS PRESENTATION GRAPHICS  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files. The use of a computer as a vehicle for preparing, producing, and controlling the presentation of visuals within the business environments. Hardware and peripheral equipment as well as commercially available software will be covered. Emphasis is placed on the use of existing commercially available software with "hands on" experience being provided in an open lab environment. Field trips may be required.  
(A-F or P/NP)  
Lecture/Lab.  
Transfer: CSU  
General Education:  
(CSU-GE: C1)

### CMPGR 217—COMPUTER ILLUSTRATION SOFTWARE  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files. Introduction to illustration software as applied to visual and data presentations. Explores the techniques and tools used by artists, designers, and illustrators to produce artwork for print, publishing, multi-media graphics, web page design or illustration. Two maximum completions. Field trips may be required.  
(A-F or P/NP)  
Lecture/Lab.  
Transfer: CSU

### CMPGR 219—COMPUTER GRAPHICS PORTFOLIO REVIEW  
1 UNIT  
Also offered as ART 119  
Recommended for Success: Before enrolling in this course, students are strongly advised to have a basic working knowledge of personal computers including: turning on and off a computer system correctly; starting programs, moving and resizing windows, the Start Menu, understanding how your computer is organized; manipulating a mouse, including selecting, double clicking, and dragging items; naming, saving, and deleting files; using portable flash memory and other common storage devices. Prepares the student majoring in or receiving a certificate in Computer Graphics, Commercial, or Fine Art with the necessary visual and business skills to develop a portfolio; emphasizes the creative and applied business needs for individuals entering their respective professional field. Field trips may be required.  
(A-F Only)  
Transfer: CSU

### CMPGR 225—3D GRAPHICS AND ANIMATION  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to have a basic working knowledge of personal computers including: turning on and off a computer system correctly; starting programs, moving and resizing windows, the Start Menu,
understanding how a computer is organized; manipulating a mouse, including selecting, double clicking, and dragging items; naming, saving, and deleting files; using portable flash memory and other common storage devices.

Graphic and animation techniques utilizing microcomputers and 3D software: 3D modeling, scene composition, materials editing, object and camera movement, character development, and story boarding will be explored. Students will have intensive hands-on experience with IBM or MAC graphic systems and related peripheral devices. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 226—3D GRAPHICS AND ANIMATION 2 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed CMPGR 225.

Continued development of 3D modeling and animation skills. Storyboarding, integration of 3D software with other industry standard applications. Finished animation production techniques. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 235—BEGINNING PHOTOSHOP 3 UNITS

Formerly listed as Image Manipulation Software

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete CMPGR 202/ART 102.

Introduction to the techniques and technology of digital imaging and image manipulation software. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 236—ADVANCED PHOTOSHOP 3 UNITS

Formerly listed as Advanced Photoshop Applications

Recommended for Success: Before enrolling in this course, students are strongly advised to have satisfactorily completed CMPGR 235.

Advanced skills in Adobe Photoshop including layout and publication, image processing, fine art and illustration. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 252—DESKTOP PUBLISHING FOR COMPUTER GRAPHICS 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files.

Desktop publishing concepts with hands-on training in the use of computers, printers, scanners, and various page-layout applications. Text and graphics will be integrated into documents and publications typically used in a range of computer graphics disciplines. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 262—EXPLORING THE WORLD WIDE WEB 1 UNIT

Introduction to the World Wide Web. Use of a graphical browser for accessing, viewing, and saving Web documents. Use of E-mail, search engines and bookmarks. Current and emerging Web technologies, and the impact on education, business, organizations, and our professional and personal lives. Lecture/Laboratory. Materials fee required. MJC Activities. Transfer: CSU (CC CMPSC 10)

CMPGR 263—INTERNET LITERACY 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files.

Provides the conceptual background and the online skills needed to become Internet literate. Covers Internet services: e-mail, listserv, newsgroups, FTP, telnet, and the World Wide Web (WWW). Emphasis will be placed on the WWW, types of access (ISP), usage, software (browsers and other support software) and Internet etiquette in a global environment. Introduction to publishing and multimedia. Usage of search engines to conduct research and copyright issues and bibliographic style. Reflects on the impact of emerging technologies on the future of commerce and communications as well as societal issues. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 264—PUBLISHING ON THE WORLD WIDE WEB 3 UNITS

Recommended for Success: Satisfactory completion of CMPGR 262, CMPSC 201


CMPGR 265—MULTIMEDIA ON THE WORLD WIDE WEB 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to have satisfactorily completed CMPGR 264.

Intermediate course covering multimedia components of the World Wide Web. Development with animation, sound, and video. Emphasis on further development of programming techniques and skills for advanced features for web pages. Extensive hands-on lab experience. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU General Education: (MJC-GE D2)

CMPGR 267—DREAMWEAVER IN WEB SITE DESIGN 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files.

Macromedia’s Dreamweaver web design software, including templates, libraries, Cascading Style Sheets, and FTP. Strategies for creating intuitive and accessible web sites such as audience considerations, site map and navigational building, and testing. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

CMPGR 268—FLASH: WEB GRAPHICS AND ANIMATION 1 3 UNITS

Prerequisite: Successful completion of CMPGR 202 or ART 102.

Introduction to Macromedia’s Flash. Covers the tools and concepts of Flash and its many interactive possibilities and functions, including drawing, image, text, animation, sound, and action scripting interaction. Explores the strategies for creating intuitive and accessible Flash productions from start-to-finish, such as audience considerations, site map and navigation building, and the effective use of content and animation, output, optimization and testing. Lecture/Laboratory. Materials fee required. Transfer: CSU (CC CMPSC 19)

CMPGR 269—FLASH: WEB GRAPHICS AND ANIMATION 2 3 UNITS

Prerequisite: Successful completion of CMPGR 268

In-depth look into Flash Style Flash is effectively used by real-world interactive designers and developers. Explore advanced Flash concepts and tools such as dynamic text, tell-targeting movie clips, drop-down menus, scrolling text, scriptable masks, embedded video, streaming and event sound, and the integration of Flash with HTML. Gain an understanding of how to use Action Scripting for more powerful interactivity and animation by exploring the use of variables, properties, expressions, functions, and operators. Bring together the Flash methods learned into the creation of a final, online portfolio presentation. Lecture/Laboratory. Materials fee required. Transfer: CSU

CMPGR 284—DESKTOP VIDEO ANIMATION 3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate basic computer skills such as creating and navigating folders and files.

Fundamental skills in animation and special effects concepts and techniques utilizing computers and digital video media. Three maximum completions. Field trips are not required. (A-F or P/NP) MJC Activities. Lecture/Lab. Transfer: CSU

CMPGR 287—INTRODUCTION TO MULTIMEDIA 3 UNITS

Recommended for Success: Satisfactory completion of Basic Computer literacy course such as CMPSC 201.

Introduction to multimedia software and hardware on microcomputers. Students will have intensive "hands on" experience working with a variety of media such as text, numbers, sound, music, graphics, animation and video. Techniques of media capture, generation and editing and subsequent interactive multimedia development will be explored. Field trips may be required. Lecture/Laboratory. Materials fee required. Transfer: CSU

CMPGR 288—INTERMEDIATE MULTIMEDIA 3 UNITS

Prerequisite: Satisfactory completion of CMPGR 287

Continuation of Multimedia concepts and applications. Working with a variety of media forms such as text, numbers, sound, music, graphics, animation and video. Emphasis is placed on further development of scripting and interactive design. Discussion of needs assessment, design issues, implementation and presentation will be combined with "hands on" projects. Field trips may be required. Two maximum completions. Lecture/Laboratory. Materials fee required. Transfer: CSU

CMPGR 298A,B—SPECIAL TOPICS IN COMPUTER GRAPHICS 1.2 UNITS

Prerequisite: Varies with topic.

Participation in discussion, analysis, and evaluation of a special topic in computer graphics, microcomputer applications, and related technologies. Topic to be announced in class schedule. Field trips may be required. Four completions allowed for a maximum of 6 units in any combination. Lecture or Lecture/Lab. Transfer: CSU
CMPSC 103—SYMBOLIC LOGIC 3 UNITS
An introduction to modern deductive logic; includes sentential and predicate logic with identity theory and definite descriptions. Lecture. Not offered every semester. Transfer: (CSU, UC)

General Education: (MJC-GE: D2)(CSU-GE: A3)

CMPSC 201—GENERAL COMPUTER LITERACY 3 UNITS
Survey of the functions and uses of computers in business, education, industry, and science, with emphasis on the personal computer. Study of computers and peripheral equipment as integrated systems. Exploration of the impact of computers on society. Introduction to problem-solving and applications programming techniques. Experience with popular Internet and application packages on the laboratory computers. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE:D2)

CMPSC 202—BUSINESS INFORMATION SYSTEMS 3 UNITS
Prerequisite: Satisfactory completion of CMPSC 201 and BUSAD 201 or BUSAD 310. Introduction to design, development, and use of information system models to support managerial decision making. Study of information systems hardware and software, advanced computer systems; analysis and planning, systems security, application development using decision support systems, and expert systems. Lab work will focus on Internet research and advanced spreadsheet, database, and word processor functions for solutions to business problems. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)(CSU IS 120)

CMPSC 203—TECHNICAL COMPUTER LITERACY 3 UNITS
Concepts and techniques for using microcomputer applications. Instruction and extensive practice in Windows, word processing, spreadsheets, database management, internet basics, file transfer between applications, and related auxiliary applications. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU General Education: (MJC-GE:D2)

CMPSC 204—INTRODUCTION TO PROGRAMMING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 90. First course in computer programming for students with little or no programming experience. General computer literacy issues useful for technicians such as computer hardware, software development, operating systems, and telecommunications. Beginning problem-solving analysis, documentation, algorithm design, control structures, as well as program coding using an appropriate beginning programming language. Data manipulation, logic, looping, program testing, and program maintenance will be stressed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

CMPSC 205—PROBLEM SOLVING AND PROGRAMMING 1 4 UNITS
Prerequisite: Satisfactory completion of CMPSC 204. First course for Computer Science transfer majors, but open to all students. Emphasizes object-oriented programming, algorithmic design, and problem analysis skills for computer science. Software engineering skills will be emphasized. Solutions will be implemented using a high-level object-oriented programming environment such as C++, C#, or JAVA. Extensive programming projects demonstrating problem solving and implementation skills will be assigned throughout the semester. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)(CC CMPSC 22)(TCSU CSCI 110) General Education: (MJC-GE: D2)

CMPSC 206—INTRO TO UNIX/LINUX SYST & PROGRAMMING 3 UNITS
Formerly listed as CMPSC 206 - Intro to UNIX/Linux Syst & Prgr.
Prerequisite: Satisfactory completion of CMPSC 204.
Introduction to the UNIX operating system using Linux. Coverage will include using UNIX shells, commands, the role of the system administrator, the UNIX file system, editors, file processing, shell programming, utilities, PERL and CGI programming, C and C++ programming, and recent developments in UNIX and the X-Windows graphical user interface. Extensive hands-on experience using UNIX operating system and programming within the UNIX environment. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) (CC CMPSC 9)

CMPSC 210—UNIX/LINUX ADMINISTRATION 3 UNITS
Prerequisite: Satisfactory completion of CMPSC 206.
This course guides students through the fundamental responsibilities of advanced UNIX/Linux system administration. Topics include file system monitoring, file and directory archiving, user account management, shutdown and rebooting sequences, system backups, system log responsibilities, system security and, configuration, monitoring and implementation of Web/DNS/Unix servers. Projects focus on the creation of shell scripts to automate system administration tasks. The course requires hands-on projects and scenario-based learning. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

CMPSC 213—PROGRAMMING WITH VISUAL BASIC 3 UNITS
Prerequisite: Satisfactory completion of CMPSC 204 with a minimum grade of C or better.
Concepts in programming a computer using the language called Visual BASIC. Emphasis on structured design, graphical user interface, and documentation. Includes user screen development, control structures, array processing, elementary file processing, and database access. Hands-on experience using microcomputers. Extensive interaction with computers will be expected. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)(CC CMPSC 28) General Education: (MJC-GE:D2)

CMPSC 214—ADVANCED VISUAL BASIC 3 UNITS
Prerequisite: Satisfactory completion of CMPSC 213 with a minimum grade of C or better.
Advanced concepts of computer programming using Microsoft Visual BASIC. Students will program user interfaces with Microsoft Word, Excel and Access. They will also create Internet and general business interfaces. Graphics and game structure applications will be covered. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

CMPSC 216—SCRIPT PROGRAMMING FOR THE WEB 3 UNITS
Formerly listed as CMPSC 216 - Javascript Programming for the Internet
Prerequisite: Satisfactory completion of CMPSC 204.
Developing World Wide Web applications with HTML and scripting tools such as python, java script, ruby and perl. An introduction to creating interactive HTML documents through manipulation of the WWW DOM (Document Object Model). Designing Web-based applications, validating and processing user input, creating dynamic documents utilizing DHTML. Extensive programming projects demonstrating problem solving and implementation skills will be assigned throughout the semester. Hands-on computer assignments required. Three maximum completions. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

CMPSC 219—DISCRETE STRUCTURES FOR COMPUTER SCIENCE 4 UNITS
Prerequisite: Satisfactory completion of CMPSC 205 and MATH 121.
Introduction to computational topics essential for work in Computer Science. Topics include: number bases, induction, sets, relations, functions, congruence, recursion, combinations and permutations, probability, graphs, trees, logic, Boolean algebra, and proof techniques. Computing related problems and examples are integrated throughout the course. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: D2)(CSU-GE: B4)

CMPSC 220—DATABASE SERVER ADMINISTRATION 3 UNITS
Formerly listed as CMPSC 220 - SQL Server Administration
Recommended for Success: Before enrolling in this course, students are strongly advised to have prior experience working with computer server systems or first complete CMPS264 - Windows Server OS course.
Provides students with the knowledge and skills required to install, configure, administer, and troubleshoot various SQL Server client/server database management systems. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
CMPSC 225—DATABASE PROGRAMMING WITH SQL
Formerly listed as CMPSC 225 - SQL Database Implementation
Prerequisite: Satisfactory completion of CMPSC 275 or CMPSC 204.
Provides students with the technical skills required to implement a database solution with SQL Server. Topics include: architecture, key features of SQL Server, reviewing SQL Server programming tools, Transact-SQL, creating databases, data integrity, planning and creating indexes, advanced query techniques, summarizing data, managing transactions and locks, implementing views, stored procedures and triggers, working with distributed data, and advanced text queries. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

CMPSC 231—INTERMEDIATE WORD PROCESSING
Recommended for Success: Satisfactory completion of OFADM 203 and OFADM 130 or CMPSC 274
Also offered as OFADM 231.
Intermediate word processing features such as mail merge, macros, styles, graphics, tabs, and sorts. Features will be applied in creating business documents. Two maximum completions. Lecture/Laboratory. Materials fee required. Transfer: CSU (CC OFTEC 141)
3 UNITS

CMPSC 241—ASSEMBLY LANGUAGE PROGRAMMING
Prerequisite: Satisfactory completion of CMPSC 205.
First course in computer architecture and assembly language programming. Data representation and manipulation, CPU organization and memory, addressing modes, logic and control, table processing, and I/O control processes will be examined. Macros, program modules, and interrupts will be studied. Extensive hands-on computer projects implementing course objectives will be assigned. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MUC-GE-D2)
4 UNITS

CMPSC 261—PROBLEM SOLVING AND PROGRAMMING 2
Prerequisite: Satisfactory completion of CMPSC 205.
Introduction to data structures implemented using object-oriented design. Includes more advanced features of high-level languages such as C++ or Java. Continued emphasis on good programming methodologies and problem solving techniques and analysis. Emphasis on algorithm efficiency, recursive algorithms, and linked lists, stacks, queues, and trees. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) CCSI 120(CC CMPSC 24)
General Education: (MUC-GE-D2)
4 UNITS

CMPSC 263—NETWORKING ESSENTIALS
Prerequisite: Satisfactory completion of CMPSC 201.
Concepts of networking technologies. Includes networking standards and the OSI model, transmission basics and media, TCP/IP protocols, topologies and Ethernet standards, hardware, WANs and remote connectivity, wireless networking, network operating systems, voice and video over IP, network security, network troubleshooting, integrity and availability of networks, and network management. Designed to assist individuals preparing for various certifications. Hands-on computer assignments required. Materials Fee Required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
General Education: (MUC-GE-D2)
4 UNITS

CMPSC 264—WINDOWS SERVER OS
Prerequisite: Satisfactory completion of CMPSC 263.
Technical study of the Windows Server operating system. Includes server hardware, installation, configuration, clients, management, network protocols, active directory and security, remote access and virtual private networks, interoperability, Internet and intranets, monitoring, tuning, and troubleshooting. Hands-on computer assignments required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU General Education: (MUC-GE-D2)
3 UNITS

CMPSC 270—UNDERSTANDING DATA COMMUNICATIONS
3 UNITS

CMPSC 275—DATABASE MANAGEMENT SYSTEMS/MICROCOMPUTER
Prerequisite: Satisfactory completion of CMPSC 203.
Introduction to database management systems (DBMS). Instruction on the design, setup and maintenance of a DBMS. Applications in inventory control, mailing lists, report, report construction and format, sorting and indexing operations, general file relationships and information retrieval. Hands-on experience using a microcomputer. Emphasis on desktop DBMS such as Microsoft Access. Four maximum completions. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU General Education: (MUC-GE-D2)(CC CMPSC 49)
3 UNITS

CMPSC 276—WEB DATABASE DEVELOPMENT
Formerly listed as CMPSC 276 - Introduction to Data Warehousing
Prerequisite: Satisfactory completion of CMPSC 275 or CMPSC 225 or CMPSC 201 or CMPSC 204.
Introduction to Web Database development. Emphasizes heterogeneous database design, optimization and reporting in a web database environment. This class will use industry standard tools and techniques with a variety of databases and programming tools. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU General Education: (MUC-GE-D2)
3 UNITS

CMPSC 278—SPREADSHEET SOFTWARE
Recommended for Success: Any introductory computer class.
Introduction to spreadsheet software. Spreadsheet analysis, design, testing, and documenting will be covered. Data entry, data management, graphing and keystroke macros will be emphasized. Applications in various areas will be explored with emphasis in business, professional and educational use. Hands-on experience using a microcomputer. Emphasis on Microsoft Excel or similar spreadsheet application. Lecture/Laboratory. Materials fee required. Transfer: CSU (CC CMPSC 30)
3 UNITS

CMPSC 281—ADVANCED NETWORKING & SECURITY
Prerequisite: Satisfactory completion of CMPSC 264.
Technical study of security for networks. Includes assessing security risks, planning administrative access and user accounts, secure communication channels, securing file and print resources, secure access to remote users and offices, secure network access to Internet users, extending the network to partner organizations, designing a public key infrastructure, and developing a security plan. Hands-on computer assignments required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

CMPSC 289—DIRECTORY SERVICES
Recommended for Success: Before enrolling in this course, students are strongly advised to either complete CMPSC 264, Windows Server, or have experience managing business server systems.
Technical study of Directory Services using tools such as LDAP and Active Directory. Includes the design and implementation of directory services, analyzing business requirements, information technology structures, software, hardware and network requirements, large and small scale directory services design, group policy design, design topology and locations, replication and disaster recovery. Hands-on computer assignments required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

CMPSC 291—WINDOWS PROGRAMMING WITH VISUAL STUDIO
Formerly listed as CMPSC 291 - Windows Programming With Visual C++
Prerequisite: Satisfactory completion of CMPSC 205.
Windows Programming using the Microsoft Visual Studio environment. Review of object-oriented programming and problem solving concepts. Emphasis on designing user applications, event-driven programming, debugging and exception handling, object-based file handling, database access, web-based and smart device applications, and advanced programming techniques. Hands-on computer programming projects will be required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MUC-GE-D2)
4 UNITS

CMPSC 294—COMPUTER SCIENCE FINAL PROJECT
Limitations on Enrollment: The students are required to bring the skills of their individual specializations, based on their 18 hours of coursework in either Information Systems, Networking, or Programming to form teams and solve a collaborative real-world IT industry level of problem application.
Culminating experience for students pursuing an Associate of Science degree in Computer Science. Objectives of degree courses will be integrated into a final managed project advised by one or more Computer Science faculty. Effective project and team management will be emphasized. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS
DAIND 301 — GOOD MANUFACTURING PRACTICES AND SANITATION  1 UNIT
Introduction to dairy plant sanitation, good manufacturing practices, guidelines and implementation. Introduction to chemicals, pH and their roles in functional cleaning of the dairy plant and associated equipment. Field trips required. Two completions allowed. Lecture. (A-F Only)

DAIND 302 — FLUID STREAM  1 UNIT
Introduction to the basic elements of routing and uses of fluid milk throughout the dairy plant. Demonstration of how fluids are utilized. Process flow from incoming raw milk throughout the plant to pasteurized finished products. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 303 — INDUSTRIAL SAFETY  1 UNIT
Introduction to the elements of industrial safety as it relates to a dairy processing facility. Topics to be covered: illness and injury prevention, confined space entry, lock-out, tag-out programs, hazard communication programs, and industrial lift programs. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 304 — SENSORY EVALUATION  1 UNIT
Develop skills for sight, taste, smell and touch, in the evaluation of various dairy products. Course content follows the California Agriculture Teaching Association Curricular Code used for Career Development Events—dairy product evaluation. Applicable to the associate degree. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 305 — HACCP AND FOOD SAFETY  1 UNIT
Introduction to the standards of identifying milk, dairy foods and elementary dairy products. Demonstration and analysis of common laboratory tests. Identification of various equipment used in the dairy lab, proper safety, and chemical disposal. Designed for the plant technician, not a laboratory technician. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 306 — DAIRY INDUSTRY EMPLOYABILITY SKILLS  1 UNIT
Resume preparation, interviewing skills, and job search techniques that are unique to the dairy processing industry. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 307 — PROCESS EQUIPMENT AND ENGINEERING  1 UNIT
Introduction and Identication of equipment used in the processing facility. Cleaning, sanitizing and maintenance of processing equipment. Performance of equipment breakdowns for inspection. Discussion of required regulatory licensing. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 308 — LABORATORY SKILLS  1 UNIT
Demonstration and analysis of common laboratory tests. Identification of various equipment used in the dairy lab, proper safety, and chemical disposal. Designed for the plant technician, not a laboratory technician. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 309 — DAIRY PRODUCTS AND MARKETING  1 UNIT
Introduction to the standards of identifying milk, dairy foods and elementary dairy products. Marketing and handling will be covered. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 310 — TRANSPORTATION OF DAIRY PRODUCTS  1 UNIT
Introduction to aspects of raw milk pick-up, routing, transportation to the milk plant, loading and transporting of finished/packaged dairy products. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 311 — CHEESE AND WHEY PROCESSING  1 UNIT
Introduction to the art of cheese making. Elementary techniques of whey processing. Field trips required. Two maximum completions. Lecture. (A-F Only)

DAIND 312 — WAREHOUSING/DRY AND REFRIGERATED  1 UNIT

Dance
For dance course descriptions, please see THER (Theatre) or PEC (Physical Education: Co-Ed Activities).
DTAST 360—INTRODUCTION TO DENTAL ASSISTING—3 UNITS
Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuers from the American Red Cross or the Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.
This course covers the knowledge and skills required for dental health care professionals to comprehend and appreciate the spread of disease, properly handle hazardous chemicals and maintain a safe dental office environment. Protocols established by the American Dental Association, Dental Board of California. California Dental Association, Center for Disease Control and Prevention, OSHA and OSHA regulations with emphasis on Bloodborne Pathogen Standard and the Hazard Communication Standard. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Fall).

DTAST 361—PREVENTION OF DISEASE TRANSMISSION—2 UNITS
Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuers from the American Red Cross or the Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.
An overview of human anatomy and physiology with an emphasis on the heart and brain. Recognition of normal but not considered pathological. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Fall).

DTAST 362—DENTAL SCIENCE—3 UNITS
An overview of the structures of the head and oral cavity including identification of oral landmarks and to recognize whether any abnormalities exist. The study of tooth morphology and the relationship to form and function of the dentition. Recognition conditions that are variations of normal but not considered pathological. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Fall).

DTAST 363—INTRODUCTION TO CLINICAL DENTISTRY—2 UNITS
Introduction to dental assisting, role of the chairside assistant, basic skills for preparing the dental patient for treatment. Intraoral tasks delegated to qualified dental assistants which are related to operative dentistry. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)(Fall).

DTAST 364—DENTAL MATERIALS—2 UNITS
The dental assistant’s role in the manipulation of dental materials used in the oral environment—instruction in the properties, characteristics, and manipulation of dental materials. Identification of government regulations and compliance with health and safety procedures when using dental materials. The study of drugs, their composition, uses, effects and contraindications as applied to the dental patient. Identification of laws regulating the use of medication for the dental patient. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)

DTAST 365—THEORY OF DENTAL RADIOLOGY—3 UNITS
Prerequisite: High school graduation or equivalent; proof of completion of CPR for the Professional Rescuers from the American Red Cross or Health Care Provider CPR course from the American Heart Association, which must be valid through the end of the program.
Introduction to the principles of dental radiology, basic concepts of x-ray generation, occupational health and safety procedures, materials and equipment used in producing dental x-rays. Theory of dental radiographic techniques. DTAST 365 (Fall) and DTAST 369 (Spring) have been designed to meet the standards set forth by the Dental Board of California for the California Radiation Safety Licensure. Both courses must be completed with a grade of C or better in order to qualify for licensure. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Fall).

DTAST 366—ADMINISTRATIVE DENTAL ASSISTING—2 UNITS
Prerequisite: Satisfactory completion of DTAST 360, 361, 362, 363, 364 and 365.
Concurrent Enrollment: DTAST 367, 368, 369 and 370.
Basic dental office business concepts and procedures including communication skills, patient relations, record management, risk management, and application of current technology. Employment skills necessary to obtain a position as an administrative dental assistant. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Fall).

DTAST 367—EXPANDED FUNCTIONS—2 UNITS
Prerequisite: Satisfactory completion of DTAST 360, 361, 362, 363, 364 and 365 with a C or better.
Concurrent Enrollment: DTAST 366, 367, 368, 369 and 370.
Achievement of a healthy and functional dentition through the prevention of new and recurring disease by the mechanical plaque control techniques. Procedures in which plaque and stains on the surface of the teeth are removed from the coronal surfaces. Specific interval tasks that are completed as a group are delegated to the expanded function dental assistant. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)(Spring).

DTAST 368—ADVANCED DENTAL ASSISTING—3 UNITS
Prerequisite: Satisfactory completion of DTAST 360, 361, 362, 363, 364 and 365 with a C or better.
Concurrent Enrollment: DTAST 366, 367, 368, 369 and 370.
Advanced training in the areas of dental specialties including prosthodontics, endodontics, periodontics, pediatric dentistry, orthodontics and oral surgery. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)(Spring).

DTAST 369—CLINICAL DENTAL RADIOLOGY—3 UNITS
Prerequisite: Satisfactory completion of DTAST 360, 361, 362, 363, 364 and 365 with a C or better.
Concurrent Enrollment: DTAST 366, 367, 368, 369 and 370.
Advanced training in the areas of dental specialties including prosthodontics, endodontics, periodontics, pediatric dentistry, orthodontics and oral surgery. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)(Spring).

DTAST 370—CLINICAL 1—6 UNITS
Concurrent Enrollment: DTAST 360, 361, 362, 363, 364 and 365 with a C or better.
Role of the chairside dental assistant; basic skills for preparing the dental patient for treatment including knowledge and skills essential to the function of the registered dental assistant during clinical experience. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only)(Spring).

DTAST 371—CLINICAL 2—1 UNIT
Prerequisite: Satisfactory completion of DTAST 366, 367, 368, 369 and 370 with a C or better.
Role of the chairside dental assistant; advanced skills for preparing the dental patient for treatment including knowledge and skills essential to the function of the registered dental assistant. Field trips may be required. Lecture. Materials fee required. (A-F Only)(Summer).

DTAST 372—PIT AND FISSURE SEALANTS—½ UNIT
Prerequisite: Satisfactory completion of DTAST 360.
Limitations on Enrollment: Dental assistant classes are limited to those admitted to the Dental Assistant program.
Tooth morphology and caries etiology will be reviewed to enhance the presentation of principles and application of pit and fissure sealants. This course meets the requirements for certification in Pit and Fissure Placement for California Dental Board. Materials fee required. (A-F Only)(Lab)
**EASCII (Earth Science)**

Dean: Brian Sanders  
Division Office: Science Building, Room 126  
Phone: (209) 575-6173  
Division website: www.mjc.edu/current/programs/divdep/snee/  
Instructors: Noah Hughes

**EASCII 161—EARTH SCIENCE**  
4 UNITS  
An introductory study of the several branches of earth science: geology, oceanography, meteorology, and astronomy. Covers topics including natural resources, minerals, rocks, volcanism, plate tectonics, earthquakes, weathering, erosion, geological time, fresh water, ocean water, ocean currents, the ocean floor, atmosphere, clouds, storms, the sun, the moon, and the solar system. Field trips are required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

**EASCII 162—INTRODUCTION TO OCEANOGRAPHY**  
4 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 70 or satisfactorily complete PHYS 150 and satisfactorily complete EASCII 161.  
Introduction to the ocean’s role in the earth system, ocean basins and plate tectonics, properties of ocean water, marine sediments, ocean-atmosphere interaction, ocean currents, ocean waves and tides, coastal processes, marine ecosystems, ocean life, ocean and climate, oceanic effects of climate change, oceanographic techniques, ocean stewardship, and ocean problems. Lab activities emphasize gathering and analysis of oceanographic data (both archived and real-time) to understand and predict oceanographic phenomena. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: B1, B3) (IGETC: 5A)

**ECON (Economics)**

Dean: Vacant  
Division Office: Journalism 150  
Phone: (209) 575-6129  
Division website: www.mjc.edu/prospective/programs/bbss/  
Instructors: Rose Lamant

**ECON 101—PRINCIPLES OF MACROECONOMICS**  
3 UNITS  
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.  
Recommended for Success: Before enrolling in this course, students are strongly advised to have college level composition skills.  
Introduction to macroeconomic theory in the context of managed market economy. Covers basic concepts in economics, particularly those relating to aggregate economic analysis, such as scarcity, trade-offs, and opportunity costs. Topics include: market systems, aggregate measures of economic activity, macroeconomic equilibrium, money and financial institutions, monetary and fiscal policy, international economics, and economic growth. Lecture. (A-F or P/NP) Transfer: (CSU, UC) (CC ECON 10) (TCSU: ECON 110) General Education: (MJC-GE: B)(CSU-GE:D2)(IGETC: 4B)
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**EHS 61 — PREPARATORY ORNAMENTAL PLANT IDENTIFICATION**  
Formerly listed as OH 61  
Preparation in the identification, growth habits, culture and ornamental use of house plants, vines, ground cover, annuals, perennials and small shrubs adapted to climates of California central valleys. One Saturday laboratory required. Field trips required. Lecture/Laboratory.

**EHS 62 — PREPARATORY ORNAMENTAL SHRUB AND TREE IDENTIFICATION**  
Formerly listed as OH 62  
Preparation in the identification, growth habits, culture and use of large shrubs and trees adapted to climates of California central valleys. Field laboratories, including some on Saturdays, are required. Field trips required. Lecture/Laboratory.

**EHS 65 — INTRODUCTORY LANDSCAPE PLANNING AND DESIGN**  
Formerly listed as OH 65  
Preparation in the planning and designing of landscaped areas. Emphasis on location of lawns, trees, shrubs, walks, driveways, patios, planters and other landscape structures for home and park. Field trips required. Lecture/Laboratory.

**EHS 100 — ENVIRONMENTAL GARDENING**  
Formerly listed as OH 100  
Plants used in the landscape; basic landscape design principles and plant propagation techniques. Emphasis on the place of horticultural crops in the economy and the role of plants in the environment. Discussion will center on the physiology of plants and their use and care. Emphasis will be on the practical application of horticultural principles. Field trips required. Lecture/Laboratory.  
(A-F Only) Transfer: (CSU, UC)

**EHS 201 — PLANT IDENTIFICATION AND USAGE 1**  
Recommended for Success: Satisfactory completion of EHS 210 and/or PLSC 200.  
Formerly listed as EHS 201—Plant Materials and Usage 1.  
Identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen & Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) Certification Tests Plant Lists. Covers those plants best observed and studied in the spring of the year. Field trips required. Will require Saturday labs. Lecture/Laboratory.  
(A-F Only) Transfer: (CSU, UC)

**EHS 202 — PLANT IDENTIFICATION AND USAGE 2**  
Recommended for Success: Satisfactory completion of EHS 210 and/or PLSC 200.  
Formerly listed as EHS 202—Plant Materials and Usage 2.  
Identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen & Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) Certification Tests Plant Lists. Covers those plants best observed and studied in the fall of the year. Field trips required. Will require Saturday labs. Lecture/Laboratory.  
(A-F Only) Transfer: (CSU, UC)

**EHS 203 — PLANT IDENTIFICATION & USAGE 2**  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete EHS 210 and/or satisfactorily complete PLSC 200.  
Identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen & Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) Certification Tests Plant Lists. Covers those plants best observed and studied in the fall of the year. Field trips required. Will require Saturday labs. Field trips are required.  
(A-F Only) Lecture/Lab. Transfer: (CSU, UC)

**EHS 210 — INTRODUCTION TO ENVIRONMENTAL HORTICULTURE SCIENCE**  
A general course in environmental horticulture with emphasis on nursery operations, landscaping, turf management, and floral industries. Topics include basic botany, cultural practices, propagation, structures and layout, pest management, planting, container gardening and house plants, floral design, plant identification, turfgrass installation and care, and survey of career opportunities. Saturday labs required. Field trips are required.  
(A-F Only) Lecture/Lab. Transfer: CSU

**EHS 215 — LANDSCAPE DESIGN**  
Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed EHS 201 and EHS 202.  
The study and implementation of the art and science of landscape design, including principles of design, the design process, drafting, graphics, and presentation methods. Project emphasis is placed upon residential and small commercial sites. Field trips are required.  
(A-F Only) Lecture/Lab. Transfer: CSU

**EHS 220 — TURFGRASS MANAGEMENT**  
Maintenance and management of turfgrasses that include sports athletic fields, golf courses, parks, cemeteries, commercial, and residential lawns. Discussion will focus on identification, installation, cultural requirements and maintenance practices. Field trips are required.  
(A-F or P/NP) Lecture/Lab. Transfer: (CSU)

**EHS 235 — PLANT PROPAGATION/PRODUCTION**  
Recommended for Success: Satisfactory completion of PLSC 200 and/or EHS 210.  
Formerly listed as OH 235—Urban Irrigation Practices.  
Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, planting pest and disease control, structures and site layout. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Regulations pertaining to plant production. Field trips required. Lecture/Laboratory.  
(A-F Only) Transfer: CSU

**EHS 250 — LANDSCAPE IRRIGATION**  
Recommended for Success: Satisfactory completion of EHS 210.  
Formerly listed as OH 250—Urban Irrigation Practices.  
Prepares students to design, install and maintain a water efficient landscape irrigation system. Topics include water supply, basic hydraulics, component identification and terminology, system layout, pipe sizing, types of heads, valves, controllers. Field trips may be required. Lecture/Laboratory.  
(A-F Only) Transfer: CSU

**EHS 276 — LANDSCAPE MAINTENANCE**  
Recommended for Success: Satisfactory completion of EHS 210.  
Formerly listed as OH 276—Park and Landscape Maintenance.  
Enhancing the function and aesthetic value of public and private landscapes by applying appropriate maintenance techniques. Topics include planting, pruning, watering, soil fertility, pest management, weed control, and landscape maintenance business practices. Field trips required. Lecture/Laboratory.  
(A-F Only) Transfer: CSU

**EHS 278 — LANDSCAPE CONSTRUCTION AND INSTALLATION**  
Recommended for Success: Satisfactory completion of EHS 210.  
Formerly listed as OH 278—Landscape Engineering.  
Fundamentals of landscape construction, including soil preparation, paving and construction materials, hand and power tool use, turf and plant installation, plan reading, estimating and bidding preparation, also covers local codes and state requirements and prepares students to pass the C-27 Landscape Contractors License exam. Field trips required. Lecture/Laboratory.  
(A-F Only) Transfer: CSU

**EHS 280 — BEGINNING FLORAL DESIGN**  
Introduction into the concepts and practices of floral design. In-depth study of the principles and elements of design used in floral composition. Principles of design as well as the design process and implement this process through the medium of floral materials. Hands-on laboratory experiences and practice in the art of floral design. American Geometric Line design is primary focus. Materials fee required. Field trips are required.  
(A-F Only) Lecture/Lab. Transfer: CSU
EHS 281—ADVANCED FLORAL DESIGN
Prerequisite: Satisfactory completion of EHS 280
Formerly listed as OH 281 - Commercial Floristry Advanced Floral Design
Advanced floral design theory, techniques and skills in the floral industry, including wedding, sympathy, party, holiday, high style and advanced floral designs. Techniques include working with the customer, consultations, pricing and use of computers and other business machines. Construction and servicing of weddings, funerals, party and holiday floral displays. Field trips required. Two maximum completions. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU
3 UNITS

EHS 282—FLORAL SHOP MANAGEMENT
Prerequisite: Satisfactory completion of EHS 280 and EHS 281.
Formerly listed as OH 282
Provides insight into the business and management skills needed to run a successful floral shop. Flower shop involvement required. Field trips required. Two maximum completions. Lecture/Laboratory/Other. (A-F Only) Materials fee required. Transfer: CSU
4 UNITS

EHS 291—ENVIRONMENTAL HORTICULTURE
SCIENCE TEACHING STRATEGIES
Application of environmental horticulture science teaching strategies. Construction of an action plan incorporating environmental horticulture science curriculum in an applied setting, such as a school garden. Exploration of science curriculum standards as they relate to teaching strategies applied in the classroom. May be completed up to two times. Field trips required. (A-F or P/NP) Lecture. Transfer: CSU
3 UNITS

EHS 293—COMMERCIAL FLORISTRY PRACTICUM
Prerequisite: Satisfactory completion of EHS 280, 281, 282.
Recommended for Success: Satisfactory completion of EHS 210, 212. Formerly listed as OH 383.
Involvement in all areas of, and taught in, a retail flower shop. Includes principles of small business management, including personnel, physical plant and financial management; floral design, construction, and pricing; floral orders and wire services; floral delivery; purchasing; and inventory control. Two maximum completions. Laboratory/Other Conjunction with practicing flower shop manager - MJC nursery or shop site. Field trips required. (A-F Only)
4 UNITS

EHS 390—NURSERY INDUSTRY SKILLS
Formerly listed as OH 390
A repeatable short course in Ornamental Horticulture that covers all skill aspects of the wholesale and retail nursery business. Also includes era examples from plant identification, turf, and landscape design. Six maximum completions. Field trips may be required. Lecture. (A-F Only)
1 UNIT

ELTEC (Electronics Technology)
Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332
Division website: www.mjc.edu/prospective/programs/teched/electech/
Instructors: Adrian De Angelis, Jim Howen, Timothy Vaughan

ELTEC 205—ELECTRONICS FABRICATION AND ASSEMBLY TECHNIQUES
Introduction to fabrication and assembly techniques used in the electronics industry. Soldering, circuit board repair, and component identification, manual and automated techniques used in circuit assembly and product manufacture are included. Materials Fee Required. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

ELTEC 208—THE WORLD OF ELECTRICITY AND ELECTRONICS
Also offered as INTEC 208
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 20.
An overview of electrical and electronic phenomena as applied to common consumer and industrial devices. The course examines the physical nature and laws of electricity and magnetism and the application of the scientific method. DC and AC circuits and their characteristics are examined, predicted, and measured. Electronic test equipment and voltage sources are utilized in the construction, troubleshooting and testing of electrical and electronic circuits. The historical development and the socioeconomic aspects of the "electronic age" are also examined. **This course is approved by the State of California for the Department of Apprenticeship Standards (DAS) Electricians Training Program. Materials fee required. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU General Education: (MJC-GE A)
CSU
3 UNITS

ELTEC 212—DIGITAL PRINCIPLES AND CIRCUITS
Also offered as CMPET 212
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 70 with a minimum grade of C or better or concurrent enrollment.
Introduction to digital circuits. Use and application of digital components in electronic devices and computers. Study of number systems, basic logic gates, counters, shift registers and A/D interfaces, and memories. Special emphasis on interfacing digital circuits to real-world input and output devices. Introduction to programmable logic devices. Prepares students for microprocessors and PLCs. This course is approved by the State of California for the DAS Electricians Apprenticeship program. Materials Fee Required. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

ELTEC 214—MICROPROCESSOR PROGRAMMING AND INTERFACING
Also offered as CMPET 214
Recommended for Success: Before enrolling in this course, students are strongly advised to Successfully complete ELTEC/CMPET 212 Digital Electronics.
Introduction to the structure and operation of microprocessors as controllers for today's electronic devices and systems. Basic microprocessor hardware including memories, registers, counters, input/output ports, decoders, and arithmetic logic using the popular PIC RISC microcontroller. Emphasis on interfacing to electronic hardware. Materials Fee Required. Field trips are not required. (A-F Only) Lecture/Lab. Transfer: CSU
4 UNITS

ELTEC 221—INSTRUMENTATION DEVICES AND SYSTEMS
Also offered as INTEC 221
Prerequisite: Satisfactory completion of ELTEC 208.
An introduction to industrial instrumentation devices and systems. The principles and operation of mechanical and electrical transducers. Analysis of industrial instrumentation and control systems. This course is approved by the State of California for the DAS Electricians Training Program. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU
3 UNITS

ELTEC 223—INDUSTRIAL ELECTRICAL COMPONENTS AND CONTROL DEVICES
Also offered as INTEC 223
An introduction to common components and control devices found in the manufacturing and processing industry. Content includes basic terminology, component identification, manufacturer's specifications, and maintenance procedures for the components and devices. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU
3 UNITS

ELTEC 226—MOTORS, CONTROLS AND CONTROLLERS
Also offered as INTEC 226
Introduction to AC and DC motors and control systems. Emphasis on system troubleshooting. Use and programming of AC and DC systems. Lecture/Laboratory. (A-F Only) Transfer: CSU
3 UNITS

ELTEC 229—COMMERCIAL AND INDUSTRIAL WIRING
Also offered as INTEC 229
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete INTEC 225 OR AGM 225) AND (INTEC 208 OR ELTEC 208).
Essential insights and practices in Commercial and Industrial Wiring that develop skills for the electrical trade. Topics include the application of basic concepts in the design of electrical systems, implementation of accepted trade practices used in installations, and common troubleshooting techniques. Field trips may be required. Materials Fee required. (A-F Only) Lecture/Lab. Transfer: CSU
3½ UNITS
ELTEC 230—BLUEPRINT READING 1 UNIT
Also offered as INTEC 230.
Recommended for success: Before enrolling in this course, students are strongly advised to satisfactorily complete AGM 225 and (ELTEC/INTEC 229) and (ELTEC/INTEC 226).
Fundamental concepts of blueprint reading for electricians applicable in any field. Topics include: construction-related blueprints (residential, commercial and industrial), machinery, automation, electronics, associated systems (hydraulic, pneumatic, communication.) Lecture/Laboratory. (A-F Only) Transfer: CSU

ELTEC 232—INTRODUCTION TO PROGRAMMABLE LOGIC CONTROLLERS 2 UNITS
Also offered as CMPET 232
Introduction to the basic concepts of Programmable Logic Controllers. Installation, programming, maintaining, and trouble shooting of micro-sized programmable logic controller systems. **This course is approved by the state of California for the DAS Electrician Trainee Program. Field trips are not required. (A-F or P/NP) Lecture Transfer: CSU

ELTEC 234—ADVANCED TOPICS IN PROGRAMMABLE LOGIC CONTROLLERS
Recommended for Success: Satisfactory completion of ELTEC 232 or CMPET 232
Also offered as CMPET 234.
Advanced study of programmable logic controllers and complete controller systems. Emphasis on component selection, design, and operation of industry-like controller systems. Lecture/Laboratory. Transfer: CSU

ELTEC 265—TROUBLESHOOTING TECHNIQUES 1 UNIT
Fast and efficient troubleshooting methods are presented and practiced. Covers single-solution problems commonly found in industrial equipment and processes, business, medicine, and everyday life. Prepares students to actively troubleshoot problems in personal and professional life. Multiple-solution problem-solving, brainstorming, and “out of the box” thinking methods also presented and practiced. This course is approved by the State of California for the DAS Electricians Training program. Field trips are not required. (A-F or P/NP) Lecture Transfer: CSU

ELTEC 320—ELECTRICAL SAFETY 1 UNIT
Also offered as INTEC 320
Understanding of electrical hazards common to business and industry. Introduction to the knowledge of common electrical injuries to employees, property damage, and how to prevent them. Basic skill development in how to recognize, evaluate, and control electrical hazards. The course covers regulatory compliance and safe work practices. (A-F Only) Lecture.

ELTEC 321—PHOTOVOLTAIC SYSTEMS 3 UNITS
Prerequisite: Satisfactory completion of ELTEC 208 or INTEC 208 or and ELTEC 320 or INTEC 320 and ELTEC 329 or INTEC 329 or AGM 225 or AGM 225 or INTEC 248.
Study of Off-Grid, Interconnected (Grid-tied), and Hybrid photovoltaic systems, including the study of locations and positioning for PV arrays, electrical and mechanical design and integration (including hands-on experiences). Safety rules and regulations related to this industry, financial topics (systems estimates and rebates), and an overview of NABCEP certification requirements. Field trips may be required. (A-F Only) Lecture/Lab.

ELTEC 329—EMERGENCY MEDICAL TECHNICIAN 1 1½ UNITS REFRESHER COURSE
Prerequisite: Satisfactory completion of EMT 390 or equivalent.
Provides new and updated information for the Emergency Medical Technician, as well as reinforcement of basic knowledge and skills. Meets requirements for re-certification as an EMT in California. Unlimited completions. Lecture. (A-F Only)

PLACEMENT REQUIREMENTS FOR ENGLISH COURSES

For students who have not already completed an English composition course at Modesto Junior College or at any other college, placement in ENGL 49, 50, and 101 requires the English Placement Examination.

- ENGL 50: Placement by examination or completion of ENGL 49 with a grade of C or better.
- ENGL 101: Placement by examination or completion of ENGL 50 with a grade of C or better.
- ENGL 103: Completion of ENGL 101 with a grade of C or better.

ENGL 48—GRAMMAR REVIEW 1 UNIT
Students will review the fundamentals of standard English grammar. They will practice recognizing and correcting errors in grammar and usage. Field trips are not required. (A-F or P/NP) Lecture.

ENGL 49—BASIC ENGLISH SKILLS 5 UNITS
Corequisite: satisfactory completion of Concurrent enrollment in or satisfactory completion of READ 40.
Fundamentals of writing. Emphasis on improving writing fluency, developing paragraphs, and short essays, and learning to edit for spelling, punctuation and word usage. Credit in this course may not be used to satisfy English requirements for graduation from Modesto Junior College. Field trips may be required. (P/NP Only) Lecture Transfer: CSU ENGL 650

Color Legend:
- NEW COURSE
- UPDATED COURSE
- INACTIVATED/HISTORICAL COURSE
- COURSE UNCHANGED FROM 2011-2012 CATALOG
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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<tr>
<td>ENGL 101 - COMPOSITION AND READING</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 50 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 184.</td>
<td>Fundamental skills in reading and writing at the college level. Emphasis on exposition, argument, research, and information competency. Students are required to write a minimum of 6,000 words, at least 6,000 of which must be in essays that have a developed thesis. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 103 - ADVANCED COMPOSITION &amp; CRITICAL THINKING</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 101.</td>
<td>Advanced composition course that focuses on the techniques and principles of argumentation. Examiners' style, diction, inference, evidence, reasoning, and rhetorical strategies of written argument. Students are required to write a minimum of 8,000 words, at least 6,000 of which must be in essays that have developed thesis. Field trips might be required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 105 - CREATING WRITING: POETRY</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 101 with a minimum grade of C or better.</td>
<td>Instruction and practice in writing poetry. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 106 - CREATING WRITING: SHORT FICTION</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 101 with a minimum grade of C or better.</td>
<td>Instruction and practice in writing short forms of fiction. A maximum of 6 units of creative writing transferable to University of California. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 108 - CREATING WRITING: AUTOBIOGRAPHY</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 101 with a minimum grade of C or better.</td>
<td>Instruction and practice in the writing of an autobiography. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 109 - CREATING WRITING: SCRIPTWRITING</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 101.</td>
<td>Instruction and practice in the writing of dramatic scripts for film, television, and theater. Two maximum completions. Field trips may be required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 114 - INTRODUCTION TO POETRY</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 50 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.</td>
<td>Analysis and discussion of poetry. Field trips may be required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 116 - INTRODUCTION TO DRAMA</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 50 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.</td>
<td>Analysis and discussion of selected plays from classical Greek period to present. Field trips may be required. (A-F or P/NP) Lecture.</td>
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<tr>
<td>ENGL 131 - INTRODUCTION TO WORLD LITERATURE TO 1500</td>
<td>3 UNITS</td>
<td><strong>Prerequisite:</strong> Satisfactory completion of ENGL 50. Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed ENGL 101 and ENGL 102.</td>
<td>Classical and medieval literature including historical backgrounds and reading in Asian, Middle Eastern, and European cultures. Field trips may be required. (A-F or P/NP) Lecture.</td>
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</table>
ENGL 132 — INTRODUCTION TO WORLD LITERATURE  
(1500 TO PRESENT)  3 UNITS  
Prerequisite: Satisfactory completion of ENGL 50.  
Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed ENGL 101 and ENGL 102.  
ENGL 132 is a continuation of ENGL 131, reading from the renaissance to contemporary literatures of Asian, Middle Eastern, European, and Latin American cultures. Note: students do not have to have taken ENGL 131 to enroll in ENGL 132. Field trips may be required. (A-F or P/NP) Lecture.  
Transfer: (CSU, UC) (CC ENGL 81) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B)  

ENGL 135 — SURVEY OF AMERICAN LITERATURE TO 1850  3 UNITS  
Prerequisite: Satisfactory completion of ENGL 50.  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 and ENGL 102.  
Survey of American literature from its beginning to mid-nineteenth century. Field trips may be required. (A-F or P/NP) Lecture.  
Transfer: (CSU, UC) (CC ENGL 17) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B)  

ENGL 137 — SURVEY OF ENGLISH LITERATURE  3 UNITS  
To the 18th Century  
Prerequisite: Satisfactory completion of ENGL 50.  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 and ENGL 102.  
Survey of English literary history from the Anglo-Saxons to the Eighteenth Century with detailed study of the writings of Chaucer, Marlowe, Spenser, Shakespeare, Milton, and others. Field trips may be required. (A-F or P/NP) Lecture.  
Transfer: (CSU, UC) (CC ENGL 46) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B)  

ENGL 138 — SURVEY OF ENGLISH LITERATURE: 1700 - PRESENT  3 UNITS  
Formerly listed as ENGL 138 - Survey of English Lit: 18th Century to Present  
Prerequisite: Satisfactory completion of ENGL 50 or qualification by the MJC assessment process.  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 and ENGL 102.  
Literary history of the eighteenth and nineteenth centuries with detailed study of the writings of Pope, Wordsworth, Coleridge, Byron, Keats, Shelley, Tennyson, and others. Field trips may be required. (A-F or P/NP) Lecture.  
Transfer: (CSU, UC) (CC ENGL 47) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B)  

ENGL 151 — FOLKLORE  3 UNITS  
Formerly listed as ENGL 151 - Introduction to Folklore  
Prerequisite: Satisfactory completion of ENGL 50.  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Examine interrelationships of people throughout the world through discussion and analysis of our folk heritage. Folk-themes and symbolism in literature also will be discussed. Field trips may be required. (A-F or P/NP) Lecture.  
Transfer: (CSU, UC) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B)
ENGL 156 — THE BIBLE AS LITERATURE: THE HEBREW CANON AND INTERTESTAMENTALWRITINGS 3 UNITS
Formerly listed as ENGL 156 - The Bible As Literature - The Hebrew Canon
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to have eligibility for ENGL 101.
Literary criticism and an appreciation of historical background and textual transmission of selected books of the Hebrew Bible (Old Testament) and Intertestamental Writings (also known as the Apocrypha) in translation. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 157 — THE BIBLE AS LITERATURE: THE NEW TESTAMENT 3 UNITS
Formerly listed as ENGL 157 - Bible As Lit - The New Testament
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Literary criticism and an appreciation of historical background and textual transmission of selected books of the New Testament. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 161 — FILM APPRECIATION 4 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to achieve satisfactory completion of ENGL 101.
An introductory course in film appreciation, emphasizing the development of sensitivity and critical judgment in audience response to film. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC ENGL 11) General Education: (MJC-GE: C) (CSU-GE: C1, C2) (IGETC: 3B)

ENGL 162 — HISTORY OF CINEMA 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Examines the international development of cinema from 1895 to the present. Covers a wide range of both American and foreign films and offers a broad survey of major movements, styles, and genres in the history of motion pictures. Focuses specifically on the social, historical, technical, and technological factors that have shaped the film industry and the films produced by it. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 163 — INTRODUCTION TO SHAKESPEARE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 and 102.
A reading of six to nine representative comedies, histories, and tragedies; designed to introduce the student to Shakespeare’s art. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC ENGL 50) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 168 — ADULT LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Introduction to literature for adolescents (ages 9-16). Includes types of literature and forms drawn from a variety of ethnic and cultural sources, and ways to promote interest, themes, and criteria for choosing materials. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 169 — CHILDREN’S LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Introduction to literature for children. Includes types of literature and forms drawn from a variety of ethnic and cultural sources, storytelling, ways to promote interest, and criteria for choosing materials. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 171 — INTRODUCTION TO AFRICAN-AMERICAN LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
An introduction to the contributions of African-Americans in American literature from the slave era to the present. The emphasis will be on a chronological study of major works in the following genres: slave narratives, folk tales, poetry, short story, novel, and drama. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 172 — INTRO TO CHICANO/A LITERATURE 3 UNITS
Formerly listed as ENGL 172 - Intro to Chicano Literature
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Survey of Chicano literature in English from its beginnings to its contemporary form. Emphasis on influences that have shaped the literature and critical skills needed to evaluate and appreciate Chicano poetry, theater, fiction, and essay. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 173 — INTRO TO LATIN AMERICAN LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50 or qualification by the MJC assessment process.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Introduction to Latin American literature from its Colonial Period to the present. Emphasis on chronological survey of major works of Latin American writers studied in English translation and selected from the following: indigenous legends, chronicles, epistles, poetry, novel, drama, and short story. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 174 — INTRODUCTION TO MODERN ASIAN LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50 or qualification by the MJC assessment process.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
An introductory course on Asian literature from the 19th century to the present in its English translation. Emphasis on major works that have made an impact on western literary tradition and the social, cultural and historical forces that have shaped these works. Field trips are not required. (A-F Only) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 175 — INTRODUCTION TO WOMEN’S LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
An introduction to literature by and about women, including an historical overview, archetypes, stereotypes, critical impediments to women’s writing, methods of criticism, and recent literary achievements. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

ENGL 176 — INTRODUCTION TO MEXICAN LITERATURE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 50.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Introduction to Mexican literature from its Colonial Period to the present. Emphasis on chronological survey of major works of Mexican writers studied in English translation and selected from the following: chronicles, epistles, poetry, novels, drama, and short stories. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)
ENGR 100— INTRODUCTION TO ENGINEERING & ARCHITECTURE 1 UNIT

ENGR 101— INTRODUCTION TO SURVEYING AND TOPOGRAPHY 3 UNITS

ENGR 127— ENGINEERING GRAPHICS 4 UNITS

ENGR 130— PROPERTIES OF MATERIALS 4 UNITS

ENGR 135— ENGINEERING MECHANICS/STATICS 3 UNITS

ENGR 140— INTRODUCTION TO CIRCUIT ANALYSIS (WITHOUT LAB) 3 UNITS

ENGR 141— INTRODUCTION TO CIRCUIT ANALYSIS (WITH LAB) 4 UNITS

ENGTC 210— INTRO TO COMPUTER ASSISTED DRAFTING 1 UNIT

ENGTC 211— INTERMEDIATE COMPUTER ASSISTED DRAFTING 1 UNIT

ENGTC 212— ADVANCED COMPUTER ASSISTED DRAFTING 1 UNIT

ENGTC 215— INTRODUCTION TO SOLID MODELING 1 UNIT
**ESL (English as a Second Language)**

Dean: Patrick Bettencourt  
Division Office: Journalism 180, Phone: (209) 575-6149,  
Division website: www.mjc.edu/current/programs/divdeps/litlang/  
Instructors: Daniel Martin, Gabrielle Steiner, Michael Strangio, Ruth Luman, Sara Shone, Michael Akard

The Literature and Language Arts division offers two programs in ESL: a non-credit, adult basic education program of courses on six levels, and a six-level credit program intended for students who plan to pursue other academic and vocational study at the college. Most ESL courses are not degree-applicable; no major is offered.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESL 1—ESL: BEGINNING ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Beginning English for non-English speakers. Emphasis on beginning spoken and written English and basic literacy. Field trips may be required. (A-F Only) Lecture.</td>
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<tr>
<td>ESL 2—ESL: ELEMENTARY ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 1 or qualification by the MJC assessment process. Elementary English with emphasis on spoken English. Field trips may be required. (A-F Only) Lecture.</td>
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<tr>
<td>ESL 3—ESL: HIGHER ELEMENTARY ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 2 or qualification by the MJC assessment process. High elementary level English for speakers of other languages. Field trips may be required. (A-F Only) Lecture.</td>
<td></td>
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<tr>
<td>ESL 4—ESL: INTERMEDIATE ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 3 or qualification by the MJC assessment process. Intermediate level English for speakers of other languages. Field trips may be required. (A-F Only) Lecture.</td>
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<tr>
<td>ESL 5—ESL: HIGH INTERMEDIATE ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 4 or qualification by the MJC assessment process. High intermediate level English for speakers of other languages. Field trips may be required. (A-F Only) Lecture.</td>
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</tr>
<tr>
<td>ESL 6—ESL: LOW ADVANCED ENGLISH FOR LIFE AND WORK</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 5 or qualification by the MJC assessment process. Low advanced level English for speakers of other languages. Field trips may be required. (A-F Only) Lecture.</td>
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</tr>
<tr>
<td>ESL 10—ENGLISH LANGUAGE 1</td>
<td>10</td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ESL 901 and/or ESL 902, especially if they lack elementary listening comprehension and speaking skills. To be successful in ESL 10, students need to be able to understand, follow, and respond to basic instruction(s) in English. Elementary course in speaking, listening, reading, and writing for persons learning English as another language. Field trips may be required. (A-F Only) Lecture.</td>
<td></td>
</tr>
<tr>
<td>ESL 20—ENGLISH LANGUAGE 2</td>
<td>5</td>
<td>Prerequisite: Satisfactory completion of ESL 10 or qualification by the MJC assessment process. Continuation of ESL 10. Elementary English grammar component for persons learning English as another language. Emphasis on vocabulary and sentence structure for practical communication in school, community, and work. Field trips may be required. (A-F or P/NP) Lecture.</td>
<td></td>
</tr>
</tbody>
</table>
ESL 23—ENGLISH SPEAKING AND LISTENING 1 5 UNITS
Formerly listed as ESL 23 - Spoken English 1
Recommended for Success: Before enrolling in this course, students are advised to use English grammar and tenses at the elementary level. Read simplified texts demonstrating knowledge of elementary vocabulary and follow basic oral and written instructions without the need of a translator.

An introduction to basic pronunciation of vowels and consonants of the English language. Attention paid to rhythm, intonation, and syllable stress, and the aural and vocabulary skills required to function in basic English. Field trips may be required. (A-F or P/NP) Lecture.

ESL 24—ESL COMPOSITION AND READING 1 5 UNITS
Prerequisite: Satisfactory completion of ESL 10 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to be concurrently enrolled in ESL 20.

Practice in reading and writing for students at the beginning (second-semester) level. Significant homework may be assigned to a lab. Field trips may be required. (A-F or P/NP) Lecture.

ESL 30—ENGLISH LANGUAGE 3 5 UNITS
Prerequisite: Placement in ESL 30 through MJC assessment process, or satisfactory completion of ESL 20 or equivalent course.

Continuation of ESL 20. Lower intermediate component for persons learning English as another language. Emphasis on review and expansion of lower intermediate grammatical structures in reading, writing, listening, and speaking. Field trips may be required. (A-F or P/NP) Lecture.

ESL 33—ENGLISH SPEAKING AND LISTENING 2 5 UNITS
Prerequisite: Satisfactory completion of ESL 23 or qualification by the MJC assessment process.

Continued development in pronunciation, rhythm, intonation, stress, reductions, linking, and focus shift of English. Beginning aural comprehension of simplified lectures; participation in group discussion, and vocabulary necessary for delivery of short presentations. Field trips are not required. (A-F or P/NP) Lecture.

ESL 34—ESL COMPOSITION AND READING 2 5 UNITS
Prerequisite: Satisfactory completion of ESL 20 or qualification by the MJC assessment process and ESL 24 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to be concurrently enrolled in ESL 30.

Practice in reading and writing for students at the low-intermediate (third-semester) level of ESL courses. Continuation of ESL 24. Significant homework may be assigned to a lab. Field trips may be required. (A-F or P/NP) Lecture.

ESL 40—ENGLISH LANGUAGE 4 5 UNITS
Non-degree course. Prerequisite: Placement in ESL 40 through assessment process or satisfactory completion of ESL 30 or equivalent course.

Intermediate course in English for persons learning English as another language. Introduction to more difficult structures in English sentences. Review of elementary English. Field trips may be required. (A-F or P/NP) Lecture.

ESL 40A—SKILLS FOR SUCCESS IN INTERMEDIATE GRAMMAR ½ UNIT
Designed to provide further practice on grammar points needed for success in ESL 40 or higher; in particular, for students who are weak in prerequisite skills and/or who have failed ESL 40. These courses do not serve as prerequisites for ESL 45. Laboratory Field trips are not required. (A-F or P/NP) Lab.

ESL 43—ENGLISH SPEAKING AND LISTENING 3½ UNITS
Formerly listed as: ESL - 43: Spoken English 2
Prerequisite: Satisfactory completion of ESL 33 or qualification by the MJC assessment process.

Continued development in natural pronunciation of American English with emphasis on advanced rhythm, intonation, and stress. Students become adept at oral presentations and gain proficiency in leading discussions. Aural comprehension emphasizes paraphrasing, note taking, and summaries of college lectures. Field trips are required. (A-F or P/NP) Lecture.

ESL 44—ESL COMPOSITION AND READING 3 5 UNITS
Prerequisite: Satisfactory completion of ESL 30 and ESL 34 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to be concurrently enrolled in ESL 40.

Practice in writing paragraphs and multi-paragraph compositions and reading for students at the intermediate level of ESL with a comprehensive foundation in English grammar and the ability to write well-formed paragraphs in English. Continuation of ESL 34. Significant homework may be assigned to a lab. Field trips may be required. (A-F or P/NP) Lecture.

ESL 45—ENGLISH LANGUAGE 5 5 UNITS
Prerequisite: Placement in ESL 45 through assessment process or satisfactory completion of ESL 40 or equivalent course.

Continuation of ESL 40. Higher intermediate components for persons learning English as another language. Review and expansion of higher intermediate grammatical structures in reading, writing, listening, and speaking. Lecture. (A-F or P/NP)

ESL 46—ESL COMPOSITION AND READING 4 5 UNITS
Prerequisite: Satisfactory completion of ESL 45 through assessment process or satisfactory completion of ESL 40 and ESL 44 or equivalent course.

Practice in writing academic essays and analysis of authentic reading for students at the higher intermediate level of ESL. Significant homework may be assigned to a lab. Field trips may be required. (A-F or P/NP) Lecture.

ESL 47—ENGLISH LANGUAGE 6 5 UNITS
Prerequisite: Placement in ESL 47 through assessment process or satisfactory completion of ESL 45 or equivalent course.

Continuation of ESL 45. Advanced English grammar component for persons learning English as another language. Emphasis on review and expansion of advanced grammatical structures in reading, writing, listening, and speaking for success in college-level courses. Lecture. (A-F or P/NP)

ESL 48—ESL COMPOSITION AND READING 5 5 UNITS
Prerequisite: Satisfactory completion of ESL 45 and ESL 46 or qualification by the MJC assessment process. Recommended for Success: Before enrolling in this course, students are strongly advised to be concurrently enrolled in ESL 47.

Practice in composition and reading for advanced ESL students who plan to continue in college. Preparation for reading and writing in various academic and vocational disciplines. Emphasis on writing in response to reading. Significant homework may be assigned to a lab. Field trips may be required. (A-F or P/NP) Lecture.

ESL: NON-CREDIT, NON-DEGREE COURSES

ESL 901—ESL: BEGINNING ENGLISH FOR LIFE AND WORK
Formerly listed as ESL 901 - ESL: Beginning
Beginning English for non-English speakers. Emphasis on beginning spoken English and basic literacy. Repeatable. Field trips may be required. (Non-Graded course) Lecture.

ESL 902—ESL: ELEMENTARY ENGLISH FOR LIFE AND WORK
Formerly listed as ESL 902 - ESL: Lower Elementary
Prerequisite: Satisfactory completion of ESL 901 or qualification by the MJC assessment process.

Elementary English with emphasis on spoken English for practical needs and preparation for transition into academic ESL classes. Repeatable. Field trips may be required. (Non-Graded course) Lecture.

ESL 903—ESL: HIGHER ELEMENTARY ENGLISH FOR LIFE AND WORK
Formerly listed as ESL 903 - ESL: Higher Elementary
Prerequisite: Satisfactory completion of ESL 902 or qualification by the MJC assessment process.

High elementary level English for speakers of other languages. Instruction and practice in listening, speaking, and reading. Preparation for transition into academic ESL classes. Repeatable. Field trips may be required. (Non-Graded course) Lecture.

ESL 904—ESL: INTERMEDIATE ENGLISH FOR LIFE AND WORK
Formerly listed as: ESL - Intermediate
Prerequisite: Satisfactory completion of ESL 903 or qualification by the MJC assessment process.

Intermediate level English for speakers of other languages. Instruction and practice in listening, speaking, reading, and writing with a greater emphasis on academic preparation. Repeatable. Field trips may be required. (Non-Graded course) Lecture.

ESL 905—ESL: HIGH INTERMEDIATE ENGLISH FOR LIFE AND WORK
Formerly listed as ESL 905 - ESL: High Intermediate
Prerequisite: Satisfactory completion of ESL 904 or qualification by the MJC assessment process.

High intermediate level English for speakers of other languages. Instruction and practice in listening, speaking, reading, and writing with a greater emphasis on academic and workforce preparation. Repeatable. Field trips may be required. (Non-Graded course) Lecture.
ESL 906—ESL: LOW ADVANCED ENGLISH FOR LIFE AND WORK
Formerly listed as ESL 921 - English At Work 2
Prerequisite: Satisfactory completion of ESL 905 or qualification by the MJC assessment process.
Low advanced level English for speakers of other languages. Instruction and practice in listening, speaking, reading, and writing with great emphasis on transition to academic programs, the workplace, and job-training courses. Repeatable. Field trips may be required. (Non-Graded course) Lecture.

FAMLF (Family Life)
Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 57
Phone: (209) 575-6343
Division website: www.mjc.edu/prospective/programs/fcs/index.html

FAMLF 131—FAMILY RELATIONSHIPS 3 UNITS
The family and its interpersonal relationships, the formation and development of the family, adjustments within the family, the family cycle, parenthood, marriage enrichment, dissolution of marriage and remarriage, exploration of resources to strengthen the family. Lecture. (A-F or P/NP) Transfer: (CSU, UC)(TCSU NUTR 110)(CC BIOL 50) General Education: (MJC-GE: E) (CSU-GE: D7,E)(IGETC:4G)

FAMLF 242—PARENT INVOLVEMENT 3 UNITS
Recommended for Success: Satisfactory completion of CLODV 245
Experience in promoting increased parent involvement and parent education in community programs. Field trips required. Lecture/Other (Fall) Transfer: CSU

FAMLF 355X,A—THE CHILD IN THE FAMILY ½, 1 UNIT
Influences of the family and school on the growth and development of the child from the prenatal stage through the early childhood years. Community resources that impact children. May be completed up to four times. Field trips may be required. Lecture. (A-F or P/NP)

FAMLF 390—THE PROCESS OF PARENTING 1 UNIT
Discussion of child growth and development related to parenting. Background for understanding parent-child relationships. Emphasis on cooperation through effective and mutually respectful communication techniques. Lecture. Three maximum completions. (A-F or P/NP)

FAMLF: NON-CREDIT COURSES

FAMLF 800—PARENT EDUCATION
Exploration of current issues in parenting. Influences of the family and school on the growth and development of the child. Emphasis on positive and nurturing guidance techniques. Unlimited completions allowed. Field trips may be required. Non graded. Lecture.

FDNTR (Food & Nutrition)
Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 57
Phone: (209) 575-6343
Division website: www.mjc.edu/prospective/programs/fcs/index.html

FDNTR 219—NUTRITION 3 UNITS
Recommended for Success: Satisfactory completion of Laboratory chemistry course in high school or college, or concurrent enrollment.
Concepts of nutrient requirements of the body in relation to growth maintenance, and repair at different stages of a normal life cycle, factors influencing normal metabolism; construction of an adequate diet at different ages and food safety and hunger will be examined. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(TCSU NUTR 110)(CC BIOL 50) General Education: (MJC-GE: A)

FDNTR 320—DIET IN HEALTH AND DISEASE 3 UNITS
Recommended for Success: Satisfactory completion of or concurrent enrollment in FDNTR 219 or 239.
Collecting data for assessing nutrition status and planning modified diets to meet individual patient needs. Emphasis placed upon application in health care facilities. Field trips may be required. Lecture. (A-F or P/NP)

FDNTR 351—PRACTICAL NUTRITION 3 UNITS
Recommended for Success: Laboratory chemistry course in high school or college or concurrently enrolled.
Basic principles of nutrition and their application. Hunger, food safety and current nutritional controversies will be examined. (A-F or P/NP) Lecture. General Education: (MJC-GE: A)
FDP 380 — FOOD PRODUCTS MICROANALYSIS-A
1 UNIT
Training in insect part and fly egg determination in food products. Lecture/Laboratory. (A-F Only)

FDP 381 — FOOD PRODUCTS MICROANALYSIS-B MOLD COUNTING
2 UNITS
Instruction in mold count procedures as applied to fruit and tomato products and food plant sanitation. Includes Howard Mold, Geotrichium Mold, and Rot Count methods. Lecture/Laboratory/Other. (A-F Only)

FDP 382 — FOOD PRODUCTS MICROANALYSIS-C
1 UNIT
Principles of food bacteriology, use of materials and equipment; tests that identify the presence and number of bacteria important in the food industry. Lecture/Laboratory. (A-F Only)

FDP 383 — ENZYMES IN THE FOOD INDUSTRY
1 UNIT
Fundamentals of food enzymes and their use in the food industry; classification, production, activity, use, immobilization and inhibition, modification of food by endogenous enzymes, and the major classes of industrial enzymes. Lecture. (A-F Only)

FDP 386 — FOOD LABORATORY CHEMISTRY PROCEDURES
1 UNIT
Basic chemical principles and techniques as they are applied to chemical analysis of foods. Field trips may be required. Lecture/Laboratory. (A-F Only)

FDP 387 — FOOD PROCESSING SANITATION AND CLEANUP
1 UNIT
Introduction to the fundamentals of food processing equipment, cleanup and sanitation, types of cleaning agents, residue problems, cleanup methods and techniques. Two maximum completions. Field trips may be required. Lecture. (A-F Only)

FILM
Dean: Michael Sundquist
Division Office: Performing and Media Arts Center, Room 205
Phone: (209) 575-6081
Division website: www.mjc.edu/arts
Instructors: Carol Lancaster Mingus, Laura Paull

FILM 150 — FILM PRODUCTION
3 UNITS
Techniques of motion picture production. Students write scripts, operate camera, sound, lighting, and editing equipment to produce basic film projects. This class will focus on single camera “film style” and techniques utilizing video production equipment. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture. MJC Activities. Transfer: (CSU, UC)

FILM 151 — ADVANCED FILM PRODUCTION 1
3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete FILM 150 with a minimum grade of C or better satisfactorily complete RATV 142.
Practical applications in film production. Creative use of camera, sound, editing, and production planning. Students will produce, direct and edit individual projects. This class will provide intermediate experience in group filmmaking, affording expanded areas of responsibility. Each group will produce a 20-minute feature film. Materials fee required. Three completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

FILM 152 — ADVANCED FILM PRODUCTION 2
3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete FILM 151 and satisfactorily complete RATV 142.
Continuation of FILM 151. Emphasis on the development of leadership skills, directing techniques, and professional caliber filmmaking. This course will provide advanced experience in group filmmaking while producing a 15-25 minute film. All individual and group work will be geared towards submission into student film festival competitions. Materials fee required. Two completions allowed. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

FILM 153 — CONTEMPORARY FILM
3 UNITS
Introduction to the contemporary film industry from a creative, technical and business perspective. Basic skill development in understanding the language of film, critical thinking and writing. Samples of topics explored include directional choices, cinematic composition, decoding the ideological message, and film as it relates to popular culture and current affairs. Attendance of first run feature films at local movie theaters is required. Materials Fee Required Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE-C)

FILM 154 — MOVIES WITH A MESSAGE
3 UNITS
Also offered as SOCS 154.
A film appreciation series intended to explore what can be learned about place, culture, history, and the human experience from films, and how movies can shape perceptions, illuminate social issues, and advance political action while examining the aesthetic relationship of subject to style, form, function, and the cultural values of the film maker. May be completed up to two times. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE-C)(CSU-GE-C1)

FREN
Dean: Patricia Bettencourt
Division Office: Journalism 180
Phone: (209) 575-6149
Division website: www.mjc.edu/current/programs/divdeps/litlang/
Instructors: Ines Bucknam

FREN 51 — INTRODUCTION TO PRACTICAL FRENCH 1
3 UNITS
Basic conversational French for travel, work, or preparation for French 101. Field trips may be required. Lecture. (A-F or P/NP)

Color Legend:
NEW COURSE
UPDATED COURSE
INACTIVATED/HISTORICAL COURSE
COURSE UNCHANGED FROM 2011-2012 CATALOG
FSCI - GEOG

FREN 52—INTRODUCTION TO PRACTICAL FRENCH 2
Prerequisite: Satisfactory completion of FREN 51.
Continuation of FREN 51. Review and expansion of essentials of French grammar and vocabulary through oral expression. (A-F or P/NP) Lecture.

FREN 101—FRENCH 1
5 UNITS

FREN 102—FRENCH 2
Prerequisite: Satisfactory completion of FREN 101.
Continuation of FREN 101. Review and expansion of three years of high school French. Lecture. (A-F or P/NP) Transfer: (CSU, UC) General Education: (MIG-GE: C)(CSU-GE: C2)(IGETC: 38,6A)

FREN 103—FRENCH 3
Prerequisite: Satisfactory completion of FREN 102.
Review of French grammar, reading and conversational practice. Includes reading and discussion in French of selections from literary works of French writers. Equivalents to the satisfactory completion of four years of high school French. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MIG-GE: C)(CSU-GE: C2)(IGETC: 38,6A)

FREN 104—FRENCH 4
Prerequisite: Satisfactory completion of FREN 103.
Review and expansion of grammatical structures covered in FREN 103. Includes reading and discussion in French of literary works of French and Francophone writers. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MIG-GE: C)(CSU-GE: C2)(IGETC: 38,6A)

FREN 501—FRENCH 101
Introduction to the French language and culture. (A-F or P/NP) Lecture.

FREN 502—FRENCH 102
Prerequisite: FREN 501 or permission of instructor.
Introduction to the French language and culture. (A-F or P/NP) Lecture.

FREN 503—FRENCH 103
Prerequisite: FREN 502.
Continuation of FREN 502. (A-F or P/NP) Lecture.

FREN 504—FRENCH 104
Prerequisite: FREN 503.
Continuation of FREN 503. (A-F or P/NP) Lecture.

FREN 505—FRENCH 505
Prerequisite: FREN 504.
Continuation of FREN 504. (A-F or P/NP) Lecture.

FREN 506—FRENCH 506
Prerequisite: FREN 505.
Continuation of FREN 505. (A-F or P/NP) Lecture.

FREN 507—FRENCH 507
Prerequisite: FREN 506.
Continuation of FREN 506. (A-F or P/NP) Lecture.

FREN 508—FRENCH 508
Prerequisite: FREN 507.
Continuation of FREN 507. (A-F or P/NP) Lecture.

FREN 509—FRENCH 509
Prerequisite: FREN 508.
Continuation of FREN 508. (A-F or P/NP) Lecture.

FREN 510—FRENCH 510
Prerequisite: FREN 509.
Continuation of FREN 509. (A-F or P/NP) Lecture.

FREN 511—FRENCH 511
Prerequisite: FREN 510.
Continuation of FREN 510. (A-F or P/NP) Lecture.

FREN 512—FRENCH 512
Prerequisite: FREN 511.
Continuation of FREN 511. (A-F or P/NP) Lecture.

FREN 513—FRENCH 513
Prerequisite: FREN 512.
Continuation of FREN 512. (A-F or P/NP) Lecture.

FREN 514—FRENCH 514
Prerequisite: FREN 513.
Continuation of FREN 513. (A-F or P/NP) Lecture.

FREN 515—FRENCH 515
Prerequisite: FREN 514.
Continuation of FREN 514. (A-F or P/NP) Lecture.

FREN 516—FRENCH 516
Prerequisite: FREN 515.
Continuation of FREN 515. (A-F or P/NP) Lecture.
FSCI 327—FIRE APPARATUS AND EQUIPMENT 3 UNITS
Recommended for Success: Satisfactory completion of FSCI 301
Fire apparatus design, specifications and performance capabilities; effective utilization of apparatus in fire service emergencies. Field trips may be required. May be repeated an unlimited number of times. (A-F Only) Lecture/Lab.

FSCI 328—INVESTIGATION OF FIRES 4 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better.
Determining cause of fires (accidental, suspicious and incendiary); types of fires; related laws; introduction to arson and incendiarism; recognizing and preserving evidence; interviewing witnesses and suspects; arrest and detention procedures; court procedures and giving court testimony. Field trips may be required. (A-F Only) Lecture/Lab.

FSCI 332—FIRE FIGHTING TACTICS AND STRATEGY 3 UNITS
Prerequisite: Satisfactory completion of FSCI 301
Principles of fire control through the utilization of manpower, equipment, and extinguishing agents on the fireground. Field trips may be required. Not offered every semester. Lecture. (A-F Only)

FSCI 336—RESCUE PRACTICES 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete FSCI 301.
Rescue problems and techniques; emergency rescue equipment; toxic gases; chemicals and diseases; radiation hazards; care of victims, including respiration and resuscitation, extraction, and other emergency conditions. Field trips may be required. (A-F Only) Lecture/Lab.

FSCI 337—WILDFIRE FIRE CONTROL 3 UNITS
Prerequisite: Satisfactory completion of FSCI 301
Introduction to factors affecting wildfire fire prevention, fire behavior, and control techniques. May be repeated an unlimited number of times. Field trips may be required. Lecture. (A-F Only) Transfer. (IC FIRE 7)

FSCI 341—FIRE COMMAND 1C: 1-ZONE FIREFIGHTING 2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete FSCI 301 and satisfactorily complete FSCI 351.
Responsibilities of the Company Officer at a wildland/urban interface incident. Materials Fee Required. Student may repeat if required by regulation. Field trips are not required. (A-F Only) Lecture/Lab.

FSCI 346—INSTRUCTIONAL METHODS FOR FIRE TRAINING OFFICERS 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301
Provides a variety of methods and techniques to assist a fire training officer in selecting, developing, and organizing materials for in-service training programs. Not offered every semester. Lecture. (A-F Only)

FSCI 347—FIRE PREVENTION 1C 2 UNITS
Prerequisite: Satisfactory completion of FSCI 354 and FSCI 355.
Designed to provide fire service personnel with the third phase of State Certified Fire Prevention instruction. Includes instruction on flammable and combustible liquid hazards, storage and extinguishment. Materials Fee Required. Field trips may be required. (A-F Only)

FSCI 350—FIRE COMMAND 1A 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better.
Fundamental skills for the First-in Incident Commander and company officers. Instruction and simulation time pertaining to the initial decision and action processes at a working fire. Topics include the fire officer, fire behavior, fireground resources, operations, and management. Materials Fee Required. Student may repeat if required by regulation. Field trips are not required. (A-F Only) Lecture/Lab.

FSCI 351—FIRE COMMAND 1B 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better.
Prepares fire officers for command of various emergency incidents. Emphasizes development of management and decision making practices required for success. Topics include use of the Incident Command System to manage major disasters, wildland fires, multi-casualty and hazardous materials incidents. Materials Fee Required. Field trips may be required. Lecture/Lab. (A-F Only)

FSCI 352—TRAINING INSTRUCTOR 1A 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301
Designed to provide the prospective or active fire company officer with a variety of methods and techniques for training fire service personnel. Emphasizes teaching technical lessons, evaluating teaching and learning efficiency and the application of principles of learning through practice teaching demonstrations. Unlimited completions. Lecture/Lab. Materials Fee Required. (A-F Only)

FSCI 352 TRAINING INSTRUCTOR 1A 2½ UNITS
Formerly listed as: FSCI - 352: Fire Instructor 1A
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete FSCI 301 and/or Possess a California Firefighter I certificate. The first of a three course series to prepare in-service firefighters to become a company officer and/or a California State Fire Training Level 1 Instructor. Training instructor courses must be taken in order 1A, 1B then 1C. Topics include methods and techniques for cognitive training in accordance with current concepts in vocational education. Emphasis on selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons. Personnel enrolled will be responsible to learn principles of learning, levels of instruction, methods of selecting, adapting, organizing and evaluating instructional efficiency. All students will complete all assignments and deliver two student lead cognitive teaching demonstrations, and must pass a state certified written test. Materials Fee Required. Field trips are not required. (A-F Only) Lecture/Lab.

FSCI 353 TRAINING INSTRUCTOR 1B 2 UNITS
Prerequisite: Satisfactory completion of FSCI 352
Designed to provide the prospective or active fire company officer with knowledge of the selection, development, organization and utilization of instructional materials for teaching technical lessons. Structured to provide fire service personnel with the professional preparation leading to standardization subjects for instructor qualification. Lecture/Lab. Materials Fee Required for State Fire Marshal Certificate and student manual. Not offered every semester. (A-F Only)

FSCI 355 TRAINING INSTRUCTOR 1C 2½ UNITS
Formerly listed as: FSCI - 355: Fire Instructor 1B
Limitations on Enrollment: Enrollment limited to students who can provide a California State Fire Marshal Certification and/or an active fire company officer or a California State Fire Training Level 1 Instructor. Training instructor courses must be taken in order 1A, 1B then 1C. Topics include methods and techniques for psychomotor training in accordance with current concepts in vocational education. Emphasis on selecting, adapting, organizing, evaluating instruction appropriate for teaching psychomotor lessons. Personnel enrolled will be responsible to learn methods of employing the four-step-method of instruction for psychomotor training. All students will complete all assignments and deliver two student lead psychomotor teaching demonstrations, and pass a state certified written test. Enrolled students must present course instructor with a Training Instructor 1A state certification the first day of class. Materials Fee Required. Field trips are not required. (A-F Only) Lecture/Lab.

FSCI 354 FIRE PREVENTION 1A 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better.
Designed to provide prospective or active Fire Company Officer and Fire Prevention personnel with basic fire prevention information. Structured to prepare the student for responding to a variety of fire prevention situations in a professional and effective manner. Materials fee required. Field trips might be required. (A-F Only)

FSCI 355—FIRE PREVENTION 1B 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 and FSCI 354.
Designed to provide fire service personnel with the second phase of state certified fire prevention instruction. Includes instruction on private water systems, fixed fire extinguishing, detection and alarm systems. Materials Fee Required. Field trips are required. (A-F Only)

FSCI 356—FIRE MANAGEMENT 1 2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better.
Designed to provide the fire service student with instruction in the elements of organizational process, demonstration of growth and development in the use of managerial skills, applications of the course content to fire service work and personal life, location and use of managerial resources, and development of an action plan. Materials Fee Required. Field trips may be required. (A-F Only) Lecture/Lab.
FSCI 357—FIRE INVESTIGATION  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 301 with a minimum grade of C or better. 
Examines the national arson problem, fire investigation responsibilities, conduct of the investiga-
tor; fire chemistry, heat energy sources and explosive conditions; fire investigation techniques and 
legal aspects of fire investigation. Materials Fee Required. Field trips are required. (A-F Only) 
Lecture/Lab.

FSCI 362—BASIC FIRE ACADEMY  
8 UNITS
Prerequisite: Satisfactory completion of FSCI 301. 
Limitations on Enrollment: Students must possess CPAT certification because they wear 
self-contained breathing apparatus equipment, so they must meet physical and medical 
requirements in order to ensure safety, per NFPA 1582 regulation. Acceptance into program 
by Fire Academy Selection Committee; consideration of acceptance based upon completion of 
application process.

Basic knowledge and skills of a fire-fighter as set by the State Fire Marshal. Successful completion of 
the course fulfills the educational requirement for Fire Fighter I. Materials Fee Required Field trips 
are required. (A-F Only) Lecture/Lab. Transfer: (MJC FSCI 362 & 363=CC FIRE7, FIRE 50, FIRE 
101, FIRE 106, FIRE 108, FIRE 110)

FSCI 363—ADVANCED FIRE ACADEMY  
9 UNITS
Prerequisite: Satisfactory completion of FSCI 362. 
Advanced Fire Academy is the second of two courses of the Fire Academy designed for the 
individual who desires a career as a professional firefighter. This course includes instruction in 
ventilation, vehicle extraction, ICS 200, 67-4e, Wildland Firefighting, Confined Space Awareness, 
are required. (A-F Only) Lecture/Lab. Transfer: (MJC FSCI 362 & 363=CC FIRE7, FIRE 50, FIRE 
101, FIRE 106, FIRE 108, FIRE 110)

FSCI 364—FIRE APPARATUS DRIVER/OPERATOR 1A  
2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to 
Satisfactorily complete FSCI 362.

Limitations on Enrollment: Enrollment limited to students who possess a valid California 
Driver’s License, class B, firefighter restricted (minimum).

Continued development of a fire fighter’s career. Operation of emergency vehicle and pump opera-
tions. How to drive and maintain various types of vehicles. Pump operation and uses for water 
sources and determining water flow. Materials Fee required. Field trips may be required. (A-F Only) 
Lecture/Lab. Transfer: (CC FIRE 29A & 29B)

FSCI 365—EMERGENCY AND FIRST RESPONDER  
1 UNIT
Designed to train fire and police personnel who are First Responders how to render emer-
cency care until paramedics arrive at the scene. Lecture/Laboratory. Students must also submit a letter of 
health to the Fire Training Center. Not offered every semester. (A-F Only)

FSCI 367—FIRE INVESTIGATION 1B  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 357 with a minimum grade of C or better. 
This course provides a deeper understanding of fire investigation and builds on Fire Investigation 
1A. Topics include: The juvenile fire setter, report writing, evidence preservation and collection, 
testimony techniques, motives, and fire fatalities. Materials Fee Required. Field trips may be 
required. (A-F Only)

FSCI 368—FIRE APPARATUS DRIVER/OPERATOR 1B  
2 UNITS
Limitations on Enrollment: Enrollment limited to students who possess a valid California 
Driver’s License, class B, firefighter restricted (minimum).

Information on pump construction and theory of pump operations. Topics include: methods for 
performing basic hydraulics and techniques on basic inspections, documentation, maintenance, and 
troubleshooting fire pumps. Each student also has the opportunity to increase his or her 
pumping skills during simulated pumping conditions. Materials fee required. Student may repeat if 
required by regulation. Field trips may be required. (A-F Only)

FSCI 371—FIRE COMMAND 2A  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 350 with a minimum grade of C or better. 
Prepares Fire Officers to use management techniques and Incident Command System when 
commanding multiple alarms or large combat forces. Materials Fee Required. Field trips may be 
required. Lecture/Lab. (A-F Only)

FSCI 372B—FIRE MANAGEMENT 2B  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 356 with a minimum grade of C or better. 
Covers the purpose of budgeting, budget controls, types of budgets and budget systems and 
justifying budgets. Materials Fee required. Field trips may be required. (A-F Only)

FSCI 372 FIRE MANAGEMENT 2B 2 1/2 UNITS
Formerly listed as: FSCI - 372B: Fire Management 2B
Limitations on Enrollment: Enrollment limited to students who can provide State Fire Training 
Certificate for Fire Management 1. 
Covers the purpose of budgeting, budget controls, types of budgets and budget systems and 
justifying budgets. Materials Fee Required. Field trips might be required. (A-F Only) Lecture

FSCI 373—FIRE INSTRUCTOR 2A  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 352/FSO 353.

First of three classes for California State Fire Training, Fire Instructor II certification. Advanced 
skill development for instructors who are responsible for evaluating performance. Course work 
provides the student with the techniques of evaluation. Course content includes construction of 
written and performance tests. Students will apply concepts of test planning, test analysis, test 
security, and test evaluation to determine instructor and student effectiveness. This is an essential 
course for writing valid and objective Fire Service tests. Materials Fee Required Field trips are not 
required. (A-F Only) Lecture/Lab.

FSCI 374—FIRE INSTRUCTOR 2B  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 352/FSO 353.

Designed to develop leadership skills. Group dynamics, problem solving techniques and inter-
personal relationships and to utilize it in staff meetings and brainstorming sessions. Skills for 
public meetings such as panel discussions and forums. Interactive team teaching is also included. 
Materials Fee Required. Field trips are not required. (A-F Only)

FSCI 375—FIRE INSTRUCTOR 2C  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 352 and FSCI 353.

Principles of media in the instructional process, selection of audio-visual and instructional 
media, employment of basic and advanced forms of instructional media, use of computers in the 
instructional process, individualized instruction programs. Materials Fee Required. Field trips may 
be required. (A-F Only)

FSCI 381—ETHICS OF LEADERSHIP COURSE 1  
3 UNITS
First of a four course series of the California Public Safety Leadership and Ethics Program. Focuses 
on the roles and responsibilities through concepts, examples, and practice. Explores current 
issues in human resource management encompassing workforce diversity as well as an 
overview of political and legal issues, to include civil rights laws. Field trips may be required. (A-F 
or P/NP) Lecture.

FSCI 382—ETHICS OF LEADERSHIP COURSE 2  
2 UNITS
Prerequisite: Satisfactory completion of FSCI 362.

Second of a four course series of the California Public Safety Leadership and Ethics Program. Course 
is designed to provide the student participant with the knowledge, skills, and abilities to 
effectively lead others and explore issues with diversity made in depth as well as additional ethics 
explorations and issues. (A-F Only) Lecture.

FSCI 398XABCD—FIRE SCIENCE SPECIAL TOPICS 1/2 - 4 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised 
to complete their firefighter probation or have supervisor’s approval for enrollment if still 
on probation. Short courses on mandated fire agency training needs. Emphasis is on new statutory laws, 
information and technology with direct impact on emergency operations and management. Content 
varies with specific agency training and certification needs studied. Materials Fee required. Student 
may repeat if required by regulation. Field trips may be required. (A-F Only) Lecture.

FSCI 3960—ADVANCED MEDICAL FIRST RESPONDER COURSE  
Prequisite: Satisfactory completion of FSCI 365

Designed to meet Emergency Medical Service requirements for recertification of police and fire 
personnel designated as first responders to the scenes of medical emergencies. Eight maximum 
completions. Lecture/Laboratory.
**FTECH (Fire Technology)**

**FTECH 301XABC — INCIDENT COMMAND SYSTEMS**

1/2 - 3 UNITS

Limitations on Enrollment: Enrollment limited to students who are certified firefighters.

Provides description and detail of the Incident Command System (ICS) organization and operations in supervisory roles on all types of emergency incidents. Materials fee required. Student may repeat if required by regulation. Field trips may be required. (A-F or P/NP) Lecture.

**FTECH 310 — RESCUE SYSTEMS AND OPERATIONS**

0.5 - 3 UNITS

Limitations on Enrollment: Enrollment limited to students who are able to provide Low Angle Rescue (LAR) course certification.

Principles and practices of basic fire service, how to safely and effectively participate in rescue operations. Materials fee required. Student may repeat if required by regulation. Field trips are not required. (A-F or P/NP - Student choice) Lecture.

**GENED (General Education Preparation/Counseling)**

Dean: Dean Tsuruda
Division Office: Morris Memorial Building, Room 103
Phone: (209) 575-6080
Division website: www.mjc.edu/prospective/getting_started/advising/index.html

**GENED 956 — GED PREPARATION**

General review of all basic high school subjects in preparation for the General Education Development (GED), and to provide students with knowledge, required for entry and success in college programs. Repeatable. Field trips are not required. (Non-Graded course) Lecture.

**GEOL (Geology)**

Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeps/sme/
Instructors: Ceece Hudelson-Putnam, Brian Sanders, Garry Hayes

**GEOL 101 — PHYSICAL GEOGRAPHY**

3 UNITS

Recommended for Success: Satisfactory completion of ENGL 101

Physical elements of geography: emphasis on earth-sun relationships, weather, climate, and vegetation patterns; degradation processes, landforms created through glaciation, water, wind and tidal activity, and human impact upon the environment. Field trips may be required. Lecture. (A-F or P/NP) Transfer: (CSU, UC)(TSU GEOG 110)(CC GEOG 15) General Education: (MJC-GE: A)(CSU-GE: B1)(IGETC: 5A)

**GEOL 102 — CULTURAL GEOGRAPHY**

3 UNITS

Recommended for Success: Satisfactory completion of ENGL 101

Introduction to origins and global distribution of cultures. Examines cultural adaptations to the earth, human modifications of the landscape, and patterns of human organization as exemplified in population, agriculture, language, religion, political organization, popular culture, and economic development. Issues addressed include famine, political conflict, multiculturism, suburban sprawl, industrial relocation and third world development. Lecture. Transfer: (CSU, UC)(TSU GEOG 120)(CC GEOG 12) General Education: (MJC-GE: B)(CSU-GE: DS)(IGETC: 4E)

**GEOL 104 — CALIFORNIA GEOGRAPHY**

3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 with a minimum grade of C or better.

Introduction to California’s unique geography; examining political, economic, cultural, physical, and historical processes and characteristics. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B)(CSU-GE: DS)(IGETC: 4E)

**GEOL 105 — ECONOMIC GEOGRAPHY**

3 UNITS


**GEOL 109 — INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS**

3 UNITS

Also offered as ENVS 109 - Introduction to Geographic Information Systems

Introduction to Geographic Information Systems (GIS). GIS centers upon mapping as a tool for identifying and assessing the locations of human activity. Applications to business, economics, weather, geology, real estate, agriculture, etc. Students will create and evaluate databases which generate maps using ArcView. Field trips are not required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: B)(CSU-GE: DS)(IGETC: 4E)

**GEOL 110 — WORLD REGIONAL GEOGRAPHY**

3 UNITS

Recommended for Success: Before enrolling in this course, students are strongly advised to complete English 101.

Survey of the world’s major geographical regions and their physical, economic, political, and cultural characteristics. Emphasis is placed upon historical influences which explain current problems and conditions. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B)(CSU-GE: DS)(IGETC: 4E)

**GEOL 160 — INTRODUCTION TO GEOLOGY**

3 UNITS

Study of the composition of the earth, and the physical and chemical processes which shape it. Topics include plate tectonics, volcanism, earthquakes, rocks and minerals, weathering, and erosion. Credit will be granted for either GEOL 160 or 161. Field trips may be required. Lecture. Material fees may be required. Not offered every semester. Transfer: (CSU, UC) General Education: (MJC-GE: A)(CSU-GE: B1)(IGETC: 5A)

**GEOL 160 INTRODUCTION TO GEOLOGY 3 UNITS**

Study of the composition of the Earth, and the physical and chemical processes which shape it. Topics include plate tectonics, volcanism, earthquakes, rocks and minerals, weathering, and erosion. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: A)(CSU-GE: B1)(IGETC: 5A)

**GEOL 161 — PHYSICAL GEOLOGY**

4 UNITS

Formerly listed as GEOL 160.

Study of the physical and chemical processes that shape the earth, including plate tectonics, volcanism, weathering and erosion; the composition of the earth, and geologic hazards such as mass wasting, flooding and earthquakes. Laboratory topics include rock and mineral identification, and the use of maps and aerial photographs to understand erosional and tectonic processes. Field trips may be required. Lecture/Laboratory. Transfer: (CSU, UC)(CC ESC 5) General Education: (MJC-GE: A)(CSU-GE: B1)(IGETC: 5A)

**GEOL 161 PHYSICAL GEOLOGY**

4 UNITS

Study of the physical and chemical processes that shape the earth, including plate tectonics, volcanism, weathering and erosion; the composition of the earth, and geologic hazards such as mass wasting, flooding and earthquakes. Laboratory topics include rock and mineral identification, and the use of maps and aerial photographs to understand erosional and tectonic processes. Field trips might be required. (A-F or P/NP - Student choice) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A)(CSU-GE: B1, B3)(IGETC: 5A, 5C)

**Color Legend:**

- NEW COURSE
- UPDATED COURSE
- INACTIVATED/HISTORICAL COURSE
- COURSE UNCHANGED FROM 2011-2012 CATALOG
### HIST - HUMAN

#### GEOL 165 — GEOLOGY OF CALIFORNIA

3 UNITS  
The geologic setting and evolution of California’s geomorphic provinces. Emphasis is on processes that have and are still acting to shape the landscape, volcanism, earthquakes, and erosion. Field trips may be required. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1) (IGETC: SA)

#### GEOL 165 GEOLOGY OF CALIFORNIA

3 UNITS  
Formerly listed as: GEOL - 165: Geology of CA  
The geologic setting and evolution of California’s geomorphic provinces. Emphasis is on processes that have and are still acting to shape the landscape, volcanism, earthquakes, and erosion. Field trips might be required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1) (IGETC: SA)

#### GEOL 166 — HISTORICAL GEOLOGY

4 UNITS  
Formerly listed as GEOL 163  
Introduction to the origin, development and evolution of the earth and its inhabitants. Topics include the study of fossils and rocks, continents and ocean basins, geologic time, plate tectonics, climate change and mass extinctions. Laboratory utilizes rocks, fossils and stratigraphic principles to decipher ancient environments. Field trips may be required. Lecture/Laboratory. P/NP Only. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: SA)

#### GEOL 166 — HISTORICAL GEOLOGY

4 UNITS  
Introduction to the origin, development, and evolution of the earth and its inhabitants. Topics include the study of fossils and rocks, continents and ocean basins, geologic time, plate tectonics, climate change and mass extinctions. Laboratory utilizes rocks, fossils and stratigraphic principles to decipher ancient environments. Field trips might be required. (A-F or P/NP - Student choice) Lecture/A Lab Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: SA)

#### GEOL 171X, A, B — GEOLOGY FIELD STUDIES

½, 1, 2 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete or concurrently enroll in a geology or earth science course. Introduction to basic geological concepts through field trips to areas of geologic significance. Emphasis will be on the materials and structures that compose a landscape, and the history and evolution of the areas visited. Four completions allowed. Field trips are required. (A-F or P/NP) Discussion /Discussion /Discussion Transfer: (CSU, UC) (ESC ESC 35)

#### GEOL 174 — GEOLOGY SUMMER FIELD STUDIES

3 UNITS  
Recommended for Success: Satisfactory completion of previous course in geology or earth science. Application of principles of geology through extended field studies at selected sites in the western United States and other geologically significant locations. Skills developed in rock, mineral, and fossil identification, and use of geological field equipment. Requires ability to work and study under rigorous conditions. Two maximum completions. Field trips might be required. (A-F or P/NP - Student choice) Discussion Transfer: (CSU)

#### GEOL 174 — GEOLOGY SUMMER FIELD STUDIES

3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete a college-level course in geology or Earth science. Application of principles of geology through extended field studies at selected sites in the western United States and other geologically significant locations. Skills developed in rock, mineral, and fossil identification, and use of geological field equipment. Requires ability to work and study under rigorous conditions. Two maximum completions. Field trips might be required. (A-F or P/NP - Student choice) /Discussion Transfer: (CSU)

#### GERM (German)

Dean: Patrick Bettencourt  
Division Office: Journalism 180  
Phone: (209) 575-6149  
Division website: www.mjc.edu/current/programs/divdeps/litlang/  
Instructors: Gabriele Steiner

#### GERM S1 — INTRODUCTORY GERMAN 1

3 UNITS  
Formerly listed as Introduction to Practical German 1  
Slow-paced, non-transferable course designed for people who have never studied German and/or another foreign language. Introduction to elementary German grammar and pronunciation. Field trips may be required. (A-F or P/NP) Lecture. General Education: (MJC-GE:C)

#### GERM S2 — INTRODUCTION TO PRACTICAL GERMAN 2

3 UNITS  
Prerequisite: Satisfactory completion of GERM S1. Continuation of GERM S1. Review and expansion of essentials of spoken and written German. Lecture.

#### GERM 101 — GERMAN 1

5 UNITS  
Essentials of written and spoken German, simple composition, conversation and reading. Field trips may be required. Lecture/Laboratory. Equivalent to the satisfactory completion of two years high school German. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C)(CSU-GE: C2) (IGETC: 6A)

#### GERM 102 — GERMAN 2

5 UNITS  
Prerequisite: Satisfactory completion of GERM 101. Continuation of GERM 101. Review and expansion of tenses, vocabulary, and commonly used expressions. Equivalent to the satisfactory completion of three years of high school German. Field trips may be required. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 3B, 6A)

#### GUIDE (Guidance/Counseling)

Dean (Interim): Dean Tsuruda  
Division Office: Morris Memorial Building, Room 103  
Phone: (209) 575-6080  
Division website: www.mjc.edu/prospective/getting_started/advising/index.html  

The Guidance program is an integral part of the counseling services. Students who take guidance skills courses will learn to:

- Acquire, organize and demonstrate problem-solving and decision-making skills;
- Explore, evaluate and pursue career and educational options;
- Develop social, intellectual and emotional competencies; develop needed skills regarding the aged population. Field trips may be required. Lecture. Transfer: CSU
GUIDE 100 — INTERNATIONAL STUDENT/NEW AMERICAN FOCUS  1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to be eligible for ESL 45 and ESL 46.
Education and career planning for students whose previous education has been outside the United States. Acquaints students with the college, its curriculum, facilities, services, academic regulations, vocational and certificate programs, degree and transfer requirements. Reviews extracurricular activities, personal adjustment, American customs, culture shock, survival techniques and immigration regulations. A detailed educational plan is developed. Students must complete a conference with a counselor during the semester. Lecture. MJC Guidance. (P/NP Only) Transfer: CSU

GUIDE 110 — EDUCATIONAL PLANNING  ½ UNIT
Acquaints MJC students with the college, its curriculum, facilities, services, academic regulations, vocational and certificate programs, degree and transfer requirements. Students must complete a conference with a counselor during the semester. An educational plan is developed according to each student’s needs and goals. Field trips are not required. (P/NP Only) Lecture. MJC Guidance. Transfer: CSU (CC GUIDE 107)

GUIDE 111 — CAREER AWARENESS  1 UNIT
Assists students in exploring career alternatives through development of skills necessary for the research, selection and planning of a life-long career. The role of attitudes, interests, values and skills will be addressed. Interests, aptitude and values tests may be used. Important aspects of occupational choice will be covered along with occupational information. An educational plan will be developed. Students must complete a conference with a counselor during the semester. Materials Fee Required Field trips are not required. (P/NP Only) Lecture. MJC Guidance. Transfer: CSU (CC GUIDE 11)

GUIDE 112 — JOB HUNTING SKILLS  ½ UNIT
Formerly listed as GUIDE 112 - Job Employment Skills
Realities of the job market and techniques for conducting a successful job search. Emphasis on learning about job application procedures, resume writing and interviewing skills. Students must complete an appointment with a counselor during the semester. Two maximum completions. Field trips are not required. (P/NP Only) Lecture. MJC Guidance. Transfer: CSU (CC GUIDE /BUSAD 25)

GUIDE 116 — ORIENTATION FOR RE-ENTRY ADULTS  2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to speak, write, and understand the English language.
Designed to help new or returning adult students be successful in college after having been out of school for a number of years. Acquaints students with college services, programs, and requirements, and numerous topics related to academic and career success. These topics include adult transitions, self exploration, educational planning, study skills, time management, learning styles, goal setting, career exploration, and other topics related to student success. Students must complete a conference with a counselor during the semester. An educational plan will be developed based on student’s academic and career goals. Field trips are not required. (P/NP Only) Lecture / Discussion. MJC Guidance. Transfer: CSU

GUIDE 120 — SUCCESS STRATEGIES FOR TRANSFER STUDENTS — 3 UNITS
Formerly listed as STSK 120.
Increase success in college by assisting students in obtaining skills and techniques necessary to reach their educational objectives. Explore personality, interests and values to increase self-understanding and select an appropriate major and career. Topics include: educational planning and transfer strategies, motivation, paper research strategies, note-taking, subject-specific study techniques, time management and textbook study methods. Lecture. (A-F or P/NP) Transfer: CSU

GUIDE 120 — SUCCESS STRATEGIES FOR TRANSFER STUDENTS — 3 UNITS
Increase success in college and in life by assisting student in obtaining skills and techniques necessary to reach personal goals. Explore personality, interests and values to increase self-understanding and select an appropriate major and career. Topics include: educational planning and transfer strategies, motivation and learning styles, research strategies, note-taking, subject-specific study techniques, time management, and textbook study methods. Field trips might be required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: Guidance )

HE (Health Education)

HE 100 — STANDARD FIRST AID/CPR  1 UNIT
A basic course for an Emergency Services professional or the citizen who wishes to maintain or acquire cardio pulmonary resuscitation (CPR) and basic first aid certification. Successful course completion results in certification in CPR and Standard First Aid. Materials fee required. Four completions allowed. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HHP 62)

HE 101 — EMERGENCY RESPONSE/CPR FPR  3 UNITS
Course designed to provide the First Responder with advanced first aid capabilities necessary in an emergency to help sustain life, reduce pain, minimize the consequences of injury or sudden illness and to provide emergency care of the sick and injured. CPR for the Health Care Provider and First Responder certification issued upon satisfactory completion. Materials fee required. Four completions allowed. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC EMS 13)

HE 110 — HEALTHFUL LIVING  3 UNITS
A consideration of factors in the selection of a plan for healthful living. Emphasis on self-assessment through gathering and analyzing information while setting new health goals. The course focuses on emotional, physical, social/spiritual, intellectual and environmental wellness in achieving human potential. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HHP 60) General Education: (MJC-GE-E) (CSU-E)

HE 111 — WOMEN’S HEALTH ISSUES  3 UNITS
Focus on women’s issues in selection of a plan for healthful living. Exploration of the interrelationship of health concerns for African American, Chicana/Latina, American Indian, Asian American, and European American women. Lecture. Transfer: (CSU, UC) (CC HHP 2) General Education: (MJC-GE-E) (CSU-E)

HE 118 — EXERCISE AND NUTRITION FOR HEALTHY LIVING  3 UNITS
Theories of exercise including techniques of endurance, methods of strength attainment, flexibility training. Nutrition concepts and influences on exercise and weight management. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE-E)

HE 118 — EXERCISE AND NUTRITION FOR HEALTHY LIVING  3 UNITS
Formerly listed as: HE - 118: Exercise and Nutrition for Healthy Living
Theories of exercise including techniques of endurance, methods of strength attainment, and flexibility training. Nutrition concepts and influences on exercise and weight management. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education. (MJC-GE-E)

HE 198A,B,C — SPECIAL TOPICS AND PROBLEMS  1-3 UNITS
Participation in discussion, analysis, and evaluation of a special topic or problem in health education. Topics announced each semester in schedule of classes. Field trips may be required. Four completions allowed. Lecture. Transfer: CSU.
### HIST 101 — HISTORY OF THE UNITED STATES TO 1877  
3 UNITS  
Formerly listed as HIST 101 — History of the United States Through Reconstruction  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Survey of United States history from 1685 through contemporary times. Local, state and national historical development will be traced with emphasis placed on American institutions and their role in the development of American culture. Special attention is given to U.S. urban and industrial processes, the country’s international role and resulting institutional developments. The role of class and ethnicity will be integrated with comparisons among Europeans, Indigenious, and African American experiences. Analysis of the role of technology in the formation of America. The evolution of contemporary local, State and Federal government and the role of the political, economic, and social movements is addressed. The gradual movement toward full inclusion of all peoples of America under State and Federal Constitutional law is emphasized. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HIST 10) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC-4F)  

### HIST 102 — HISTORY OF THE UNITED STATES POST CIVIL WAR  
3 UNITS  
Recommended for Success: Satisfactory completion of ENGL 101.  
U.S. history from the late 19th century until contemporary times. Local, state and national historical development will be traced with emphasis placed on American institutions and their role in the development of American culture. Special attention is given to U.S. urban and industrial processes, the country’s international role and resulting institutional developments. The role of class and ethnicity will be integrated with comparisons among Europeans, Indigenious, and African American experiences. Analysis of the role of technology in the formation of America. The evolution of contemporary local, State and Federal government and the role of the political, economic, and social movements is addressed. The gradual movement toward full inclusion of all peoples of America under State and Federal Constitutional law is emphasized. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC-4F)  

### HIST 104 — WESTERN CIVILIZATION TO 1650  
3 UNITS  
Formerly listed as HIST 104 — Western Civilizations  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Survey of the social, economic, political, religious, intellectual, and cultural development of Western Civilization from the Neolithic to the Reformation. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B, C) (CSU-GE: D6) (IGETC-4F)  

### HIST 105 — WESTERN CIVILIZATION SINCE 1650  
3 UNITS  
Formerly listed as HIST 105 — Western Civilization  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Survey of the political, economic, social, and cultural changes in the history of Western Civilization from 17th century Absolutism to the present. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B, C) (CSU-GE: D6) (IGETC:, 4F)  

### HIST 106 — WORLD CIVILIZATION TO THE 16TH CENTURY  
3 UNITS  
A comparative and interactive investigation and analysis of World Civilization as related to the development of the modern world. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B, C) (CSU-GE-C2, D6) (IGETC: 3B, 4F)  

### HIST 107 — WORLD CIVILIZATION FROM THE 16TH CENTURY  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101. A comparative study of World Civilizations from 1500 to the present. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MIC-GE: B, C) (CSU-GE: D6) (IGETC-4F)  

### HIST 112 — TWENTIETH CENTURY AMERICA  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Survey of the social, economic, political, religious, intellectual, and cultural development of twentieth century United States history. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC-4F)  

### HIST 113 — SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES PRIOR TO THE 20TH CENTURY  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
The first in a two-part series, HIST 113 examines the development of American society and culture prior to the 20th century. HIST 113 specifically analyzes the formation and evolution of American social institutions in response to indigenous American and immigrating European and African cultures. This course compares interpretations of race, gender, class, political economy and human rights. Emphasis is placed on the evolution of State and Federal constitutional government and the principle of inclusion. Contemporary local, State, and Federal government developments are analyzed historically in relation to political and social movements as a foundation for contemporary social activism. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC-4F)  

### HIST 115 — ECONOMIC HISTORY OF THE UNITED STATES  
3 UNITS  
Recommended for Success: Satisfactory completion of ENGL 101.  
Also offered as ECON 115. Analysis of origins and development of business, labor and agriculture from the colonial period to the present. Emphasis on the federal government’s part in the development and regulation of business, labor and agriculture; the government’s role in the national economic process. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:B)(CSU-GE: D2, D6)(IGETC-4B, 4F)  

### HIST 116 — WOMEN IN AMERICAN HISTORY  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Study of the history of women in the United States, their experiences and contributions from the pre-colonial period to the present. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:B)(CSU-GE: D2, D6)(IGETC-4B, 4F)  

### HIST 125 — HISTORY OF MEXICO  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
The second in a two-part series, HIST 125 examines the development of Mexican society and culture in the 20th and 21st century. HIST 125 specifically analyzes Mexican political and economic institutions and their interaction with Indigenous American, Latino/Chicano, African American, European, and Asian American ethnicities. Particular attention is given to various historic and contemporary civil and human rights movements. Critical evaluation of the developing role of local, State, and Federal government in the inclusion of ethnic and gender participation. The gradual movement toward full protection of all peoples of Mexico under State and Federal Constitutional law is emphasized. The effects of U.S. foreign and domestic policies on first and third world nations will be evaluated. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:B)(CSU-GE: D2, D6)(IGETC-4B, 4F)  

### HIST 129 — HISTORY OF MEXICO  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.  
Survey of Mexican history from the first Mesoamerican civilizations through the present, exploring the intersection of politics, the economy, society, culture, and geography. Periods covered include: Mesoamerica, the colonial period, independence, La Reforma, the Porfiriato, the Mexican Revolution and its aftermath, and the post-WWII period. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D3, D6) (IGETC-4F)  

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**NEW COURSE** | **UPDATED COURSE** | **INACTIVATED/HISTORICAL COURSE** | **COURSE UNCHANGED FROM 2011-2012 CATALOG**
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**Color Legend:**
- **NEW COURSE**: Indicates a new course not previously offered.
- **UPDATED COURSE**: Indicates a course with updated information.
- **INACTIVATED/HISTORICAL COURSE**: Indicates a course that has been discontinued or is historical in nature.
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**: Indicates that the course information has not changed from the 2011-2012 catalog.
HIST 128—HISTORY OF AMERICAN FAR WESTERN FRONTIER 3 UNITS
A regional history of frontier life in the trans-Mississippi West during the 19th century, including early exploration through the fur trade, territorial expansion, and the mining and farming frontier. Special emphasis is given to the contribution of Native Americans and Asian, African, Iberian and Mexican cultures in shaping the character of the American West. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HIST 55) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC: 4F)

HIST 129—HISTORY OF CALIFORNIA 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.

Survey of California history from the first peoples to inhabit this region through the present. The course explores the intersection of politics, the economy, society, culture, and geography and the way it has contributed to the formation of contemporary California. Emphasis comparing and contrasting the historical development of California to that of the rest of the nation. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HIST 111) General Education: (MJC-GE: B) (CSU-GE: D6) (IGETC: 4F)

HIST 145—HISTORY OF LATIN AMERICA 3 UNITS
Formerly listed as HIST 145 - Latin American History
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.

Survey of Latin American history through the present, emphasizing changes and continuities in the political, economic, social, and cultural life of the continent. Examines issues such as: the colonial legacy, development and underdevelopment, ideas of race and ethnicity, and the struggle for ethnic parity, disparity, and inclusion. Contemporary and historic local, State, and Federal government developments are analyzed in relation to political and social movements as a foundation for contemporary activism for civil rights, human rights, and economic justice. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D3, D6) (IGETC: 4F)

HIST 154—AFRICAN AMERICANS THROUGH THE 19TH CENTURY 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.


HIST 155—AFRICAN AMERICANS IN THE 20TH AND 21ST CENTURIES 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.

Second in a two-part series. Examines the political, economic, technological, and social history of African Americans from the end of the 19th century through the early 21st century. Specific analysis of complex relationships between European Americans, Latino/Chicano Americans, and African American ethnic groups. Inquiry into race, gender, and class disparities. Ongoing struggles for ethnic self-determination and inclusion are contrasted against institutional resistance and social marginalization. Emphasis on the evolution of State and Federal Constitutional government and the struggle for ethnic parity, disparity, and inclusion. Contemporary and historic local, State, and Federal government developments are analyzed in relation to political and social movements as a foundation for contemporary activism for civil rights, human rights, and economic justice. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: D3, D6) (IGETC: 4C, 4F) (A1 Group a)

HUMAN 101—INTRODUCTION TO THE HUMANITIES 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to be eligible for ENGL 101.

Introduction to the major works of the humanities that focuses on the diversity of human experience and the relationships among arts and ideas. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B)

HUMAN 105—EARLY HUMANISTIC TRADITIONS 3 UNITS
Recommended for Success: Eligibility for ENGL 101

Study of creative and intellectual achievements from cultures of the world beginning with Prehistory and extending to the Renaissance. Lecture. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HUMAN 1) General Education: (MJC-GE-C) (CSU-GE: C2) (IGETC: 3B)

HUMAN 106—HUMANITIES IN THE MODERN WORLD 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.

Study of creative and intellectual achievements from cultures of the world beginning with 1600’s and extending into the 20th centuries. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HUMAN 2) General Education: (MJC-GE-C) (CSU-GE: C2) (IGETC: 3B)

HUMAN 110—EAST MEETS WEST 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to be eligible for ENGL 101.

Comparative study of the Eastern and Western world cultures. Works studied are chosen from the fields of art, music, philosophy, literature and/or architecture. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HUMAN 3) General Education: (MJC-GE-C) (CSU-GE: C2) (IGETC: 3B)

HUMAN 130—INTRODUCTION TO WESTERN RELIGIONS 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to be eligible for ENGL 101

Origins and development of the three monotheistic religions of Western Civilization: Judaism, Christianity and Islam, scripture, beliefs, traditions, rituals, and celebrations; scripture of all three faiths, along with architecture and arts. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE-C) (CSU-GE: C2) (IGETC: 3B)

HUMAN 140—INTRODUCTION TO WORLD MYTHOLOGY 3 UNITS
Recommended for Success: Eligibility for ENGL 101

An overview of mythology which examines the nature, functions, and meanings of myths throughout the world, their cultural contexts, artistic expressions, and influence on contemporary life. Field trips may be required. Lecture. (A-F or P/NP). Transfer: (CSU, UC) General Education: (MJC-GE-C) (CSU-GE: C2) (IGETC: 3B)

HUMSR (Human Services)

Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129
Division website: mjc.edu/prospective/programs/hbsc/
Instructors: Kimberly Kenneard

The Modesto Junior College Human Services programs provide knowledge and skills involved with the delivery of a wide variety of social services through various community social work and counseling agencies.

The two-year programs are designed to prepare students for entry-level employment in human service organizations as well as to upgrade current employees. They also provide a basis for future...
HUMSR 101 — INTRODUCTION TO HUMAN SERVICES 3 UNITS
Development of human services in American society by private and governmental agencies at national, state, and local levels. Emphasis on contemporary programs and practices, needs served, and directed changes. Preparation for "new careers" in paraprofessional programs in the health, education, and social services, such as eligibility workers, counselor aides, vocational rehabilitation aides, social service technicians, and pre-professional positions. Field trips may be required. Lecture. Transfer: CSU General Education: (MUC-GE B)

HUMSR 103 — INTRODUCTION TO HUMAN SERVICE CAREERS 1/2 UNIT
Introduction to careers in the human services profession, personal qualities, clinical skills, and academic requirements necessary for entry-level human service positions. (A-F or P/NP) Lecture. Transfer: CSU

HUMSR 104 — AGING IN AMERICA 3 UNITS
Also offered as GERON 101. Analysis of the aging process from a multidisciplinary approach, including sociology, psychology, and physiology. Students will have an opportunity to explore their beliefs, feelings, and values regarding the aged population. Field trips may be required. (P/NP Only option)Lecture. Transfer: CSU

HUMSR 110 — INTRODUCTION TO INTERVIEWING, COUNSELING 3 UNITS
Recommended for Success: Satisfactory completion of HUMSR 101. Introduction to the principles and practices of interviewing, counseling, and theoretical frameworks. Designed to assist in the preparation of paraprofessionals in the Human Services and other interrelated fields. Recognition and understanding of social problems, and the impact on human behavior. Lecture. (A-F or P/NP) Transfer: CSU

HUMSR 111 — COUNSELING IN CHEMICAL DEPENDENCY 3 UNITS
Recommended for Success: Satisfactory completion of HUMSR 101. Concepts of counseling, therapy, personality development, and theoretical frameworks relevant to chemical dependency. Designed to assist the paraprofessional in the chemical dependency profession and other related fields. Clinical skills, assessment tools, techniques, crisis intervention strategies, and resolution will be covered. Lecture. (A-F or P/NP) Transfer: CSU

HUMSR 113 — CO-OCCURRING DISORDERS 3 UNITS
Introduction to the treatment needs of individuals who are diagnosed with a psychiatric disorder in combination with a chemical dependency disorder. Students will learn to identify, assess, and offer treatment to those with a dual diagnosis/co-occurring disorder. Field trips may be required. (A-F only) Lecture. Transfer: CSU

HUMSR 114 — DEATH AND DYING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101. Exploration of feelings, belief systems, values and theoretical comprehension about death, dying, and the bereavement process from a historical, multidisciplinary, and cultural perspective. Topics include: coping mechanisms, counseling the dying, suicide, grief and bereavement, terminal illness, and multi-cultural concepts about death. (A-F or P/NP) Lecture. Transfer: CSU General Education: (MUC-GE B)

HUMSR 116 — DRUGS AND ALCOHOL IN SOCIETY 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 101. An introductory course that focuses on drug and alcohol use, abuse, and dependency in society. Covers causes for addiction, current trends, historical dimensions, prevention, treatment, multicultural considerations, and corresponding myths regarding chemical dependency and psychoactive drugs. Lecture. (A-F or P/NP) Transfer: CSU General Education: (MUC-GE B)

HUMSR 117 — INTERVENTION AND TREATMENT STRATEGIES IN CHEMICAL DEPENDENCY 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 101. Prerequisite: Satisfactory completion of HUMSR 111 and 116. Continued development in the application of therapeutic techniques, clinical skills, and strategies relative to the treatment of chemical dependency. Emphasizes the intervention process, assessment tools, crisis counseling, theoretical foundations, recovery dynamics, and family systems. Lecture. (A-F or P/NP) Transfer: CSU

HUMSR 118 — PHARMACOLOGY OF ABUSED SUBSTANCES 3 UNITS
Also listed as PSYCH 118. Recommended for Success: HUMSR 116 or PSYCH 101. An introduction to psychopharmacology and the process of drug addiction. Topics include classification of abused and psychotherapeutic drugs, basic principles of pharmacology, behavioral and psychophysiological effects of drugs, major neurotransmitter systems and how they are influenced by drugs. Lecture. Transfer: CSU

HUMSR 119 — INTRODUCTION TO GROUP LEADERSHIP AND GROUP PROCESS 3 UNITS
An introduction to the dynamics of group interaction with an emphasis upon the individuals' subjective experience as the group studies itself (under supervision). The factors involved in problems of communication, effective emotional responses, and personal growth will be highlighted. Emphasis on group process as a means of changing individual behavior. Field trips may be required. (A-F only) Lecture. Transfer: CSU

HUMSR 120 — PROFESSIONAL DEVELOPMENT IN THE HELPING PROFESSIONS 3 UNITS
Formerly listed as Professional Development in Chemical Dependency. Recommended for Success: Satisfactory completion of ENGL 101. Focuses on the application of clinical skills, theoretical foundations, strategies, techniques, ethical standards, and professional development in the Human Services and Chemical Dependency profession. Lecture. (A-F or P/NP) Transfer: CSU

HUMSR 121 — INTRODUCTION TO PSYCHOSOCIAL REHABILITATION 3 UNITS
Introduction to the field of psychosocial rehabilitation and its application in the public mental health system. The class provides an overview of the core practice models, principles, theories, and methods in psychosocial rehabilitation as related to the social sciences, and gives students a broad view of best clinical practices, social and psychological considerations in working with individuals who have psychiatric disorders using sociological concepts, theories, and methodology. Field trips may be required. Lecture. (A-F or P/NP) Transfer: CSU General Education: (MUC-GE B)

HUMSR 142 — PSYCHOSOCIAL REHABILITATION PRACTICE 3 UNITS
Continued development in the field of psychosocial rehabilitation, and its application in the public mental health system. Designed to provide opportunities for students to practice and apply models of psychosocial rehabilitation, principles, theories, and methods related to the social sciences with individuals who have psychiatric disorders using sociological concepts and methodology. Course is not repeatable. Field trips may be required. Lecture. (A-F or P/NP) Transfer: CSU General Education: (MUC-GE B)

HUMSR 144 — COMMUNITY AGENCY PRACTICUM DISCUSSION 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101. Analysis of field experiences of students concurrently enrolled in HUMSR 145A, HUMSR 145B, or HUMSR 145D. Class time is devoted to sharing, evaluation, and discussion of student's supervised field experiences and placement. Continued development of clinical skills, theoretical integration, knowledge base, professional values, and competence in the helping profession. Field trips are not required. (A-F or P/NP) Lecture. Transfer: CSU

HUMSR 145A, 145B, 145D — COMMUNITY AGENCY PRACTICUM 1, 2, 4 UNITS
Formerly listed as Community Agency Fieldwork. Prerequisite: Satisfactory completion of HUMSR 110 or 111. Concurrent Enrollment: HUMSR 145 Supervised field experience in a variety of community social agencies. Three maximum completions in any combination of HUMSR 145 A, B, and D. Lecture/Lab. (A-F or P/NP) Transfer: CSU
IIS
(Individualized Instruction and Services)
Division Office: Special Programs, Morris, 112B
Phone: (209) 575-6702

IIS 13—IMPROVING LEARNING POTENTIAL
Non-degree course.
Specialized computer-assisted instruction for students with disabilities to maximize their learning potential and increase academic efficiency. Four completions allowed. Lecture/Laboratory. (P/NP Only)

IIS 15—ADAPTED KEYBOARDING
Non-degree course.
Designed to teach keyboarding basics to students with disabilities who must use assistive technologies for successful access to the keyboard or monitor and/or are unable to complete successfully in mainstream keyboarding courses. Four completions allowed. Lecture/Laboratory.

IIS 16—COMPUTER ACCESS 1
Non-degree course.
Designed for students with visual, physical, acquired brain injury, language impairment, learning disabilities or deafness. Provides training in the use of computer access technologies which enhance a disabled student’s ability to access and use microcomputers. Four completions allowed. Lecture/Laboratory.

IIS 18—COMPUTER ACCESS PROJECTS
Non-degree course.
Designed for students with disabilities who require access to specialized assistive technologies in order to complete assignments for other classes in which they are concurrently enrolled. (A-F or P/NP) Four completions allowed. Lecture/Laboratory.

IIS 20—MATH STRATEGIES FOR DISABLED STUDENTS
Non-degree course.
Intended for students with disabilities who need additional instruction and compensatory strategies that typically lead to success within the traditional classroom. Specialized instruction will occur in basic skills and in formulating efficient test-taking and study strategies specifically related to math. Four completions allowed. Lecture (A-F or P/NP).

IIS 21—MAKING THE MOVE: TRANSITION TO COLLEGE
Non-degree course.
Intended for new and re-entry students with disabilities who need additional instruction and compensatory strategies to learn and be successful within the traditional classroom. Specialized instruction will occur in disability awareness and in formulating strategies for success in the college environment. Four completions allowed. Lecture.

INDIS
(Interdisciplinary Studies)
The Interdisciplinary Studies Program emphasizes critical thinking, communication skills, and independent work. Students are accepted into the program not solely on the basis of past achievement but, most importantly, on their willingness to become members of an intellectually stimulating, interactive learning community.

INDIS 100—INTRODUCTION TO HONORS SCHOLARSHIP
Enrollment limited to those who have been admitted to the Honors program.
Interpersonal communication theory and its practical application. Forms of philosophical inquiry that are applicable to the humanities, social sciences, arts, and physical sciences as well as their ethical and political applications. Library and information sources, including development of research strategies, and the retrieval, evaluation, and use of information. Lecture. (A-F Only)
Transfer: CSU.

INTDS (Interior Design)
Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 157
Phone: (209) 575-6343
Division website: www.mjc.edu/prospective/programs/fcs/index.html

Course content within the Interior Design program emphasizes the home and the workplace as the environment created by individuals in response to their family and work interests and needs. Focus is placed not only on the physical set-up of the structure and interior but also on the psychological and sociological effects of the environment on the people who function within it. Product knowledge is emphasized as students learn to keep up with what is in demand as lifestyles and tastes change.

INTDS 10 X, A,B—INTERIOR DESIGN OPEN LAB ½, 1, 2 UNITS
Corequisite): Concurrent enrollment in INTDS 100 or 120 or 140 or 145 or 150 or 155 or 160 or 170 or 180 or 190 or 200 or 201 or 202 or 203 or 204 or 205 or 206 or 210 or 215 or 220 or 230 or 235 or 240 or 245 or 250 or 255 or 260 or 265 or 270 or 290 or 295X or 298X or 299 or 349 or 373 or 375 or 393 or 399.
Open lab for the currently enrolled interior design student, concurrent enrollment with another interior design course required. Four completions allowed. Laboratory. (P/NP Only).

INTDS 100—CAREERS IN DESIGN 2 UNITS
Introduction to educational and interior design employment opportunities. Includes portfolio and educational plan development and curriculum requirements that pertain to educational goals as they relate to interior design majors. Emphasizes personal, educational, and professional qualifications required for success in obtaining, maintaining, and advancing in the field of interior design and related professions. Field trips may be required. Lecture. (A-F or P/NP). Transfer: CSU.

INTDS 120—COLOR THEORY AND APPLICATION 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete READ 82 and ENGL 50 and MATH 20. Corequisite: Satisfactory completion of or concurrent enrollment in INTDS 200. Basic color theory and its application to the built environment. Development of skills and knowledge applicable to interior architecture, decorative arts, and related fields of design, such as product development. Exploration of the impact of cultural heritage, the effects of environment, and the psychological implications related to the application and use of color. Field trips may be required. Lecture (A-F or P/NP). Transfer: CSU.

INTDS 130—FABRICS FOR INTERIORS 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete (READ 82 and MATH 20 and ENGL 50) Introduction to natural and manufactured textiles used for interior residential and non-residential furnishings. Analysis of fibers and yarns, fabric structure, designs, methods of color application and finishing treatments. Emphasis on selection, use, aesthetics, suitability, and care. Government legislation, sustainable design practices, testing for performance, and new technologies, includes related professional practices. (A-F or P/NP) Lecture. Transfer: CSU.

INTDS 140—RENDERING AND RAPID VISUALIZATION 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete READ 82 and ENGL 50 and MATH 20. Emphasis on selection, use, aesthetics, suitability, and care. Government legislation, sustainable design practices, testing for performance, and new technologies, includes related professional practices. (A-F or P/NP) Lecture. Transfer: CSU.

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete (READ 82 and ENGL 50) Introduction to the principles and techniques used in interior illustration. Emphasis on drawing in perspective using light, shade, and shadow, and pencil rendering of furniture, interior finishes, and accessories. May be completed up to 2 times. Field trips may be required. Lecture/Laboratory. (A-F or P/NP). MJC Activities. Transfer: CSU.
INTDS 145 — FUNDAMENTALS OF LIGHTING DESIGN  
3 UNITS  
Fundamentals of lighting design, theory, and application, including both aesthetic and technical considerations. Basic study of how light affects color and vision. Survey of lighting techniques, codes, and energy efficient practices for interior designers. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 150 — HISTORY OF INTERIORS/DECORATIVE ARTS 1  
3 UNITS  
Overview of the development of interior architecture and furniture styles of the world from Antiquity to the Classical Revival Period of the nineteenth century. Covers dominant social, economic, technological influences, and innovations affecting design and development of specific styles and periods. Description of dominant influences and characteristics of interior, furniture, ornamental design, and decorative arts, architecture, and textiles. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU, UC  
**General Education:** (CMIC-GE:C)  

INTDS 155 — HISTORY OF INTERIORS DECORATIVE ARTS 2  
3 UNITS  
Survey of the historical relationship between interior architecture, furniture, and decorative arts. Overview of styles from the Classical Revival period of the nineteenth century through the present time. Social, economic, technological influences and innovations are emphasized. Field trips may be required. Lecture. (A-F or P/NP) Lecture. **Transfer:** CSU, UC  
**General Education:** (CMIC-GE:C)

INTDS 160 — ASIAN DESIGN AND DECORATIVE ARTS  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete READ 82, AND ENGL 50 AND MATH 20.  
Broad survey of historic and contemporary Asian decorative arts, architecture, interiors, and landscape design. Introduction to the influence of trade, International exhibitions, and globalization on Western design and manufacturing, including the Asian-inspired works of Western architects and designers. Survey of Asian motifs, materials, color schemes, and resources. Field trips may be required. Lecture/Laboratory. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 180 — UNIVERSAL DESIGN FOR HEALTH, SAFETY, & WELFARE  
3 UNITS  
Formerly listed as INTDS 180 - Barrier-Free Design, Codes & Regulations.  
Global design decisions related to environmental, social, cultural, economic and physiological needs. Concepts of universal, accessible, adaptable, barrier-free, aging-in-place, and lifetime design. Related ADA guidelines, local, state, and federal codes will be discussed. Includes survey of appropriate interior, finishes, materials and resources. Space planning considerations for specific needs, issues relating to aging population and life style. Field trips are not required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 190 — SUSTAINABLE AND GREEN DESIGN  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete READ 82, AND MATH 20 AND ENGL 50.  
Overview of environmentally responsible design, building practices, systems, and materials with an emphasis on residential construction and interiors. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 200 — INTERIOR DESIGN FUNDAMENTALS  
3 UNITS  
Overview of interior design and furnishings. Study and application of principles of color and design, period influences, selection and arrangement of decorative materials, organized selection of furnishings and materials. Includes consumer and socioeconomic considerations. Field trips may be required. Lecture. **Transfer:** CSU

INTDS 210 — INTRODUCTION TO SALES & MARKETING FOR DESIGN 3 UNITS  
Introduction to sales psychology and the principles of marketing and business development for design. Increasing success in the workplace by building client relationships, understanding client needs and wants, and finding a niche. Focus on marketing methods, branding, ethics, selling design services, communication and presentation techniques, and effective use of technology. Field trips may be required. Lecture. (A-F or P/NP) **Transfer:** CSU

INTDS 215 — INTERIOR DESIGN STUDIO 1  
2 UNITS  
Corequisite: Satisfactory completion of or concurrent enrollment in INTDS 200.  
Designed to apply concepts and theories presented in the lecture course, INTDS 200, Fundamentals of Interior Design. Emphasizes the design process in developing solutions for design projects. Develops skills for using visual and oral communication tools for client presentations. Field trips may be required. A-F and P/NP. Lecture/Laboratory. **Transfer:** CSU

INTDS 220 — INTERIOR FINISHES CONSTRUCTION MATERIALS  
3 UNITS  
Analysis, application and evaluation of the materials and components of Interior Design and Architecture. Emphasis will be placed on the selection, specification and estimation of cost and installation criteria. Introduction to local and regional design resources, the influence of style and innovations in technology and sustainability. Flooring, paint and wall coverings, window treatments, textiles, furnishings and various surface materials will be included. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 230 — DRAFTING FOR INTERIORS  
3 UNITS  
Introduction to tools and techniques specific to drafting of interior spaces. Development of floor plans, sections, elevations, cabinetry and reflected ceiling plans relating to interior design. Incorporation of space planning, ADA guidelines, building codes, concepts of universal and lifetime design, and visual presentations. (A-F or P/NP) Field trips may be required. Lecture/Laboratory. **Transfer:** CSU

INTDS 235 — SPACE PLANNING  
3 UNITS  
Formerly listed as Residential Space Planning.  
Research and development of design solutions based upon human factors, codes, and interior environmental issues. Application of the design process to interior design projects. Structural and non-structural components of interior environments are included. Skills in drafting and presentation techniques are emphasized. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 245 — KITCHEN AND BATH DESIGN  
3 UNITS  
Overview of the basic principles of kitchen and bath design and space layout, including drawing floor plans and elevations to scale. Selection and evaluation of current product and materials are made based upon the survey of the client’s needs. Cabinetry, appliances, finish materials, barrier-free design and changing family patterns, reflecting current materials, innovations, technology, and regulations. Field trips may be required. (A-F or P/NP) Lecture. **Transfer:** CSU

INTDS 250 — COMPUTER AIDED DRAFTING/DESIGN FOR INTERIOR DESIGN  
3 UNITS  
**Prerequisite:** Satisfactory completion of INTDS 200.  
Overview and application of the basic skills and techniques of Computer Aided Drafting/Design (CADD) using designer-specific software. Floor plans, space planning, elevations and client needs are emphasized. Principles and elements of design as well as the ADA and NFPA guidelines will be applied to interior architecture, layout, lighting, finish materials & furnishings. Field trips may be required. Lecture/Laboratory. (A-F or P/NP) **Transfer:** CSU

INTDS 270 — BUSINESS AND PROFESSIONAL PRACTICES  
3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MAINT 10 or qualify through the MJC assessment process.  
The business and professional management of an interior design practice, including legal issues, ethics, project programming and business practices. Introduction to field-specific software for management. Emphasis placed upon creating a business plan, developing contracts, choosing an appropriate business format, and licensing alternatives. Wholesale resource development procedures and introduction to professional examinations are included. Field trips may be required. Lecture. (A-F or P/NP) **Transfer:** CSU

**INTEC** *(Industrial Technology)*

Dean (Interim): Pedro Mendez  
Office: John Muir 258W  
Phone: (209) 575-6332  
Division website: www.mjc.edu/prospective/programs/tech/industrialtech/  
Instructors: John Kripp

Courses are intended for students interested in new career opportunities in the Manufacturing, Maintenance, Electrician, Home Building, Building and Safety Code Administration, Plant and Facilities and Production fields as well as those already working in the Industry who are interested in updating or upgrading their knowledge and skills.
INTEC 50—BASIC VOCATIONAL ENGLISH FOR INDUSTRIAL TECHNOLOGY
Reading, writing, speaking and vocabulary skill development specific to industrial technology. Designed for students who want to improve their basic language skills. Elective credit only, does not apply toward Industrial Technology major. Field trips may be required. Two maximum completions. Lecture/Laboratory.

INTEC 115—INTRODUCTION TO TECHNICAL INDUSTRIES
Introduction to educational and technical employment opportunities. Includes an understanding of curriculum requirements that pertain to educational goals as they relate to technical majors. Assists students in setting goals and developing skills necessary for life-long success in obtaining, maintaining, and advancing in technical careers. Current events that impact technical industries and society will be discussed. History and employment opportunities in technical industries. Techniques and applications of sound shop/agency practices and hazardous waste management. Development of an educational plan and presentations by MJC counselors. Field trips may be required. Materials fee required. Lecture/Laboratory.

INTEC 200—INTRODUCTION TO MECHANICAL TECHNOLOGY
Introduction to principles, procedures, terminology, reports, federal and state law, safety, team building and quality programs of modern industrial and processing plants. Field trips may be required. Three maximum completions. Lecture/Laboratory.

INTEC 201—INTRODUCTION TO INDUSTRIAL OPERATIONS
Introduction to policies, procedures, terminology, reports, federal and state law, safety, team building and quality programs of modern industrial and processing plants. Field trips may be required. Three maximum completions. Lecture/Laboratory.

INTEC 202—FUNDAMENTALS OF INDUSTRIAL TECHNOLOGY
Students will explore common industrial production, manufacturing and fabrication processes. Field trips required. Three maximum completions. Lecture/Laboratory.

INTEC 203—INDUSTRIAL MECHANICAL/PNEUMATIC COMPONENTS AND EQUIPMENT
An introduction to fluid power, power transmission, and other common mechanical components and equipment found in the manufacturing and processing industry. Content includes basic terminology, operation, calculations, installation, and maintenance of individual components as well as systems. Field trips may be required. (A-F or P/NP) Lecture/Laboratory.

INTEC 204 (WASN’T IN CATALOG)

INTEC 205—PRINCIPLES OF QUALITY CONTROL SYSTEMS
Recommended for Success: Satisfactory completion of INTEC 201, 202, 203, 261 or industry experience.
Principles of quality control, quality improvement methodology, and quality commitments of industrial corporations. Field trips may be required. Three maximum completions. Lecture.

INTEC 208—THE WORLD OF ELECTRICITY AND ELECTRONICS
Also offered as ELTEC 208
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 20.
An overview of electrical and electronic phenomena as applied to common consumer and industrial devices. The course examines the physical nature and laws of electricity and magnetism and the application of the scientific method. DC and AC circuits and their characteristics are examined, predicted, and measured. Electronic test equipment and voltage sources are utilized in the construction, troubleshooting and testing of electrical and electronic circuits. The historical development and the socioeconomic aspects of the “electronic age” are also examined. **This course is approved by the State of California for the Department of Apprenticeship Standards (DAS) Electricians’ Training Program.** Materials fee required. Field trips are not required. (A-F or P/NP) Lecture/Laboratory. Transfer: CSU General Education: (MJC-GE A)

INTEC 211—INSTRUMENTATION DEVICES AND SYSTEMS
Prerequisite: Satisfactory completion of ELTEC 211 or 208.
An introduction to industrial instrumentation devices and systems. The principles and operation of mechanical and electrical transducers. Analysis of industrial instrumentation systems. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU

INTEC 223—INDUSTRIAL ELECTRICAL COMPONENTS AND CONTROL DEVICES
Also offered as ELTEC 223
An introduction to common components and control devices found in the manufacturing and processing industry. Content includes basic terminology, component identification, manufacturer’s specifications, and maintenance procedures for the components and devices. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU

INTEC 225—PRINCIPLES OF ELECTRICAL WIRING
Formerly listed as ELECT 225.
Also offered as AGM 225.
Fundamental principles, systems, and applications of electrical energy and the equipment necessary to manually or automatically control that energy. Field trips required. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU

INTEC 226—MOTORS, CONTROLS AND CONTROLLERS
Prerequisite: Satisfactory completion of ELTEC 211 and ELTEC 208 or INTEC 208
Also offered as ELTEC 226
An introduction to AC and DC motors and the circuits which control them. Use and programming of variable frequency drive motor controllers. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU

INTEC 229—COMMERCIAL AND INDUSTRIAL WIRING
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete (INTEC 225 OR AGM 225) AND (INTEC 208 OR ELTEC 208).
Also offered as ELTEC 229
Essential insights and practices in Commercial and Industrial Wiring that develop skills for the electrical trade. Topics include the application of basic concepts in the design of electrical systems, implementation of accepted trade practices used in installations, and common troubleshooting techniques. Field trips may be required. Materials fee required. Lecture/Laboratory. Transfer: CSU

INTEC 248—ELECTRICAL CODES AND ORDINANCES
Interpretation and application of national, state and local codes and ordinances which regulate the installation and maintenance of electrical circuits and equipment. This course may be repeated up to four completions. Formerly listed as INDED 393. Four completions allowed. Field trips may be required. (A-F Only) Lecture. Transfer: CSU

INTEC 249—ANALYSIS OF ELECTRICAL CODES
Prerequisite: Satisfactory completion of INTEC 248
Continuation of INTEC 248. Training in analysis of national, state and local codes and ordinances which regulate installation, alteration and maintenance of electrical circuits and equipment. Lecture. Three maximum completions. Materials fee required. (A-F Only) (Spring) Transfer: CSU

INTEC 261—INTRODUCTION TO PLANT MAINTENANCE
An introduction to fundamental maintenance principles, procedures, practices and troubleshooting principles for equipment and systems in modern industrial and processing plants. Formerly listed as INDED 361. Transfer: CSU. Field trips may be required. (A-F Only) Lecture.

INTEC 262—HYDRAULICS/PNEUMATICS
Also offered as AGM 262
Principles and practices of hydraulics/pneumatics as used in the industry. Study of different applications and management of hydraulics for the most efficient use. Basic pneumatic principles and application systems. Field trips may be required. Two maximum completions. Lecture. Transfer: CSU

INTEC 265—TROUBLESHOOTING TECHNIQUES
Also offered as ELTEC 265
Common troubleshooting methodologies used in manufacturing today. One solution and multiple-solution problems commonly found in everyday life through industrial processes. Prepares students to actively solve problems in personal and professional life. Lecture. Transfer: CSU. 

Color Legend:

NEW COURSE
UPDATED COURSE
INACTIVATED/HISTORICAL COURSE
COURSE UNCHANGED FROM 2011-2012 CATALOG

REV 01/13/2012 LSM
**INTEC 300—SURVEY OF APPLIED TECHNOLOGIES**  
3 UNITS  
Also offered as ELTEC 300  
Survey of applied technologies in the Advance Manufacturing, Transportation, or Construction Industry. Topics include electricity, small engines/industrial mechanics, common computer software and robotics. Field trips may be required. (A-F only) Lecture/Laboratory.

**INTEC 301—EMPLOYABILITY SKILLS 1**  
2 UNITS  
Development of basic background in non-technical skills (S.C.A.N.S.) that will increase a person's employability in the Family and Consumer Sciences and Industrial Technology related occupations. Topics include: Team Building, Safety, Time and Money Management. Field trips may be required. Lecture/Laboratory.

**INTEC 302—EMPLOYABILITY SKILLS 2**  
2 UNITS  
Development of basic background in non-technical skills (S.C.A.N.S.) that will increase a person's employability in the Family and Consumer Sciences and Industrial Technology related occupations. Topics include: Leadership, Safety, Industry Expectations. Field trips may be required. Lecture/Lab.

**INTEC 303—INTRODUCTION TO TEAMWORK DEVELOPMENT FOR INDUSTRY**  
1 UNIT  
Interdisciplinary approach to the study of team solutions to industrial problems. Introduction to team member selection criteria, development of team cohesiveness, team solutions to realistic industry problems, and use of computer software to solve and present team solutions. Modules in communications, computer application and industrial technology. Lecture.

**INTEC 306—INTRODUCTION TO OCCUPATIONAL SAFETY & HEALTH**  
3 UNITS  
Formerly listed as INSAF 367  
Also offered as: MFGA 306 May need to take out!  
Introduction to the principles and techniques of occupational safety and health. Lecture. (A-F Only)

**INTEC 312—BEARINGS**  
½ UNIT  
A descriptive introduction to the common industrial bearing. Content includes basic terminology, operation and maintenance of journal bearings, ball and roller bearings, bearing seals, bearing lubrication, and bearing maintenance. Lecture.

**INTEC 320—ELECTRICAL SAFETY**  
1 UNIT  
Also offered as ELTEC 320  

**INTEC 340—UNIFORM BUILDING CODE, STRUCTURAL**  
3 UNITS  
Formerly listed as INDED 360  
Review of building plans for compliance with structural engineering requirements as per the Uniform Building Code. Four completions allowed. Lecture. (A-F Only)

**INTEC 341—UNIFORM BUILDING CODE, NON-STRUCTURAL**  
3 UNITS  
Formerly listed as INDED 370  
Review of building plans for compliance with non-structural requirements such as occupancy types, and fire safety requirements as per the Uniform Building Code. Four completions allowed. Lecture. (A-F Only)

**INTEC 344—UNIFORM MECHANICAL CODE**  
3 UNITS  
Formerly listed as INDED 374  
Minimum code requirements for the installation of heating, ventilating, cooling, and refrigeration systems in residential and commercial applications. Four completions allowed. Lecture. (A-F Only)

**INTEC 346—ENFORCEMENT OF BUILDING REPAIR AND ABATEMENT REGULATIONS**  
3 UNITS  
Formerly listed as INDED 376  
General review of housing regulations and their application to existing structures. Four completions allowed. Lecture. (A-F Only)

**INTEC 350—INDUSTRIAL TECHNOLOGY INTERNSHIP**  
2 UNITS  
Prerequisite: Minimum of 15 units completed in Industrial Technology major.  

**INTEC 362—INDUSTRIAL REFRIGERATION SYSTEMS**  
2 UNITS  
Principles underlying heat transfer as used in refrigeration systems. Explanation of devices and equipment used in industrial refrigeration systems. Formerly listed as INDED 362. Field trips may be required. (A-F Only) Lecture.

**INTEC 366—HEATING VENTILATION, AIR—CONDITIONING AND REFRIGERATION**  
2 UNITS  
Formerly listed as INDED 366  
Principles of installation and maintenance of heating and cooling systems in residential and industrial facilities. Four completions allowed. Lecture/Laboratory. (A-F Only)

**INTEC 367—PLUMBING PRINCIPLES AND METHODS**  
2 UNITS  
Formerly listed as INDED 368  
Principles of design, installation, and maintenance, and troubleshooting of residential and commercial pipe fitting and plumbing. Discussions and activities involve application of standard plumbing practice. Field trips may be required. Lecture/Laboratory. (A-F Only)

**INTEC 376—MECHANICAL BLUEPRINT READING**  
2 UNITS  
Also offered as: ENGTIC 376  
Recommended for Success: Before enrolling in this course, students are strongly advised to have a basic working knowledge of personal computers.  
Reading and interpreting basic two-dimensional mechanical drawings and sketches. Terminology, symbols, notes, and practices for manufacturing and fabrication trades. Field trips may be required. (A-F or P/NP) Lecture/Lab.

**INTEC 379—UNIFORM PLUMBING CODE**  
3 UNITS  
Formerly listed as INDED 369  
Installation and inspection of plumbing in the construction of residential units. Content based upon current Uniform Plumbing Code. Lecture. Four completions allowed. (A-F Only)

**INTEC 380—ELEMENTARY CARPENTRY AND CONSTRUCTION**  
5 UNITS  
Designed to provide entry-level skills for students wanting to explore and enter the construction trades. Experiences in developing carpentry, construction, planning and employability skills used in the residential and commercial construction industry. Field trips may be required. Materials fees. Lecture/Laboratory. (A-F Only)

**INTEC 390, A,B—ADVANCED MANUFACTURING TRAINING**  
½ UNITS  
Advanced skills utilized in industry and needed by students working in the mechanical and automation areas of plant maintenance. Field trips may be required. Maximum of 10 units of INTEC 390 and INTEC 391 credit. Lecture. (A-F Only)

**INTEC 391—ADVANCED MANUFACTURING TRAINING**  
1½ UNITS  
Advanced skills utilized in industry and needed by students working in the mechanical and automation areas of plant maintenance. Field trips may be required. Maximum of 10 units of INTEC 390 and INTEC 391 credit. Lecture. (A-F Only)

**ITAL (Italian)**

**ITAL 101—ITALIAN 1**  
5 UNITS  
MATH

COURSES OFFERED

LIBR 101 — LIBRARY RESEARCH ON THE WEB 1 UNIT
Formerly listed as LR 120 - Library Research on the World Wide Web
Introduction to online research, with an emphasis on the concepts and skills necessary for academic research. Analysis of advantages and limitations of web-based information, evaluation of online and traditional information sources, and strategies for efficient searching. Evaluation of online information and documentation of sources in APA and MLA formats. Field trips are not required. (A-F or P/NP - Student choice) Lecture Transfer: (CSU, UC) General Education: (MJC-GE: D2 )

LIBR 120 — LIBRARY RESEARCH ON THE INTERNET 1 UNIT
Formerly listed as LR 120 - Library Research on the World Wide Web
Introduction to online research, with an emphasis on the concepts and skills necessary for academic research. Analysis of advantages and limitations of web-based information, evaluation of online and traditional information sources, and strategies for efficient searching. Evaluation of online information and documentation of sources in APA and MLA formats. Field trips are not required. (A-F or P/NP) Lecture Transfer: (CSU)

JRNAL 100 — REPORTING AND WRITING FOR THE MEDIA 3 UNITS
Prerequisite: Satisfactory completion of ENGL 100 or ENGL 100B
Fundamentals of reporting and writing ideas and information for the print, broadcast, and “new” media, including research, writing, development of news judgment, and ethical standards. Basic skills development in shaping news story, feature, critical review, and opinion stories according to professional standards of accuracy, completeness and style, as well as essentials of newspaper design. Prepares students to work on campus newspaper, radio, television, and newspaper website and for higher education in these fields, recommended for students interested in any branch of the media, including Internet publications. Field trips may be required. Lecture/Laboratory. (A-F or P/NP)
Transfer: (CSU, UC) Transfer: (CSU) (JRNAL 100)

JRNAL 120B.C — MULTIMEDIA NEWS PRODUCTION STAFF 2 – 3 UNITS
Formerly listed as Student Newspaper Production Staff
Prerequisite: Satisfactory completion of JRNAL 100
Production-based class produces the student newspapers, the Pirates’ Log in both print and online versions. Class provides hands-on, applied learning experience and training in reporting, writing and/or producing news and feature articles in a variety of media, as well as editing and layout skills. This is the second class in the sequence for the degree in journalism, intended for writers and editors, graphic and web designers. Four completions allowed. Field trips are not required. (A-F Only) Lab MJC Activities Transfer: CSU (MJC) JRNAL 120B.Only (formerly JRNAL 100C)

JRNAL 146B.C — PIRATES’ LOG PHOTO STAFF 2 – 3 UNITS
Formerly listed as Newspaper Photo Staff
Prerequisite: Satisfactory completion of JRNAL 100
Production-based class produces the student newspaper, the Pirates’ Log in both print and online versions. Class provides hands-on, applied learning experience and training in reporting, writing and/or producing news and feature articles in a variety of media, as well as editing and layout skills. This is the second class in the sequence for the degree in journalism, intended for writers and editors, graphic and web designers. Four completions allowed. Field trips are not required. (A-F Only) Lab MJC Activities Transfer: CSU

JRNAL 170 — PHOTOJOURNALISM 3 UNITS
Prerequisite: Satisfactory completion of JRNAL 170
Also offered as ART 270
Study of photography as a tool in reporting news, sports and feature stories in print and online media. Examines work and approach of professional photographers, develops fundamental skills in visual storytelling, camera, lighting and compositional techniques, editorial content, page layout, copyright and ethics. Photographs will be made with film and/or digital cameras and processed on computer. May be completed up to 2 times. Lecture Lab. (A-F or P/NP) MJC Activities Transfer: CSU

LIBR 100 — RESEARCH METHODOLOGY 2 UNITS
Formerly listed as LR 100
Introduction to academic information sources, including traditional print resources, ebooks, online periodical and research databases, and the World Wide Web. Emphasis on the development of effective research strategies, and the retrieval, evaluation, and use of information for academic research assignments. Field trips are not required. (A-F or P/NP) Lecture Transfer: (CSU, UC) General Education: (MJC-GE: D2 )

LIBR 100 RESEARCH CONCEPTS AND PRACTICE 3 UNITS
Formerly listed as: LIBR - 100: Research Methodology,LR - 100: Research Methodology Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 50.
Introduction to academic information sources, including traditional print resources, ebooks, online periodical and research databases, and the Web. Emphasis on the development of effective research strategies, and the retrieval, evaluation, and use of information for academic research assignments. Field trips are not required. (A-F or P/NP - Student choice) Lecture Transfer: (CSU, UC)

MACH (Machine Tool Technology)
Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332
Division website: www.mjc.edu/prospective/programs/teched/electech/
Instructors: Jeff Weaver

The Machine Tool Technology program provides training toward the acquisition of proficiency in the use of metal removal and metal forming machine tools. Training in calculations of cutting speeds and feeds, use of measuring tools, study of elementary metallurgy, and making adjustments are also emphasized. Special focus is given to care of equipment, orderliness, accuracy, speed, judgment, confidence and safe working habits.

MACH 211D,E — MACHINE TOOL TECHNOLOGY 1 4.5 UNITS
Prerequisite: Satisfactory completion of MATH 20 & ESL 45
Study and application of basic measuring tools, (steel rules, vernier calipers and micrometers), layout tools and hand tools. Emphasis in the theory and practice in the use of drilling machines, bandsaws and lathes. This course meets California apprenticeship standards. Intended for students with little or no experience in the manufacturing industry. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (A-F Only) Transfer: (CSU)

MACH 211 MACHINE TOOL TECHNOLOGY 1 4 – 5 UNITS
Formerly listed as: MACH - 211D: Machine Tool Technology 1
This class is an introduction for students with no experience in the manufacturing metal processes. The study and application of basic measuring tools, (steel rules, vernier calipers & micrometers), layout tools and hand tools. Also examines the theory and practice of drilling machines, bandsaws, lathes and vertical milling machines. Materials Fee Required. Field trips might be required. (A-F or P/NP - Student choice) Lecture Lab Lecture Lab Transfer: (CSU)

MACH 212D.E — MACHINE TOOL TECHNOLOGY 2 4.5 UNITS
Prerequisite: Satisfactory completion of (MACH 211D, or E) and MACH 301.

Principles and fundamental use of precision grinders and advanced applications of the manual engine lathe and milling. Advanced levels of measuring systems, study of basic metallurgy, and techniques of heat treating to enhance the properties of metallic parts. Meets California apprenticeship standards. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (A-F or P/NP) Transfer: CSU

MACH 213C—MACHINE TOOL TECHNOLOGY 3  3,4 UNITS
Prerequisite: Satisfactory completion of (MACH 212D, or E) and MACH 302.
Theory and practice in the use of the dividing head, metric system, classes of fit, tool and cutter grinding, gear cutting, and dovetails. Carbide tools emphasized. Exploration and study of manufacturing processes found in use in local industries. Meets California apprenticeship standards. Field trips may be required. Two maximum completions. Materials fee required. Lecture/Laboratory. (A-F or P/NP)(Fall) Transfer: CSU

MACH 218—INTRODUCTION TO CNC LATHE PROGRAMMING 2 UNITS
Recommended for Success: Previous experience in the use of manual or CNC lathes. The use of manual programming techniques to develop tool path codes required to produce products using CNC milling and turning equipment. Effective cutting speeds, feeds, and depth of cut for various machining operations. The use of “canned cycles” with word address programming as well as conversational programming format will be addressed. May be completed up to 2 times. Field trips may be required. Lecture/Lab. (A-F or P/NP). Materials fee required. Transfer: CSU

MACH 219—INTRODUCTION TO CNC MILL PROGRAMMING 2 UNITS
Recommended for Success: Previous experience in the use of manual or CNC lathes and milling machines. The previous courses and/or or training must have been completed satisfactorily. The use of manual programming techniques to develop tool path codes required to produce products using CNC milling and turning equipment. Effective cutting speeds, feeds, and depth of cut for various machining operations using “canned cycles” and word address programming format will be addressed. May be completed up to 2 times. Materials fee required. Lecture/Lab. (A-F or P/NP). Transfer: CSU

MACH 220—CNC MACHINE TOOL PROGRAMMING 2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to be familiar with basic metal cutting practices, machine tool setup, and calculation of cutting tool speeds and feeds as encountered in the operation of manual lathes and milling machines; and have a working knowledge in the operation of personal computers; and have a basic understanding of formatting, structure, and codes used in the Word Address Format system of CNC programming. The use of CAM (Computer Aided Manufacturing) programming techniques and software to develop tool path codes required to machine products using CNC milling and turning equipment. Materials Fee Required. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

MACH 222—CNC MACHINE OPERATIONS 2 UNITS
Recommended for Success: Concurrent enrollment in MACH 219, 220, or 221 and previous machining experience. The setup and operation of computer-controlled machine tools with emphasis on vertical machining centers and two axis turning centers. Primary controller operation, machine setup, tooling application, installation and adjustment and basic codes needed for editing will be addressed. Field trips may be required. Two maximum completions. Lecture/Laboratory/Other. Materials fee required. Transfer: CSU

MACH 223—ADVANCED CNC MACHINE OPERATIONS 3 UNITS
Prerequisite: Satisfactory completion of MACH 222. Advanced setups, controller issues, and inspection techniques that may be encountered in the use of CNC controlled machine tools. May be completed up to 2 times. Field trips may be required. Lecture/Lab. (A-F or P/NP). Materials fee required. Transfer: CSU

MACH 301—MACHINE SHOP 1  3 UNITS
Study and application of basic measuring tools. (steel rulers, vernier calipers and micrometers), layout tools and hand tools. Theory and practice in the use of drilling machines, bandsaws, lathes and vertical milling machines. Meets California apprenticeship standards. Two maximum completions. Field trips may be required. Lecture/Laboratory. (A-F or P/NP) Materials fee required.

MACH 302—MACHINE SHOP 2  3 UNITS
Prerequisites: Satisfactory completion of MACH 211D, or E or MACH 301. Principles and fundamentals in the use of the milling machine, band saw and surface grinder with emphasis on milling operations. Principles of metallurgy, heat treating, and the application of more advanced measuring techniques will be explored. Field trips may be required. Lecture/Laboratory. (A-F or P/NP) Three maximum completions. Materials fee required.

MACH 303—MACHINE SHOP 3  3 UNITS
Prerequisites: Satisfactory completion of MACH 212D, or E or MACH 302. Theory and practice in the use of the dividing head, gearing systems, carbide tooling, and non-traditional machining systems. Field trips may be required. Lecture/Laboratory. Three maximum completions. (A-F or P/NP) Materials fee required.

MACH 310—ADVANCED TOPICS IN MACHINING 1 UNIT
Prerequisite: Previous machining experience or Satisfactory completion of MACH 211E or MACH 301 or MACH 221 OR MACH 222.
Overview of advanced tooling and machining practices. Topics may include electrical discharge machining, rapid prototyping, fretting, cutting tool materials and geometry, die casting and plastic injection molding. Field trips may be required. Three maximum completions. Lecture/Laboratory. Materials fee required. (Summer)(P/NP Only)

MACH 311—CNC PROGRAMMING WITH MACROS 1 UNIT
Prerequisite: Previous machining experience or Satisfactory completion of MACH 219 and previous CNC programming experience or on-the-job training. This is NOT an entry-level class.
The application and practice of using macro techniques in the development of programs for the operation of CNC machine tools. May be completed up to 2 times. Field trips may be required. Materials fee required. Lecture/Lab. (P/NP Only)

MACH 312—4 AXIS MILL PROGRAMMING AND OPERATION 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to have had previous programming experience on CNC machine tools, using word address format language. Application and practice of programming, installing, and operating 4th axis rotary devices on CNC vertical machining centers. Materials fee required. Two maximum completions. Field trips may be required. (P/NP Only) Lecture/Lab

MACH 313—MANUFACTURING PROCESSES 2 UNITS
The exploration and study of manufacturing techniques and common industrial processes found in local industries. Field trips may be required. Two maximum completions. Lecture.

MACH 315—3D PART PROGRAMMING FOR CNC MACHINES 1 UNIT
Prerequisite: Satisfactory completion of MACH 220. The application and practice of developing a program using CAD/CAM software that will direct a CNC machining center to cut a three dimensional contoured part. May be completed up to 2 times. Field trips may be required. Materials fee required. Lecture/Lab. (P/NP Only)

MACH 395—ADVANCED MACH TOOL TECHNOLOGY LAB 1-3 UNITS
Formerly listed as MACH 395C
Prerequisite: Satisfactory completion of MACH 211 or MACH 301 or MACH 218 or MACH 219 or MACH 220 or MACH 222.
Provides access to a Machine Tool Technology laboratory setting for advanced students for the purpose of continued skills development applicable to production machining processes. Three maximum completions. Field trips are not required. (P/NP Only) Lab.
MATH 10—INTRODUCTION TO MATHEMATICS 4 UNITS
Recommended for success: Qualification by MJC assessment process.
Module 1: A review of the four arithmetic operations as they apply to whole numbers, common fractions, and decimal fractions. Module 2: A variety of selected applications from arithmetic, pre-algebra, and geometry. Lecture. (A-F or P/NP)

MATH 20—PRE-ALGEBRA 5 UNITS
Prerequisite: Qualification by MJC math assessment process or satisfactory completion of MATH 10. Recommended for success: Placement into READ 82 or higher by MJC Assessment process.
Designed to help students prepare for algebra and applied math courses by reviewing fundamental operations of arithmetic and common geometric formulas, and introducing the algebraic concepts of simplifying expressions, polynomial arithmetic, and solving and graphing linear equations. Arithmetic reviewed includes integers, decimals, ratios, and percents. Lecture. (A-F or P/NP)

MATH 47—SKILLS FOR SUCCESS IN NON-TRANSFER LEVEL COURSES ½ UNIT
Formerly listed as MATH 47 - Skills for Success in Elementary Algebra
Designed to provide practice in basic mathematical skills needed for success in non-transfer level mathematics courses. Particularly useful for those who are weak in prerequisite skills or who have struggled in other non-transfer level mathematics courses. NOTE: MATH 47 DOES NOT serve as a prerequisite to any mathematics course. Four completions allowed. Field trips are not required. (P/NP Only) Lab.

MATH 49—SKILLS FOR SUCCESS IN TRANSFER LEVEL MATH COURSES ½ UNIT
Formerly listed as MATH 49 - Skills for Success in Intermediate Algebra
Designed to provide practice on mathematical skills needed for success in transfer level mathematics courses. Particularly useful for those who are weak in prerequisite skills or who have struggled in intermediate algebra or precalculus courses. NOTE: MATH 49 DOES NOT serve as an entry level prerequisite to transferable mathematics courses. Four completions allowed. Field trips are not required. (P/NP Only) Lab.

MATH 49 SKILLS FOR SUCCESS IN TRANSFER LEVEL MATH COURSES 0.5 UNIT
Formerly listed as MATH 49 - Skills for Success in Intermediate Algebra
Practice on mathematical skills needed for success in transfer level mathematics courses. Intended for those who need prerequisite skills or who have struggled in intermediate algebra or precalculus courses. DOES NOT serve as a prerequisite to transferable mathematics courses. Four maximum completions allowed. Field trips are not required. (P/NP Only) Lab.

MATH 50—BUSINESS MATHEMATICS 3 UNITS
Prerequisite: Satisfactory completion of MATH 20 or qualification by the MJC assessment process.
Mathematical background for business students. Problems of buying and selling, simple and compound interest, bank discounts, trade and cash discounts, installment payments, inventory markups, annuities, present value, commissions, taxes, payrolls, depreciation, and financial statements. Field trips are not required. (A-F or P/NP) Lecture.

MATH 70—ELEMENTARY ALGEBRA 5 UNITS
Prerequisite: Satisfactory completion of MATH 20 or qualification by the MJC assessment process.
Equivalent to a first-year high school algebra course. Topics include: simplifying algebraic expressions, solving linear and quadratic equations, factoring, graphing lines and parabolas, solving systems of equations, rational expressions, and radicals, with application problems incorporated into each topic. Field trips are not required. (A-F or P/NP) Lecture. (CC MATH 101)

MATH 71—ELEMENTARY ALGEBRA 1 3 UNITS
First half of MATH 70 - Elementary Algebra. Topics include: simplifying algebraic expressions, solving linear equations, graphing lines, and solving systems of linear equations and inequalities, with application problems incorporated into each topic. Field trips are not required. (A-F or P/NP) Lecture. (CC MATH 100A)

MATH 72—ELEMENTARY ALGEBRA 2 3 UNITS
Second half of MATH 70 - Elementary Algebra. Topics include: simplifying algebraic expressions, factoring, solving quadratic equations, graphing parabolas, rational expressions, and radicals, with application problems incorporated into each topic. Field trips are not required. (A-F or P/NP) Lecture. (CC MATH 100B)

MATH 80—PLANE GEOMETRY 3 UNITS
Prerequisite: Satisfactory completion of MATH 70 or equivalent or qualification by MJC assessment process.
Theorems of plane geometry, proofs and the nature of a mathematical proof, numerical solution of geometric problems, and constructions using compass and straight edge. Lecture. (A-F or P/NP).

General Education: (MJC-GE:02)
### Mathematics Courses

**MATH 88—ALGEBRA WITH APPLICATIONS** 3 UNITS
Prerequisite: Satisfactory completion of MATH 70 or (MATH 71 and MATH 72) or equivalent placement by the MJC assessment process.
Designed as an alternative to MATH 90 for students pursuing an AA or AS degree and not intending to transfer. Topics include linear equations, linear inequalities, and applications; quadratic equations and applications; exponential equations and applications; solving systems of linear equations and applications; probability. (A-F or P/NP) Lecture. Not repeatable. General Education: (MJC-GE: D2)

**MATH 90—INTERMEDIATE ALGEBRA** 5 UNITS
Prerequisite: Satisfactory completion of MATH 70 or MATH 71 and MATH 72 or qualification by the MJC assessment process.
Equivalent to second-year high school algebra. Topics include linear, quadratic, exponential, and logarithmic functions and equations; complex numbers; solving systems of equations using substitution, matrices and determinants; conic sections, sequences, series and combinatorics. Field trips are not required. (A-F or P/NP) Lecture (CC MATH 104) General Education: (MJC-GE: D2)

### General Education/Transfer & Liberal Studies

**MATH 101—MATHEMATICAL IDEAS AND APPLICATIONS** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A general education course emphasizing the role of mathematics in civilization, the nature of mathematical thought, and applications of mathematics. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 6) General Education: (MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

**MATH 105—STRUCTURE OF MATHEMATICS 1** 4 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Structure of arithmetic for prospective elementary school teachers. The definitions, operations, and properties of sets, counting numbers, integers, rational and irrational numbers; number systems; order theory. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 4A) General Education: (MJC-GE: D2)(CSU-GE: B4)

**MATH 106—STRUCTURE OF MATHEMATICS 2** 4 UNITS
Prerequisite: Satisfactory completion of MATH 105.
Elementary probability, statistics and geometry for prospective elementary school teachers. Includes Euclidean geometry, measurement, and analytic geometry. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 4B) General Education: (MJC-GE: D2)

**MATH 111—APPLIED COLLEGE ALGEBRA** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A College Algebra course that presents each topic to answer the question, "What is this used for?" Instruction begins with a real-world problem and develops the mathematical models and methods to solve it. Topics include: polynomial, rational, exponential, and logarithmic functions; theory of equations; systems of equations; matrix algebra, and analytic geometry. Designed specifically for students needing only a one-semester, non-precalculus College Algebra course for transfer to a university. Not open to students who have received credit in MATH 121. Will not serve as a prerequisite to MATH 122 or MATH 171. Students preparing to take calculus must take MATH 121 and MATH 122. Lecture. Field trips are not required (A-F or P/NP) Transfer: (CSU, UC)(CC MATH 17A) General Education: (MJC-GE: D2)

**MATH 121—PRE-CALCULUS 1** 5 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A one-semester College Algebra course or, together with MATH 122, a two-semester Precalculus course sequence. Emphasis on algebra skills essential for success in calculus. Topics include: review of linear, quadratic, rational, radical, exponential, logarithmic equations and graphs; systems of equations and inequalities (linear and non-linear); functions and graphs; synthetic division; complex roots of polynomials; the Fundamental Theorem of Algebra; applications of exponential and logarithmic equations; sequences and series; mathematical induction; combinatorics. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 17B) General Education: (MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

**MATH 122—PRE-CALCULUS 2** 5 UNITS
Prerequisite: Satisfactory completion of MATH 121.
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 80. Together with MATH 121, a two-semester Precalculus course sequence. A comprehensive course in analytic geometry and trigonometry. Topics include: vectors, rotation of axes, conic sections, polar and parametric functions, and trigonometric functions & graphs with applications. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 17C)(MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

**MATH 134—ELEMENTARY STATISTICS** 5 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Elements of descriptive and inferential statistics, including probability, discrete and continuous probability distributions, hypothesis testing, regression analysis, ANOVA, and nonparametric statistics. Materials fee required. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 2)(TCSU STAT 110)(TCSU STAT 120) General Education: (MJC-GE: D2)(CSU-GE: B4)(IGETC: 2)

**MATH 138—CALCULUS FOR BUSINESS AND SOCIAL SCIENCES** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.

**MATH 139—CALCULUS 1** 5 UNITS
Prerequisite: Satisfactory completion of MATH 121 or MATH 122.

**MATH 140—CALCULUS 2** 3 UNITS
Prerequisite: satisfactorily completed MATH 139.
Calculation of limits and derivatives of transcendental functions; applications to business economics. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 14)(MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

**STATISTICS, COMPUTERS, AND APPLICATIONS**

**MATH 190—FINITE MATHEMATICS** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Set theory, probability and counting techniques, Markov chains, matrices and linear systems, linear programming (Simplex Method), applications to business and behavioral and social sciences. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 12) General Education: (MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

**MATH 200—DISCRETE MATHEMATICS** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.

**MATH 210—LINEAR ALGEBRA** 3 UNITS
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
Vector spaces, linear transformations, determinants, eigenvalues, and eigenvectors. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC MATH 210) General Education: (MJC-GE: D2)(CSU-GE: B4)(IGETC: 2A)

### Color Legend:

- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**
MDAST (Medical Assisting)

Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 258-W
Phone: (209) 575-6373
Division website: www.mjc.edu/alliedhealth
Instructors: Shirley Buzbee

MDAST 320—INTRODUCTION TO MEDICAL ASSISTING 3 UNITS
Concurrent Enrollment: MDAST 321, 322, 323.
Orientation to the medical office and the role of the medical assistant. Professional relations and communications, ethics, and legal responsibilities; history of medicine, and community health facilities. Field trips may be required. Lecture. (A-F Only)(Fall)

MDAST 321—MEDICAL TERMINOLOGY 3 UNITS
Emphasizing logical and rational understanding of word parts. Covers medical terms organized according to body systems, including fundamental understanding of the basic anatomy, function, diseases and surgeries of each body system. (A-F Only). Lecture. (Fall)

MDAST 322—MEDICAL ASSISTING CLINICAL PROCEDURES 3 UNITS
Concurrent Enrollment: MDAST 320 and MDAST 323.
Clinical medical assisting skills, which pertain to preparing the patient for examination and assisting the physician during patient examination and treatment. Orientation to the medical office and the role of the medical assistant. Professional relations and communications, ethics, and legal responsibilities; history of medicine, and community health facilities. Field trips may be required. Lecture/Laboratory. Materials Fee Required. Field trips are not required. (A-F Only) Lecture /Lab

MDAST 323—MEDICAL ASSISTING ADMINISTRATIVE PROCEDURES 3 ½ UNITS
Concurrent Enrollment: MDAST 320, 321, 322.
Medical assisting administrative procedures including financial record keeping, insurance claims, banking functions, payroll and medical records. Students receive training in completing the above procedures manually and by computer. Field trips may be required. Lecture. (A-F Only) (Fall)

MDAST 324—INTRODUCTION TO DISEASES AND PHARMACOLOGY 4 UNITS
Concurrent Enrollment: MDAST 325, 326.
Medical terminology related to the human body in health and disease. Pathogenesis and discussion of representative diseases, signs and symptoms of many major diseases, and basic drugs used in treatment. Lecture (A-F Only)(Spring)

MDAST 325—LABORATORY PROCEDURES 3 UNITS
Concurrent Enrollment: MDAST 324, 325.
Introduction to laboratory procedures necessary to aid the physician. Includes patient preparation for diagnostic studies, purposes, techniques and recording of procedures commonly performed. Field trips may be required. Lecture/Laboratory. (A-F Only) (Spring)

MDAST 325 MEDICAL ASSISTING LABORATORY PROCEDURES 3 UNITS
Formerly listed as: MDAST - 325: Lab Procedures
Prerequisite: Satisfactory completion of MDAST 320 and MDAST 322 and MDAST 323. Concurrent enrollment in MDAST 324 and MDAST 326. Introduction to laboratory procedures necessary to aid the physician. Includes patient preparation for diagnostic studies, purposes, techniques, and recording of procedures commonly performed. Field trips might be required. (A-F Only) Lecture /Lab
### MDAST 326—EXTERNSHIP UNITS
**Concurrent Enrollment: MDAST 321, 325**

Externship portion of the program consists of two 8-week rotations in which students apply knowledge in performing administrative and clinical procedures. Students also receive training in medical office emergencies and seeking employment. Lecture / Lab. Materials fee required. Field trips may be required. (A-F Only) Lecture / Lab.

### MDAST 326 MEDICAL ASSISTING PRACTICUM 7 UNITS
Formerly listed as: MDAST 326 Externship

Prerequisite: Satisfactory completion of MDAST 320 and MDAST 322 and MDAST 323.
Corequisite: Concurrent enrollment in MDAST 324 and MDAST 325.

Practicum portion of the program consists of two 8-week rotations in which students apply knowledge in performing administrative and clinical procedures. Students also receive training in taking the national certification exam and seeking employment. Field trips are not required. (A-F Only) Lecture / Lab.

### MDAST 327—CLINICAL EXTERNSHIP 3½ UNITS
**Prerequisite: Satisfactory completion of (MDAST 320 and MDAST 322 and MDAST 323)**

Clinical Externship portion of the program consists of 184 clinical hours in which students apply knowledge in performing administrative and clinical procedures. Students also receive training in medical office emergencies and seeking employment. (F - Only) Lab. Materials fee required.

### MDAST 350—MEDICAL TRANSCRIPTION 3 UNITS
Recommended for Success: Satisfactory completion of MDAST 321, OFADM203 or equivalent, OFADM331 or equivalent.

Entry-level course to prepare students to take the Medical Transcriptionist Certification Exam offered by the American Association for Medical Transcription (AAMT). Covers use of computers to transcribe physician dictation including progress notes, letters, consultations, procedures, and radiology reports heard through the earphones of a transcribing machine. Two maximum completions. Lecture. Transcribing machine, earphones and supplies required.

### MDAST 352—MEDICAL CODING/CPT 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MDAST 321.

Entry-level course that covers the use of Current Procedural Terminology (CPT), a coding system developed by the American Medical Association (AMA) to convert widely accepted, uniform descriptions of medical, surgical, and diagnostic services rendered by health care providers into five-digit numeric codes. This course along with Medical Assisting 353 prepares students to take the Certified Coding Specialist Examination offered by the American Health Information Management Association (AHIMA). Unlimited completions. (A-F or P/NP) Lecture.

### MDAST 353—MEDICAL CODING/ICD 3 UNITS
Recommended for Success: Satisfactory completion of MDAST 321 or equivalent.

Formerly listed as MDAST 352: Medical Coding Specialist.

Entry-level course that covers the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) which is designed for the classification of patient morbidity (sickness) and mortality (death) information for statistical purposes and for the indexing of hospital records by disease and operation for data storage and retrieval. This course along with Medical Assisting 352 prepares students to take the Certified Coding Specialist Examination offered by the American Health Information Management Association (AHIMA). Two maximum completions. Lecture. (A-F or P/NP) Two completions allowed.

### MDAST 354—INTERMEDIATE MEDICAL CODING/ICD9CM 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MDAST 321, 325, and MDAST 353.

Continued development in various settings where ICD-9-CM is used, such as specialities, physician offices, medical group practices, medical clinics, billing companies and hospitals. Fundamental skills include ICD-9-CM coding, guidelines/conventions, use of the ICD-9-CM manual, and numerous coding exercises (including excerpts from actual patient records). (A-F or P/NP). Field trips may be required. Lecture.

### METEO 161—INTRODUCTION TO METEOROLOGY 4 UNITS
**Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 70 or PHYS 160 and (EASCI 161)**

Introduction to atmospheric structure, weather monitoring techniques, solar radiation, thermodynamics, air pressure, humidity, cloud formation, wind patterns, planetary circulation patterns, storms, and severe weather (including thunderstorms, tornadoes, and hurricanes), and the causes and consequences of climate change. Lab activities emphasize gathering and analysis of meteorological data (both archived and real-time) to understand and predict weather events. Field trips may be required. (A-F or P/NP) Transfer: (CSU, UC) General Education: (MJC GE: A) (CSU-GE: B1, B3) (IGETC: 5A, 5C)

### MICRO 101—MICROBIOLOGY 4 UNITS
**Prerequisite: Satisfactory completion of BIO 116 or BIO 101 or BIO 117 and CHEM 143.**

Includes the study of microorganisms, microbial metabolism, genetics, and varieties; immunity, infections, and antimicrobials. Intended mainly for student entering the health professions. Field trips may be required. (A-F or P/NP) Lecture / Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: 5A, 5C)

### METEOROLOGY (Meteorology)
**Dean: Brian Sanders**

Division Office: Science Building, Room 126

Phone: (209) 575-6173

Division website: www.mjc.edu/current/programs/divdeps/sme/

Instructors: Noah Hughes

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**Color Legend:**
- **NEW COURSE**
- **UPDATED COURSE**
- **INACTIVATED/HISTORICAL COURSE**
- **COURSE UNCHANGED FROM 2011-2012 CATALOG**
MUSIC DEPARTMENT COURSE ID CROSSWALK

In the 2009-2010 MJC academic year, the Music Department has new course IDs. Below is a crosswalk that will allow you to quickly identify new courses and what formerly were MUSIC courses.

OLD MUSIC ID   NEW ID
MUSIC 100   MUST 101
MUSIC 101   MUST 102
MUSIC 102   MUST 121
MUSIC 103   MUST 122
MUSIC 104   MUST 131
MUSIC 105   MUST 132
MUSIC 106   MUST 123
MUSIC 107   MUST 124
MUSIC 108   MUST 133
MUSIC 109   MUST 134
MUSIC 110   MUST 101
MUSIC 112   MUST 122
MUSIC 113   MUST 122
MUSIC 114   MUSE 191
MUSIC 115   MUSE 192
MUSIC 118   MUSE 111
MUSIC 119   MUST 111
MUSIC 120   MUST 121
MUSIC 121   MUSE 122

OLD MUSIC ID   NEW ID
MUSIC 122   MUSA 123
MUSIC 123   MUSA 124
MUSIC 124   MUSA 131
MUSIC 125   MUSA 132
MUSIC 126   MUSA 133
MUSIC 127   MUSA 161
MUSIC 128   MUSA 163
MUSIC 129   MUSA 164
MUSIC 131   MUSA 151
MUSIC 132   MUSA 152
MUSIC 133   MUSA 153
MUSIC 134   MUSA 154
MUSIC 139   MUSA 155
MUSIC 140   MUSA 171
MUSIC 142   MUSA 173
MUSIC 144   MUSE 183
MUSIC 145   MUSE 176
MUSIC 146   MUSE 175
MUSIC 147   MUSE 185

MUSA (Music: Applied)

See “Repeat Limitations on Music Courses.” Students must meet performance and repertoire standards before proceeding to successive levels in the following courses.

MUSA 121—ELEMENTARY PIANO
Formerly listed as MUSIC 120
1 UNIT
Essentials of music notation, fundamentals of rhythm, tone production and the coordinated use of both hands; introduction of scales and chords; methods of practice and memorization. Completion of MUSA 121, Elementary Piano is recommended for all general elementary teaching candidates. Electronic keyboard lab and acoustic upright piano practice rooms available. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab MJC Activities. Transfer: (CSU, UC) (CC MUSIC 31A)

MUSA 122—PIANO ENRICHMENT
Formerly listed as MUSC 121
Recommended for Success: Satisfactory completion of MUSA 121 or equivalent.
1 UNIT
Designed for the continuation of development of coordination, understanding of rhythmic skills, technique and theory. Emphasis upon sight reading and ensemble playing. Electronic piano lab and practice rooms available. Field trips may be required. Four completions allowed. Lecture/Laboratory MJC Activities. Transfer: (CSU, UC)

MUSA 123—INTERMEDIATE PIANO
Formerly listed as MUSC 122
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSA 122.
1 UNIT
Further study of piano technique, tone production, efficient use of physical self; detailed study of diatonic scales and harmonic progressions; attention given to improving sight reading skills, learning process, musical interpretation of the score, memorization techniques and performance skills; introduction to intermediate level repertoire from various stylistic periods; participation in live performance demonstrations as well as live student recital by the end of the quarter. (A-F Only) Lab MJC Activities. Transfer: (CSU, UC)

MUSA 124—ADVANCED PIANO
Formerly listed as MUSC 124
Recommended for Success: Satisfactory completion of MUSA 123.
2 UNITS
Lecture/Laboratory. Development of skills introduced in MUSA 121; analysis of practice methods to overcome technical difficulties; study of advanced repertoire from various stylistic periods; emphasis on preparation for recital. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab MJC Activities. Transfer: (CSU, UC)

MUSA 131—ORGAN 1
Formerly listed as MUSIC 181
Recommended for Success: Satisfactory completion of MUSA 121 or equivalent.
1 UNIT
Lecture/Laboratory. History construction and literature for the organ; use of foot pedals, coordination of hands and pedals together using basic rhythm, melodic, and chordal structures; study of advanced repertoire from various stylistic periods; emphasis on preparation for recital. Four completions allowed. Field trips may be required. (A-F Only) Lab MJC Activities. Transfer: (CSU, UC)

MUSA 132—ORGAN 2
Formerly listed as MUSIC 125
Recommended for Success: Satisfactory completion of MUSA 131 or equivalent.
1 UNIT
Lecture/Laboratory. Ability to coordinate keyboard manuals and pedals together using basic rhythm, melodic, and chordal structures. Development of skills introduced in MUSA 131. Emphasis on analysis of techniques to overcome technical difficulties; study of advanced repertoire from various stylistic periods; emphasis on preparation for recital. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab MJC Activities. Transfer: (CSU, UC)

MUSA 133—ORGAN 3
Formerly listed as MUSIC 126
Recommended for Success: Satisfactory completion of MUSA 132 or equivalent.
1 UNIT
Lecture/Laboratory. Limitation on enrollment: Ability to coordinate keyboard manuals and pedals together using basic rhythm, melodic, and chordal structures. Study and analysis of organ literature from baroque, classical, romantic and contemporary periods; function of the organ in solo and accompanimental forms; opportunity for practical experience in both areas; emphasis on cumulative repertoire. Four completions allowed. Lecture/Laboratory (A-F or P/NP) Transfer: (CSU, UC)

MUSA 134—ELEMENTARY HARPSCORD
Formerly listed as MUSIC 181
Recommended for Success: Satisfactory completion of MUSA 121.
1 UNIT
Introduction to the basic skills of harpsichord performance. Literature from the Renaissance, Baroque and Early Classical periods. Performance techniques will include figured bass, vocal and instrumental accompanying. Four completions allowed. Field trips are not required. (A-F or P/NP) Lecture/Lab MJC Activities. Transfer: (CSU, UC)
MUSA 141—ELEMENTARY GUITAR
Formerly listed as MUSIC 163
Examination of the basic elements of classical guitar technique and repertoire. Technical
work will emphasize posture, correct right- and left-hand technique, as well as treble clef note-reading
in first position. The course will introduce sight-reading on easy melodies, as well as chord
charts. Chord coverage will include: closed finger chords, opened finger chords, and bar chords.
The student is responsible for providing a nylon-stringed classical guitar, a guitar tuner, and a
foot-stool. All students will perform in a semi-formal performance at the end of the semester.
Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities Transfer:
(CSU, UC) (EC MUSIC 49)

MUSA 142—GUITAR PERFORMANCE
Formerly listed as MUSA 142 and MUSIC 164
Prerequisite: Satisfactory completion of MUSA 141.
Continuation of MUSA 141. Focus on group performances and an introduction to solo
performance. Students will learn to follow notation up to the fifth position in solo and smaller
ensembles. Intermediate techniques including tremolo, flamenco strumming, and harmonic playing.
Technical exercises and techniques to develop finger independence. A classical, nylon-string
 guitar is strongly recommended for use in the course. Four completions allowed. Field trips are not
 required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC)

MUSA 143—GUITAR ENRICHMENT
Formerly listed as MUSA 143 and MUSIC 174 - Guitar Advancement
Prerequisite: Satisfactory completion of MUSA 141.
Recommended for Success: Before enrolling in this course, students are strongly advised to
satisfactorily complete MUSA 142.
Improvement of guitarist’s accomplishment technique, analytical skills, and performance compe-
tence. Music education majors are strongly encouraged to enroll. Special attention will be given
to performance in solo and group settings. Students will be required to participate in a formal recital
at the end of the term. A nylon-string classical or flamenco guitar is required for the course.
Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities Transfer:
(CSU, UC)

MUSA 144—INTERMEDIATE GUITAR
Formerly listed as MUSIC 165
Prerequisite: Satisfactory completion of MUSA 141.
Recommended for Success: Before enrolling in this course, students are strongly advised to
satisfactorily complete MUSA 142 or satisfactorily complete MUSA 143.
Further development of guitar performance skills and techniques. Particular attention will be given
to technical exercises and the performance practices surrounding the classical and flamenco inter-
mediate repertoire. Students will need a Nylon-string classical guitar. Two public performances
(mid-term and final) will be connected to this course. Four completions allowed. Field trips may be
required. (A-F or P/NP) Lab. MJC Activities Transfer: (CSU, UC)

MUSA 145—APPLIED CLASSICAL GUITAR
Formerly listed as MUSIC 166
Corequisite: Concurrent enrollment required in or satisfactory completion of MUSA 144.
Designed for performance majors intending to transfer to four-year institutions. The curricula will
cover materials necessary to provide the appropriate skill level for upper division coursework at
most universities. Students must perform a forty-five minute recital as a completion requirement
for the course. A fifteen-minute jury may substitute for the recital requirement. Four completions
allowed. Field trips may be required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC)
(CE MUSIC 50)

MUSA 151—ELEMENTARY VOICE 1
Formerly listed as MUSIC 131
Development of singing voice through consideration and application of the basic elements of
tone production, i.e., breathing, resonance, diction posture, principles applied through group
and individual vocal exercises and singing. This is the first of two preparatory courses for students
who intend to take voice classes at the major level. Three completions allowed. Field trips may be
required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC) (EC MUSIC 36)

MUSA 152—ELEMENTARY VOICE 2
Formerly listed as MUSIC 132: Voice Enrichment
Recommended for Success: Before enrolling in this course, students are strongly advised to
have previous vocal experience.
Further development of the singing voice through consideration of application of the basic
elements of tone production, i.e., breathing, resonance, diction, posture, principles applied through
group and individual vocal exercises and singing. Field trips may be required. Four completions
allowed. Lecture/Laboratory. MJC Activities Transfer: (CSU, UC) (EC MUSIC 37)

MUSA 153—APPLIED VOCAL REPERTOIRE 1
Formerly listed as MUSIC 133 - Intermediate Voice
Concurrent Enrollment required in MUSA 155
Recommended for Success: Before enrolling in this course, students are strongly advised
to have a chorale background or previous voice lessons.
Limitation on enrollment: Enrollment limited to students possessing the ability to read music
and sing within the tonal center.
Study and performance of vocal solo literature with emphasis on building repertoire,
development of style, and preparation for recitals. Recital and public performance participation
required. This class is intended for voice majors. Necessary for transfer to a four-year University as a music major. Four Maximum completions. Field trips are not required. (A-F or P/NP) Lab. MJC Activities Transfer: (CSU, UC) (EC MUSIC 39)

MUSA 154—APPLIED VOCAL REPERTOIRE 2
Formerly listed as MUSIC 134
Prerequisite: Satisfactory completion of MUSA 153.
Corequisite: Concurrent enrollment required in MUSA 155.
Limitations on enrollment: Enrollment limited to students with an intermediate level ability to
sight read music and sing within the tonal center.
Continuation of MUSA 153 with greater emphasis on building repertoire, development of style,
and preparation for recital auditions, auditions in general and recitals. Recital and public performance participation required. This class is intended for voice majors. This is a necessary class
to transfer as a music major to a four year university. Four completions allowed. Field trips may be
required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC) (EC MUSIC 56)

MUSA 155—VOCAL MASTER CLASS
Formerly listed as MUSIC 139
Corequisite: Concurrent enrollment required in MUSA 153 or MUSA 154.
Development of vocal performance through the consideration and application of good vocal
 technique, performance practice and dramatic character development, principles applied through
recital attendance and through solo, duet or ensemble performances in class and public recitals.
Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities Transfer:
(CSU, UC)

MUSA 161—ELEMENTARY STRINGS 1 UNIT
Formerly listed as: MUSIC - 127: Elementary Strings
Introduction to playing orchestral stringed instruments (violin, viola, cello, or bass). Designed for
students with no previous instrumental music experience, students who wish to review funda-
mentals of string playing, or experienced instrumentalists who wish to learn a new instrument.
Students must own or have access to a bowed string instrument. Public performance required.
Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities Transfer:
(CSU, UC) General Education: (MJC-GE: Activities)

MUSA 163—APPLIED MUSIC (VIOLIN AND VIOLA) 1 UNIT
Formerly listed as MUSIC 128
Recommended for Success: Before enrolling in this course, students are strongly advised to
play a violin or viola at an intermediate level and demonstrate the ability to read music.
Study and performance of violin or viola technique and literature. Public performance participation
required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. MJC
Activities Transfer: (CSU, UC)

MUSA 164 APPLIED MUSIC (VIOLIN AND VIOLA) 1 UNIT
Formerly listed as: MUSIC - 129: Applied Music (Violin and Viola)
Recommended for Success: Before enrolling in this course, students are strongly advised to
be able to play a violin or viola at an intermediate level and demonstrate the ability to read music.
Study and performance of violin or viola technique and literature. Public performance participa-
tion required. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student
choice) Lecture. Transfer: (CSU, UC) General Education. (MJC-GE: Activities)
MUSA 164—APPLIED MUSIC (CELLO AND BASS) 1 UNIT
Formerly listed as MUSIC 129
Co-requisite: Concurrent enrollment required in MUSA 161 or MUSA 165 or MUSA 867.
Recommended for Success: Before enrolling in this course, students are strongly advised to play a cello or bass at an intermediate or advanced level and demonstrate the ability to read music. Study and performance of cello or bass technique and literature. Recital and public performance participation required. Repeatable up to 4 units maximum. Field trips may be required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC)

MUSA 164 APPLIED MUSIC (CELLO AND BASS) 1 UNIT
Formerly listed as: MUSA - 129: Applied Music (Cello and Bass)
Recommended for Success: Before enrolling in this course, students are strongly advised to play a cello or bass at an intermediate or advanced level and demonstrate the ability to read music. Study and performance of cello or bass technique and literature. Recital and public performance participation required. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

MUSA 173—APPLIED MUSIC (BRASS AND PERCUSSION) 1 UNIT
Formerly listed as MUSA 173 and MUSIC 142
Limitations on Enrollment: Enrollment limited to students who pass audition. Study and performance of brass and percussion solo literature, etudes, scales, and technical studies. Intended for music majors and/or advanced players. Recital and public performance participation required. Student must own or have access to an instrument appropriate for this course. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC)

MUSA 183—APPLIED MUSIC (WOODWINDS) 1 UNIT
Formerly listed as MUSA 144
Limitations on Enrollment: Enrollment limited to students who pass audition. Study and performance of woodwind solo literature, etudes, scales, and technical studies. Intended for music majors and/or advanced players. Recital and public performance participation required. Student must own or have access to an instrument appropriate for this course. Field trips may be required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture. MJC Activities Transfer: (CSU, UC) (CC MUSIC 52)

MUSC (Music: Commercial)
See “Repeat Limitations on Music Courses.” Students must meet performance and repertoire standards before proceeding to succeeding levels in the following classes.

MUSC 111—RECORDING ARTS 1 2 UNITS
Formerly listed as MUSC 172
Also offered as RATV 172
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSA 121 and MUSA 122
Introduction to the terminology and practices of the recording arts. Properties of sound, microphone placement, multi-track recording, mixing and mastering. Lab time and materials fees will be required. Two completions allowed. Field trips may be required. (A-F or P/NP) MJC Activities Transfer: CSU

MUSC 112—RECORDING ARTS 2 2 UNITS
Formerly listed as MUSC 178
Also offered as RATV 178
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSA 111
Advanced topics in the recording studio relating to the digital recording process. In-depth study of microphone choice and placement, microphones pre-amplifiers and analog processors, direct inputting, non-destructive digital editing, software plug-ins, automation techniques, mixing and mastering in the recording process. Laboratory time required. Materials fee required. Four completions allowed. MJC Activities Transfer: CSU.

MUSC 121—INTRODUCTION TO THE SYNTHESIZER AND MIDI 2 UNITS
Formerly listed as MUSC 170
Introduction to synthesizer and electronic keyboard sound design and operational procedures. MIDI (Musical Instrument Digital Interface) music studio techniques will be examined and utilized in an electronic music studio environment. Music acoustics, electronic music composition, synthesizer live performance, digital sampling, audio recording and music software programs will be explored. Four completions allowed. Field trips are not required. (A-F or P/NP) Lecture/Lab. MJC Activities Transfer: (SU)

MUSC 122—ELECTRONIC MUSIC 2 1 UNIT
Formerly listed as MUSC 171
Recommended for Success: Satisfactory completion of MUSC 122 or previous synthesizer/tape recording and MIDI music studio experience.
Applied topics in electronic music composition, MIDI (Musical Instrument Digital Interface) music studio procedures, sampling, tape and digital recording. Performance in an electronic music concert is expected. Field trips may be required. Four completions allowed. Laboratory. (A-F or P/NP) MJC Activities Transfer: (SU)

MUSC 126—MUSIC PRODUCTION FOR MULTIMEDIA 2 UNITS
Formerly listed as MUSC 168
Also offered as RATV 168
Designed for the student with an interest in music composing, music production, sound design and sound effects. The course will explore production of music for recording artists, music videos, demos, public service announcements, radio programs, graphics animations, commercials, jingles, and TV/film scoring through the use of MIDI sequencing, digital multitrack recording and SMPTE synchronizing. Four completions allowed. Lecture/Lab. MJC Activities. (A-F or P/NP) Transfer: CSU

MUSE (Music: Ensemble)
See “Repeat Limitations on Music Courses.” Students must meet performance and repertoire standards before proceeding to succeeding levels in the following classes.

MUSE 145—GUITAR ORCHESTRA 1 UNIT
Formerly listed as MUSC 173
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSA 141 or be concurrently enrolled in MUSA 141.
Emphasis on guitar ensemble repertoire, preparation and performance. Required participation and performance in large and small ensembles. Students will be assigned to groups that will perform in mandatory graded concert performances throughout the course. Students should be prepared to perform in different venues and represent the college’s guitar department. Four completions allowed. Field trips are required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

MUSE 151—MASTERWORKS CHORUS 1 UNIT
Formerly listed as MUSC 154
Previous experience in a large chorus ensemble.
A choral ensemble for all levels of singers. Study and performance of either one large scale work or program of shorter choral works, drawn from the standard repertoire of classical, folk, and popular music. Public performances required. Four completions allowed. Laboratory. MJC Activities. Transfer: (CSU,UC) (CC MUSIC 66)
MUSE 155 — CONCERT CHOIR  
1 UNIT  
Formerly listed as MUSIC 152  
Limitation on enrollment: Ability to match pitch, sing melodies in tune, and sight read elementary-level passages will be evaluated in audition.  
A large choral ensemble for intermediate and advanced level singers. Public performances of multi-cultural programs from a variety of historical periods. Field trips required. Four completions allowed. Rehearsal/Other: MJC Activities. Transfer: (CSU, UC) (CC MUSIC 78)  

MUSE 156 — CHAMBER CHOIR  
1 UNIT  
Formerly listed as MUSIC 153 — Singers  
Prerequisite: Satisfactory completion of audition.  
A small choral ensemble for advanced singers. Public performances of historically and culturally varied music. Four Maximum completions. Field trips are required. (A-F or P/NP - Student choice) /Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities)  

MUSE 156 — STRING ORCHESTRA  
1 UNIT  
Formerly listed as MUSIC 150  
Recommended for Success: Before enrolling in this course, students are strongly advised to have experience playing a musical instrument.  
Rehearsal and public performance of orchestral music written for a full symphony of strings, woodwinds, brass, and percussion. Repertoire will include works from many eras and a variety of cultures. Focus on developing ensemble balance and tone color, good intonation, rhythmic and stylistic integrity. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab MJC Activities. Transfer: (CSU, UC) (CC MUSIC 76)  

MUSE 156 — CHAMBER MUSIC ENSEMBLES (STRINGS)  
1 UNIT  
Formerly listed as MUSIC 151  
Recommended for Success: Before enrolling in this course, students are strongly advised to have previous experience in instrumental music and have the ability to read music. Student must own or have access to an appropriate instrument. Rehearsal and performance of original wind literature and transcriptions for concert band. Field trips may be required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities Transfer: (CSU, UC)  

MUSE 157 — SYMPHONIC BAND  
1 UNIT  
Formerly listed as MUSIC 146  
Recommended for Success: Before enrolling in this course, students are strongly advised to have previous experience in instrumental music and have the ability to read music. Rehearsal and performance of original wind band literature and transcriptions for band. Public performances are required. Field trips may be required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities Transfer: (CSU, UC)  

MUSE 158 — EVENING JAZZ BAND  
1 UNIT  
Formerly listed as MUSIC 147  
Recommended for Success: Before enrolling in this course, students are strongly advised to have previous experience in instrumental music and have the ability to read music. Study and performance of jazz literature in both traditional and contemporary styles. Public performances are required. Field trips may be required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC) (CC MUSIC 72)  

MUSE 161 — COMMUNITY ORCHESTRA  
1 UNIT  
Formerly listed as MUSIC 162  
Recommended for Success: Before enrolling in this course, students are strongly advised to have experience playing a musical instrument.  
Rehearsal and public performance of orchestral music written for a full symphony of strings, woodwinds, brass, and percussion. Repertoire will include works from many eras and a variety of cultures. Focus on developing ensemble balance and tone color, good intonation, rhythmic and stylistic integrity. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: (CSU, UC) (CC MUSIC 76)  

MUSE 162 — SYMPHONIC BAND  
1 UNIT  
Formerly listed as OLDAD 854  
Study and performance of either one large-scale work or program of shorter works. Public performance required. Not a graded course. Lecture/Laboratory.  

MUSE 165 — JAZZ BAND  
1 UNIT  
Formerly listed as MUSIC 145  
Recommended for Success: Before enrolling in this course, students are strongly advised to have previous experience playing jazz music (one player per part). Student must own or have access to an instrument appropriate for this course.  
Study and performance of jazz literature in both traditional and contemporary styles. Public performances are required. Field trips may be required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC) (CC MUSIC 72)  

MUSE 166 — CONCERT BAND  
1 UNIT  
Formerly listed as OLDAD 861  
Study and performance of a combination of large-scale and shorter works for orchestra. Public performance. Field trips may be required. Laboratory/Rehearsal. Unlimited repeats. Not a graded course.  

MUSE 171 — CONCERT BAND  
1 UNIT  
Formerly listed as OLDAD 862  
Study and performance of a combination of large-scale and shorter works for orchestra. Public performance. Field trips may be required. Laboratory/Rehearsal. Unlimited repeats. Not a graded course.
MUSG (Music: General)

MUSG 101—MUSIC APPRECIATION 3 UNITS
Formerly listed as MUSIC 110
A survey course emphasizing the development of the listener’s perception of the basic elements of music. Illustrations encompass various types of folk and traditional music, traditional classical music from a variety of historical periods, and musical material of a contemporary nature. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:C) (CSU-GE:C1) (IGETC:3A)

MUSG 102—INTRODUCTION TO WORLD MUSIC 3 UNITS
Formerly listed as MUSIC 169
Exploration of traditional/contemporary folk music of Africa, Asia, Latin America Europe and the U.S. from the perspective of music as culture. Investigations of the impact/influence of migratory patterns, social-political processes, and how ethnicities (groups that exist by language and customs) are reflected in music. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:C) (CSU-GE:C1) (IGETC:3A)

MUSG 111—INTRODUCTION TO AMERICAN POPULAR MUSIC 3 UNITS
Formerly listed as MUSIC 118
Survey course emphasizing the listeners perception and understanding of the elements of American Popular Music. Illustrations will cover Folk, Jazz, Musical Theatre and Rock styles of popular music. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:C) (CSU-GE:C1) (IGETC:3A)

MUSG 112—THE MUSIC OF THE BEATLES 3 UNITS
Formerly listed as MUSIC 190
A survey of the musical styles by the Beatles dating from 1958-1970. Emphasis will be placed on identifying the various musical periods, the stylistic practices in their compositions, their performances and interviews. Field trips are not required. (A-F Only) Lecture. Transfer: (CSU, UC)

MUSG 121—HISTORY OF WESTERN MUSIC 1 3 UNIT
Formerly listed as MUSIC 112
Survey of musical styles by master composers dating from the ancient period through the end of the baroque period (1750). Various historical periods, the stylistic practices in composition and performance, musical compositions of the most prominent composers from each historical period. Field trips may be required. Lecture/Laboratory. (A-F or P/NP) Transfer: (CSU, UC) (CC MUSIC 11) General Education: (MJC-GE:C) (CSU-GE:C1) (IGETC:3A)

MUSG 122—HISTORY OF WESTERN MUSIC 2 3 UNIT
Formerly listed as MUSIC 113
A general survey of the musical styles by master composers dating from the classical period (1750) to the present. Emphasis will be placed on identifying the various historical periods, the stylistic practices in composition and performance, and utilizing the musical compositions of the most prominent composers from each historical period. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC MUSIC 11) General Education: (MJC-GE:C) (CSU-GE:C1) (IGETC:3A)

MUST (Music: Theory)

MUST 101—MUSIC FUNDAMENTALS 1 3 UNITS
Formerly listed as MUSIC 100
Basic music theory concepts such as rhythm, musical notation, tonality, scales, key signatures, intervals and chords. Basic aural skills concepts such as rhythmic drills and sight singing using solfège. (A-F Only) Lecture. Transfer: (CSU, UC)

MUST 102—MUSIC FUNDAMENTALS 2 3 UNITS
Formerly listed as MUSIC 104
Prerequisite: Satisfactory completion of MUST 101/MUSIC 100
Recommended for Success: Satisfactory completion of MUST 101/MUSIC 100 and MUST 110/MUSIC 112.
A continuation of MUST 101. Further study of intervals, rhythm, chord construction with application to the keyboard, ear training, sight singing, and simple dictation. Lecture/Lab. Transfer: (CSU, UC)

MUST 103—MUSIC, BIRTH TO K: THEORY AND PRACTICE 3 UNITS
Formerly listed as MUSIC 176 Also offered as CLDDV 293
Referred to as CLDDV 293
Prerequisite: Satisfactory completion of CLDDV 293
Recommended for Success: Before enrolling in this course students must have successfully completed one or more of the following courses: MUST 101/MUSIC 100, MUST 121/MUSIC 120, MUSA 161/MUSIC 127, MUSA 161/MUSIC 131 or MUSA 153/MUSIC 133.
Introduction to the methods of teaching music to children (birth to kindergarten). Theories on the developing mind and the benefit of musical understanding to musicianship as well as overall child development. Kodaly, Orff, Dalcroze and other methods will be covered. Relationship of child development theory and developmentally appropriate practice. Study of classroom implementation process. First in a two course sequence. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU

MUSP (Music: Stage Production)

MUSP 151—MUSICAL THEATRE WORKSHOP 2 UNITS
Formerly listed as MUSIC 157
Recommended for Success: Before enrolling in this course, students are strongly advised to have previous vocal experience. Intended for those interested in singing and acting. Study and performance of musical theatre. Public performance is required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: (CSU, UC)

MUSP 153—ADVANCED MUSICAL THEATRE WORKSHOP 2 UNITS
Formerly listed as MUSIC 158
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSP 151.
Intended for those interested in singing and acting. Study and performance of musical theatre. Public performance is required. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

MUSI (Music: Independent Activities)

MUSI 349 A-D—WORK EXPERIENCE IN THE ARTS — SUPERVISED PRACTICE 1 UNIT
Formerly listed as MUSIC 349A
Designed for those majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. May be repeated for a total of 16 units. Also offered during May, June, and July. Lecture/Other. (A-F Only)
MUST 111—RHYTHMIC SKILLS  
Formerly listed as MUSIC 119  
1 UNIT  
Introduction to terminology and symbols used in the rhythmic notation of music, and to facilitate the development of the ability to read, write and accurately perform rhythmic figures with proper inflexion and artistic phrasing. Four completions allowed. Lecture/Laboratory. Not offered every semester. Transfer: CSU

MUST 120—MUSIC THEORY REVIEW  
1 UNIT  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUST 101 or MUST 102, or have had at least two years of high school or community ensemble performance experience; and have declared music as their major. Designed to prepare music majors for the required music theory sequence; review of fundamentals of music theory, rhythmic and pitch notation, terminology, diatonic intervals, triads, inversions, figured bass, Roman numeral analysis. Four completions allowed. (A-F or P/NP) Lecture. Transfer: CSU

MUST 121—MUSIC THEORY 1  
Formerly listed as MUSIC 102  
3 UNITS  
Prerequisite: Satisfactory completion of MUST 101.  
Corequisite: Concurrent enrollment required in MUST 121 and MUST 131.  
Brief review of primary Music Fundamentals topics: Tonality, Introduction to common harmonic practice through exercises in part writing and figured bass, simple guided composition, and analysis. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC MUSIC 20A) General Education: (MJC-GE-C) (CSU-GE-C1) (IGETC:3A)

MUST 122—MUSIC THEORY 2  
Formerly listed as MUSIC 103  
3 UNITS  
Prerequisite: Satisfactory completion of MUST 121.  
Corequisite: Concurrent enrollment required in MUST 122 and MUST 132.  
Continuing development of technique in common harmonic practice through Roman numeral analysis, part writing, figured bass, and guided composition exercises. Introduction to tonal harmony and secondary dominants; introduction to phrase and period structure. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (TCSU MUS 140) (CC MUSIC 20B) General Education: (MJC-GE-C) (CSU-GE-C1) (IGETC:3A)

MUST 123—MUSIC THEORY 3  
Formerly listed as MUSIC 106  
3 UNITS  
Prerequisite: Satisfactory completion of MUST 122  
Concurrent Enrollment: MUST 130  
Recommended for Success: Concurrent enrollment in MUST 133.  
Continuation of the study of structural elements of music such as melody, rhythm, harmony and form with emphasis on the organization of these elements, study of chromatic alteration, expansion of harmonic resources through chromaticism, study of binary and sonata form. Lecture. Not offered every semester. Transfer: (CSU, UC) (CC MUSIC 21A) General Education: (CSU-GE-C1) (IGETC:3A)

MUST 124—MUSIC THEORY 4  
Formerly listed as MUSIC 107  
3 UNITS  
Prerequisite: Satisfactory completion of MUST 123  
Concurrent Enrollment: MUST 130  
Recommended for Success: Concurrent enrollment in MUST 134.  
Continued development of analytical techniques; study of fugue and basic tonal counterpoint; introduction to Impressionism and to twentieth century structural techniques; study of ternary form with emphasis on the organization of these elements; study of chromatic alteration, expansion of harmonic resources through chromaticism, study of binary and sonata form. Lecture. Not offered every semester. Transfer: (CSU, UC)(CC MUSIC 21B) (CSU-GE-C1) (IGETC:3A)

MUST 130—PRACTICAL MUSIC  
Formerly listed as MUSIC 197  
1 UNIT  
Corequisite: Concurrent enrollment required in MUST 121 or MUST 122 or MUST 123 or MUST 124.  
Development of aural and rhythmic skills by means of computer assisted participation. Exposure to standard western art music repertoire by means of guided listening. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: CSU

MUST 131—aural SKILLS 1  
Formerly listed as MUSIC 104  
Corequisite: Satisfactory completion of or concurrent enrollment in MUST 121.  
Introduction to sight singing techniques using movable Do, solfege and rhythm syllables; supplements the study of music theory by practical application of concepts learned through singing, rhythmic reading analysis and dictation. (A-F or P/NP) Lecture/Laboratory. Transfer: (CSU, UC)(CC MUSIC 4A)(TCSU MUS 160)

MUST 132—aural SKILLS 2  
Formerly listed as MUSIC 105  
1 UNIT  
Corequisite: Satisfactory completion of or concurrent enrollment in MUST 122.  
Continuation of MUST 131; further development of techniques for sight singing, taking melodic and rhythmic dictation. (A-F or P/NP) Lab. Transfer: (CSU, UC)(CC MUSIC 4B)

MUST 133—aural SKILLS 3  
Formerly listed as MUSIC 108  
1 UNIT  
Corequisite: Satisfactory completion of MUST 132.  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUST 123.  
Sequentinal continuation of MUST 132. Aural Skills 2; supplements the study of written music theory (MUST 123) by practical application of singing, ear-training, and performance techniques; further development of musicianship through weekly singing of diatonic as well as chromatic melodies from textbook using movable Do Solfege and conducting; basic keyboard skills to harmonize weekly melodies and achieve correct intonation; analysis, rhythmic, melodic and harmonic dictation; use of computer assisted instruction in Praxica Musica,lab portion of the class. (MUST 130). Field trips might be required. (A-F Only) Lab. Transfer: (CSU, UC)(CC MUSIC 5A)

MUST 134—aural SKILLS 4  
Formerly listed as MUSIC 109  
1 UNIT  
Corequisite: Satisfactory completion of MUST 133  
Recommended for Success: Concurrent enrollment in MUST 124.  
Continuation of materials presented in preceding applied music theory courses. Development of individual proficiency in sight-singing, dictation, aural, rhythmic and keyboard skills. Field trips may be required. Lecture/Laboratory. (Spring) Transfer: (CSU, UC)(CC MUSIC 5B)

NR (Natural Resources)  
Dean: Mark A. Anglin  
Division Office: Agriculture, Room 100  
Phone: (209) 575-6200  
Division website: www.mjc.edu/prospective/programs/agens/index.html  
Instructors: Mike Morales, Dale Pollard

In this program the student will develop skills and knowledge in animal/plant science and I.D., mechanics, communications, public relations, and computations specific to become a park ranger maintenance person, or private entrepreneur in allied jobs including game farm worker. This program will also prepare the student for transfer to a state university or university program when the General Education requirements are completed. Contact the division office in the Agriculture Building for advising assistance.

NR 50—SURVEY OF NATURAL RESOURCES  
3 UNITS  
Survey of natural resources, their importance to society and ecological principles of resource conservation; identification, conservation, and use of renewable and non-renewable resources, career opportunities and industries associated with natural resources. Field laboratories, including some Saturdays, required. Lecture/Laboratory.
NR 53—INTRODUCTION TO AGRICULTURE RESOURCES AND RURAL RECREATION 3 UNITS
Natural resources as industries and basic skills relate to natural resources management. Concepts in natural resources management, soil and land, water, forest, fish and wildlife, outdoor recreation, energy, mineral and metal resources, and opportunities for employment. Field trips required. Lecture/Laboratory.

NR 200—SOILS 4 UNITS
Study of soil derivation, classification and characteristics as related to natural and human systems. Soil as a natural system including climate, ecology and geology. Soil use and management including erosion, moisture retention, structure, cultivation and organic matter. Special emphasis placed on the relationship between natural and agronomic soil systems. Laboratory topics include soil type, classification, soil chemistry, water and nutrient management and soil microbiology. Field trips required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC) General Education: (MC-GE: A)(CSU-GE: B1, B3) (IGETC: 5A)

NR 215—WILDLAND PRODUCTION 3 UNITS
Wildlife production and management and its relationship to humans; managing game for sustained yields. Production principles for common game species found in this area, habitat improvement, species compatibility and interrelationships; wildlife and fish identification. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSU (CC NARTC 181) General Education: (MUC-GE:A)

NR 220—INTRODUCTORY FORESTRY 3 UNITS
Introduction to the integrated management of trees, soils, water, fish and wildlife for the production of wood and fiber products. Emphasis will be on both the traditional and emerging uses of the forest resources to satisfy human needs and the protection of the public trust. Field trips required. Lecture/Lab. (A-F Only) Transfer: CSU (CC FORES 10/FORTEC 162) General Education: (MUC-GE:A)(CSU-GE: B1, B3) (IGETC: 5A)

NR 222—NATIVE TREE AND SHRUB IDENTIFICATION 3 UNITS
Formerly listed as Native Plants Identification. The study of botanical characteristics, taxonomy, physiology, and community relationships of the major trees and shrubs in California and the Western United States. Includes discussion of commercial uses and geographic ranges of native plants common to the region. Field trips outside of regular class hours. Field trips required. Lecture/Lab. (A-F Only) Transfer: CSU (CC NARTC 160)

NR 224—INTRODUCTION TO FOREST MEASUREMENT 3 UNITS
Recommended for Success: Satisfactory completion of EHS 201 or 202 or NR 220 or 222 or 376, or equivalent.
Introduction to principles and practices of interpreting aerial photographs. Emphasis on vegetation mapping, road reconnaissance and inventory techniques. Use of aerial photographs to obtain location, area, vegetation types, timber volume. Explanation of Geographic Information Systems and its application to forestry and natural resources. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: CSU (CC NARTC 160)

NR 230—OUTDOOR/FOREST RECREATION 3 UNITS
A study of historic, social, political, economic, and environmental factors influencing outdoor recreation at federal, state, and local levels. Survey of conflicts in natural resources land use and solutions to these conflicts. Maintenance and operation of recreational facilities. Field trips may be required. Lecture/Lab. (A-F Only) Transfer: CSU

NR 376—FORESTRY TECHNOLOGY 3 UNITS
Recommended for success: Satisfactory completion of NR 220 or NR 222 or NR 224. Additional training in silviculture, cruising, forest management, harvesting, and regulations as determined by the California Forest Practice Act. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CC FORES 10/FORTEC 162)

NR 379—WILDLAND FIRE CONTROL 1 UNIT
Introduction to fundamentals of wildland fire behavior, basic fire fighting strategy, methods of attack to suppress wildland fires. Course is taught in conjunction with U.S. Forest Service. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CC NATRE 22)

NURSE 40—NURSE ASSISTANT 5 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to obtain a GED or High School diploma.
Limitations on Enrollment: Enrollment limited to students who have had a physical examination within the last three months and can provide confirmation of a PPD and pass a criminal background screening through the Livescan fingerprint process.
Preparation for employment as a nurse assistant in a skilled nursing facility. Upon satisfactory completion of the course, the student is eligible to take the state examination for certification as a Certified Nurse Assistant (CNA). Based on the Model Curriculum for Nurse Assistant Training and Assessment Program following Department of Health Services Guidelines. Organized in fifteen units with content ranging from role and responsibilities of the CNA to death and dying. Student must attend Lecture on Thursday and Friday 1 p.m. - 5 p.m. for the first 2 weeks of the term. No lab the first 2 weeks of the term. Beginning the third week of the term, students attend Lecture. on Thursday from 1:00 to 4:05 p.m. and lab on Friday or Saturday from 6:00 a.m. until 2:30 p.m. Additional costs for students: purchase of appropriate uniform for the clinical site, enrollment fees, books, and application fees for the state certification examination. Student may repeat if required by regulation. Field trips are not required. (A-F Only) Lecture/Lab.

NURSE 115—INTRODUCTION FOR NURSING MAJORS ½ UNIT
Formerly listed as NURSE 115—Guidance for Nursing Majors
Acquaints students with the academic requirements and curriculum for the Associate Degree Nursing program. Students view the role and function of the nurse. Students analyze their educational needs and goals and choose alternatives to enhance success through nursing education. Students will understand the curriculum requirements that pertain to them and begin to formulate an educational plan for an associate of science degree in nursing. The role of aptitudes, interests, values and skills will be addressed. Important aspects of nursing as an occupational choice will be covered along with information regarding the nursing profession. Field trips are not required. (P/ NP Only) Lecture. Transfer: CSU

NURSE 259—LVN TRANSITION: ROLE CHANCE PREPARATION 2 UNITS
Formerly listed as NURSE 259 - LVN Transition: Preparing for a Role Change
Limitations on Enrollment: Limited to Licensed Vocational Nurses with an active license with IV certification. Board of Registered Nursing (BRN) requires Associate Nursing Degree programs to provide a pathway for LVNs to enter an ADN program. This course fulfills one of the BRN's requirements.
Prerequisite: Successful completion of ANAT 125, MICRO 101, PHYSIO 101 and ENGL 101 and a score of 67 or greater on the Test of Essential Academic Skills (TEAS). Course prerequisites and TEAS score are the same requirements for qualification for entry into the generic ADN program.
The focus of this course is on nursing knowledge and skills that the LVN student needs in order to provide the basis for transition of information and skills required of the registered nurse. Content includes nursing process as it applies to the adaptation theory of nursing practice, LVN role transition to registered nurse, assessment of physical and psychosocial adaptations, pharmacology, and math for medication calculation. Emphasis is on critical thinking in the clinical setting as it applies to nursing practice. Materials Fee Required Field trips are not required. (A-F Only) Lecture/Lab. Transfer: CSU

NURSE 260—NURSING PROCESS: PHARMACOLOGY 2 UNITS
Prerequisite: Acceptance into the Associate Degree Nursing program.
Concurrent enrollment in: NURSE 261 and NURS 800
Recommended for Success: Satisfactory completion of TD/NTR 219
Enrollment limited to: Capacity of MJC Nursing Program
Introduction to concepts of Pharmacology, including pharmacokinetics, pharmaceutical systems of measurements and calculations, drug classifications, and nursing responsibilities in medical administration. Lecture. (Fall, Spring) (A-F Only) Transfer: CSU

Division website: www.mjc.edu/alliedhealth

NURSE (Associate Degree and Vocational Nursing)
Dean: Maurice McKinney, EdD
Division Office: John Muir Hall, Room 258-W
Phone: (209) 575-6373

Color Legend:
NEW COURSE
UPDATED COURSE
INACTIVATED/HISTORICAL COURSE
COURSE UNCHANGED FROM 2011-2012 CATALOG
NURSE 261—NURSING PROCESS: FUNDAMENTALS
Prerequisites: Acceptance into the MJC Associate Degree Nursing Program
Concurrent enrollment in NURSE 260 and NURSE 800
Recommended for Success: Satisfactory completion of NURSE 115, FDNTR 219
Enrollment limited to: Capacity of MJC Nursing Program
Applies fundamental concepts and principles of the nursing process to care and needs of patients within the acute care setting. Focus on assessment and care of patients experiencing alterations in basic health needs. Practice of basic clinical skills in a simulated lab setting prior to beginning care in the acute care facility. Additional theoretical principles include therapeutic communication, patient teaching, professional ethics, and legal aspects of nursing. Lecture/Laboratory. Field trips may be required. Materials fee required. (Fall, Spring) (A-F Only) Transfer: CSU

NURSE 262—NURSING PROCESS: SKILLS
Prerequisite: Satisfactory completion of NURSE 260 and NURSE 261.
Corequisite: Concurrent enrollment in NURSE 800.
Limitations on Enrollment: Based on program capacity.
This course prepares the nursing student to perform nursing skills necessary for satisfactory participation in the obstetrics and pediatric clinical setting. Skills included in this course are: intravenous therapy, gavage feeding, infant bathing, delivery table set-up, and correct administration of medications. Materials Fee Required. Field trips are not required. (P/NP Only) Lab Transfer: CSU

NURSE 263—NURSING PROCESS: MATERNITY
Prerequisite: Satisfactory completion of NURSE 262.
Corequisite: Concurrent enrollment in NURSE 800.
Limitations on Enrollment: Program requires it by using a non-evaluative process to limit enrollment from among a pool of qualified students.
Applies the basic principles and concepts of the nursing process to meet the needs of the childbearing woman, the childbearing family and the patient with alterations of the reproductive system. Health maintenance, prevention of illness, and patient/family teaching in the hospital and community setting will be emphasized. Includes socio-cultural-spiritual aspects of the family. Field trips are not required. (A-F Only) Lecture/Lab Transfer: CSU

NURSE 264—NURSING PROCESS: PEDIATRICS
Prerequisite: Satisfactory completion of NURSE 263 and NURSE 262.
Corequisite: Concurrent enrollment required in NURSE 800.
Limitations on Enrollment: Enrollment limited to students admitted to the Nursing Program.
Applies the principles and concepts of the nursing process to meeting the adaptation needs of the pediatric patient and patient with alterations of the reproductive system. Family centered care in the hospital and outpatient settings will be emphasized. Throughout the course health maintenance and prevention of illness is emphasized in patient/family teaching. Field trips are not required. (A-F Only) Lecture/Lab Transfer: CSU

NURSE 265—NURSING PROCESS: MEDICAL-SURGICAL
Prerequisite: Satisfactory completion of NURSE 260 and NURSE 261 and NURSE 262 and NURSE 263 and NURSE 264.
Corequisite: Concurrent enrollment in NURSE 800.
Limitations on Enrollment: Acceptance into the ADN program. Enrollment limited to program capacity.
Applies the principles and concepts of the nursing process that focuses on promoting adaptation of adolescent through senescent clients with serious or complex alterations in health. Students will complete didactic units in oxygenation, cardiovascular, hematological, immunological, and oncologic nursing. Acute hospital settings and hospice services will be utilized for the clinical practicum of the course. Materials Fee Required. Field trips may be required. (A-F Only) Lecture/Lab Transfer: CSU

NURSE 266—NURSING PROCESS: MENTAL HEALTH
Formerly listed as NURSE 253 - Nursing Process 3
Prerequisites: Satisfactory completion of NURSE 262, 263, and 264.
Concurrent enrollment in NURSE 800
Enrollment limited to: MJC Nursing Program capacity.
Applies the principles and concepts of the nursing process to meet the needs of clients with psychiatric disorders across the life span. Mental health maintenance, prevention of illness, patient/ family teaching, and therapeutic communication/relationships will be emphasized. Students will be assigned to an acute psychiatric setting and tertiary areas that support and provide community mental health care services. Lecture/Lab. Field trips may be required. (Fall, Spring) (A-F Only) Transfer: CSU

NURSE 267—NURSING PROCESS: ADVANCED MEDICAL-SURGICAL
Prerequisite: Satisfactory completion of NURSE 265 and NURSE 266.
Corequisite: Concurrent enrollment in NURSE 800.
Includes advances in medical/surgical concepts and principles in the nursing process. Promotes role transition from student nurse to professional nursing through a clinical preceptorship. The student is responsible for all the clinical skills learned in previous semesters, acquires new skills and takes a clinical competency test in the acute care setting. The 5 1/2 week, 180-hour preceptorship is the capstone of the nursing program, encompassing all the clinical, technical and critical thinking skills learned in the program, and emphasizing leadership in management of patient care. In preceptorship, the student works directly with a registered nursing preceptor in the acute care facility. Materials Fee Required. Field trips are not required. (A-F Only) Lecture/Lab Transfer: CSU

NURSE 350—VOCA TIONAL NURSE 1
Prerequisite: Satisfactory completion of NURSE 350.
Enrollment limited to those admitted to the CNA to LVN program.
Applies the fundamentals of nursing to the care and needs of patients within the acute and long-term hospital setting. Care of patients with alterations in basic health care needs. Practice of fundamental clinical skills in a simulated lab setting prior to beginning care in the hospital. Lecture/Laboratory. Field trips required. (A-F Only)

NURSE 351—VOCA TIONAL NURSE 2
Prerequisite: Satisfactory completion of NURSE 350.
Apply concepts of care for adults with disorders of the musculoskeletal system, integumentary system, and cardio pulmonary system. Apply concept of mental health, well being and illness in health care. Practical experience will be gained in skilled nursing facilities, health care clinics, and acute care settings. Lecture/Lab (A-F Only)

NURSE 352—VOCA TIONAL NURSE 3
Prerequisite: Satisfactory completion of NURSE 350.
Apply basic principles and concepts of the nursing process to meet the adaptation needs of adult patients with disorders of the neurological system, gastrointestinal system, urinary system, endocrine system and the eye, ear, nose, and throat. Practical experience will be gained in skilled nursing facilities, health care clinics and acute care settings. (A-F Only) Lecture/Laboratory

NURSE 353—VOCA TIONAL NURSE 4
Prerequisite: Satisfactory completion of NURSE 352.
Applies basic nursing knowledge to the care and needs of adult patients with disorders of the reproductive system, during normal maternity nursing care and pediatric patients. Practical experience will be gained in the acute hospital setting. Nursing leadership principles are introduced. (A-F Only) Lecture/Laboratory. Materials Fee Required.

NURSE 354—VOCA TIONAL NURSE 5
Prerequisite: Satisfactory completion of NURSE 353.
Applies the basic principles and concepts of the nursing process and leadership during preceptorship in a skilled nursing facility or health care facility. Lecture/Laboratory. (A-F Only)

NURSE 355—INTRA VENOUS THERAPY
Enrollment limited to Licensed Vocational Nurses or those who are eligible for NCLEX-PN.
Applies the foundation and basic concepts of infusion therapy, including IV nursing responsibilities in the initiation, maintenance, and therapeutic modalities of intravenous therapy. The course focuses on risk management and legal responsibilities, quality assessment and competency milestones, infection control practices related to infusion therapy, fundamentals of fluid and electrolyte balance, and special needs of the pediatric and geriatric population. (A-F Only) Lecture/Laboratory. Materials Fee Required.

NURSK (Nursing: Skills)
Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 258-W
Phone: (209) 575-6373
Division Website: www.mjc.edu/alliedhealth
NON-CREDIT COURSES

NURS 800 NURSING SKILLS DEVELOPMENT
Corequisite: Concurrent enrollment in NURSE 259 or NURSE 261 or NURSE 262 or NURSE 263 or NURSE 264 or NURSE 265 or NURSE 266 or NURSE 267 or NURSE 40 or NURSE 350 or NURSE 351 or NURSE 352.
Provides simulated clinical experiences in a supervised laboratory setting for students who must use the Allied Health skills laboratory to achieve the objectives of a course in which they are enrolled. Field trips are not required. (Non-Graded course) Lab

NURSE (Nursing: Work Experience)

Dean: Maurice McIninnon, EdD
Division Office: John Murr Hall, Room 258-W
Phone: (209) 575-6373
Division website: www.mjc.edu/alliedhealth

Modesto Junior College serves the needs of its students and those of the community through its Cooperative Vocational Work Experience program. A program objective is to provide guidance and opportunity for career planning by students in the real laboratory of the community's business and industries. Work experience education results when it encompasses a systematic plan whereby students, while in college, gain realistic employment experiences through part-time work. Students should consult their advisors to determine divisional practice on work experience units acceptable toward major requirements. Pay may or may not be received for work experience programs depending upon the type and place of employment.

NURSE 361—WORK EXPERIENCE-NURSING 1 UNIT
Prerequisite: Satisfactory completion of NURS 260 and NURSE 261.
Corequisite: Concurrent enrollment in NURSE 262 or NURSE 263 or NURSE 264 or NURSE 265 or NURSE 266 or NURSE 267 or NURSE 299.
Provides the student enrolled in the ADN program an opportunity to obtain nursing experience in a structured clinical work/study/community service program in participating clinical agencies. Students gain additional practice in nursing by applying previously learned knowledge and skills. Lecture: 1 hour arranged. 75 hours compensated related work experience per semester equals 1 unit or 60 hours uncompensated related work experience. Four completions allowed. Field trips are not required. (P/NP Only) Lab.

NURSE 362—WORK EXPERIENCE-NURSING 2 UNITS
Prerequisite: Satisfactory completion of NURSE 260 and NURSE 261.
Corequisite: Concurrent enrollment in NURSE 262 or NURSE 263 or NURSE 264 or NURSE 265 or NURSE 266 or NURSE 267 or NURSE 299.
Provides the student enrolled in the ADN program an opportunity to obtain additional nursing experience in a structured clinical work/study/community service program in a participating clinical agency. Students gain additional practice in nursing by applying previously learned knowledge and skills. Lecture: 1 hour arranged. 150 hours compensated related work experience per semester equals 2 units or 120 hours uncompensated related work experience per semester equals 2 units. Four completions allowed. Field trips are not required. (P/NP Only) Lab.

NURSE 385A-D—WORK EXPERIENCE VOCATIONAL NURSE 1-4 UNITS
Concurrent enrollment: NURSE 350
The Nursing Work Experience is designed to provide an opportunity for students enrolled in Vocational Nursing Program to participate in relevant work experiences in a community clinical agency participating in nursing work experience. Students acquire knowledge, skills, and attitudes necessary for success in the field of nursing. (P/NP Only)

OFADM (Office Administration)

Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129

Division website: mjc.edu/prospective/programs/bbss/
Instructors: Kevin Alavezos, Nancy Backlund, Christine Groth

OFADM 201—INTERMEDIATE KEYBOARDING 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed at least one semester of keyboarding and type a minimum of 45 gross words per minute on a five-minute test.
First of three modules in OFADM 201. Further development of keyboarding with an emphasis on speed and accuracy, practice and drill on production keyboarding, drill and practice on formatting techniques and procedures for setting up business letters, academic and business reports, tables, business forms, including interoffice memoranda, resumes, minutes, and agendas. Individualized instruction. Open entry/open exit. (A-F Only) Lecture. (CSU)

OFADM 202—INTERMEDIATE KEYBOARDING 2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed at least one semester of keyboarding and type a minimum of 45 gross words per minute on a five-minute test.
First of three modules in OFADM 201. Further development of keyboarding with an emphasis on speed and accuracy, practice and drill on production keyboarding, drill and practice on formatting techniques and procedures for setting up business letters, academic and business reports, formal reports and all components, tables, business forms, including interoffice memoranda, resumes, minutes, and agendas. Individualized instruction. Open entry/open exit. (A-F Only) Lecture. Transfer: (CSU)

OFADM 203—INTERMEDIATE KEYBOARDING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed at least one semester of keyboarding and type a minimum of 45 gross words per minute on a five-minute test.
Further development of keyboarding with an emphasis on speed and accuracy, practice and drill on production keyboarding, drill and practice on formatting techniques and procedures for setting up business letters, academic and business reports, formal reports and all components, tables, business forms, including interoffice memoranda, resumes, minutes, and agendas. Also, the design and creation of effective office forms and publications, such as letterheads, notebooks, cover pages, announcements, flyers, and newsletters. Individualized instruction. Open entry/open exit. (A-F Only) Lecture. Transfer: (CSU)
OFADM 203 — INTERMEDIATE KEYBOARDING 3 3 UNITS
Formerly listed as: OFADM - 203: Intermediate Keyboarding
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed OFADM 201 and either OFADM 230 or CMPSC 274.
Keyboarding course designed to diagnose a student’s current keyboarding skills needs, prescribe appropriate practice materials, measure skill development, improve speed and accuracy, and continually evaluate the skill building process. Three maximum completions. Field trips are not required. (A-F Only) Lecture /Lab. (CSU)

OFADM 231 — INTERMEDIATE WORD PROCESSING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed OFADM 201 and either OFADM 230 or CMPSC 274.
Intermediate word processing features such as mail merge, styles, graphics, tab, and sort. Features will be applied in creating business documents. Field trips are not required. (A-F Only) Lecture /Lab. (CSU)

OFADM 302 — BEGINNING DOCUMENT PROCESSING 1 1/2 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to have completed OFADM 201 or have ability to keyboard and type a minimum of 35 gross words per minute on a three-minute test.
Further development of speed and accuracy on the alpha/numeric keyboard. Instruction in opening, saving, naming, printing documents; deletion and addition of text; margin/tab settings; spacing techniques; text editing techniques; vertical/horizontal centering; basic business letter memo, and report formats. Field trips are not required. (A-F Only) Lecture /Lab. (CSU)

OFADM 303 — KEYBOARDING FOR SPEED AND ACCURACY 1 1/2 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 301 or have ability to keyboard by touch at 20 GWAM.
Keyboarding course designed to diagnose a student’s current keyboarding skills needs, prescribe appropriate practice materials, measure skill development, improve speed and accuracy, and continually evaluate the skill building process. Three maximum completions. Field trips are not required. (A-F Only) Lab.

OFADM 304 — PROFESSIONAL ENGLISH FOR BUSINESS 3 UNITS
Review of the mechanics of correct English usage as applied in the business environment. Emphasis on sentence structure, word usage, punctuation, spelling, business vocabulary, dictionary usage, grammar review, and proofreading. Heavy emphasis is placed on the use of various business documents throughout the course for students to apply their writing skills. Field trips are not required. (A-F Only) Lecture.

OFADM 305 — RECORDS MANAGEMENT 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 335 and have ENGL 50 eligibility.
Filing rules and their application to alphabetic, numeric, geographic, and subject systems; establishing manual and computer filing systems; records control, retention, transfer, equipment, and supplies; micrographics; using the computer to store, organize, maintain, and retrieve information. Field trips may be required. (A-F or P/NP) Lecture/Lab.

OFADM 311 — BUSINESS EDITING AND PROOFREADING 3 UNITS
Recommended for Success: Ability to keyboard assignments.
Development of skills in transcribing typed and handwritten notes using word processing and voice recognition technology. Emphasis will be placed on the mechanics of letter styles, as well as grammar, punctuation, spelling, vocabulary, syllabication, capitalization, proofreading, and use of figures. (A-F or P/NP) Lecture.

OFADM 312 — ALPHABETIC NOTETAKING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 301.
Abbreviated writing system, using the alphabet, designed to give students a quick and easy method of writing in a short period of time. Designed for academic or job related activities with emphasis on increasing speed in taking notes for college or business. (A-F Only)
### COURSES OFFERED

<table>
<thead>
<tr>
<th>COURSES</th>
<th>UNITS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td><strong>OFADM 313</strong> — <strong>OFFICE SKILLS</strong></td>
<td><strong>3 UNITS</strong></td>
<td>A study of various positions available in an office. Emphasis on location, skills, salary, benefits, and retirement packages of office positions. Covers entry-level skills and experiences necessary for beginning office positions, including career planning, telephone, and time management skills. Recommended as a first semester course for students pursuing an Office Administration or Clerical certificate or degree. Field trips may be required. (A-F or P/NP) Lecture.</td>
</tr>
<tr>
<td><strong>OFADM 314</strong> — <strong>OFFICE PROCEDURES &amp; TECHNOLOGIES</strong></td>
<td><strong>2 UNITS</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have satisfactorily completed OFADM 202 and OFADM 362; and also have satisfactorily completed OFADM 231 or have prior knowledge of word processing software. A study of the attributes and skills needed to work in an office. Explores duties of administrative assistants. Topics include workplace environment, workforce behaviors, telecommunications, reprographics, oral and written communications, mailing and shipping, and record keeping. (Course only offered during fall semester) Field trips may be required. (A-F or P/NP) Lecture. (ICC-OFTEC 139)</td>
</tr>
<tr>
<td><strong>OFADM 315</strong> — <strong>TODAY’S OFFICE</strong></td>
<td><strong>2 UNITS</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have completed all Required Courses for Office Administration or Clerical degree or certificate. Provides a simulated office environment to give students the experience that is often necessary in obtaining and keeping an office position. Students will be “hired” as an employee within the simulated office with the availability of transferring to other positions later in the course. Emphasis on application of skills and knowledge necessary to be an effective employee. Upon mastery of necessary skills, students may be placed as interns in offices to gain additional experience. The course should be taken in the student’s last semester before graduation or certificate completion. (A-F or P/NP) Laboratory. (Spring Only)</td>
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<tr>
<td><strong>OFADM 320</strong> — <strong>TELEPHONE TECHNIQUES</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Development of effective use of the telephone. Scenarios include appropriate greetings, placing callers on hold, dealing with difficult callers, and communication on the telephone. Telephone equipment and services are also covered. Lecture/Lab.</td>
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<tr>
<td><strong>OFADM 320</strong> — <strong>TELEPHONE TECHNIQUES</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Development of effective use of the telephone. Scenarios include appropriate greetings, placing callers on hold, dealing with difficult callers, and communication on the telephone. Telephone equipment and services are also covered. Field trips are not required. (A-F or P/NP) Student choice Lecture.</td>
</tr>
<tr>
<td><strong>OFADM 328A, B</strong> — <strong>MACHINE TRANSCRIPTION</strong></td>
<td><strong>1,2 UNITS</strong></td>
<td>Recommended for Success: Satisfactory completion of OFADM 211 or 301, and ability to keyboard 40 gross words per minute on a five minute test. Instruction and practice in the use of a standard transcribing machine. Individualized instruction in the keyboarding of general business documents including letters, memos, and reports. Open entry/open exit. Two Maximum completions for 328A only. (A-F Only) Lecture/Lab. (ICC-OFTEC 121 or 3208 only)</td>
</tr>
<tr>
<td><strong>OFADM 328</strong> — <strong>MACHINE TRANSCRIPTION</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Formerly listed as: OFADM – 328A: Machine Transcription Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 311 or satisfactorily complete OFADM 304 and have the ability to keyboard 40 gross words per minute on a three-minute timing. Instruction and practice in the use of software designed to assist in the transcription of audio recordings. Individualized instruction in the keyboarding of general business documents including letters, memos, press releases, and reports. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
</tr>
<tr>
<td><strong>OFADM 329</strong> — <strong>MACHINE TRANSCRIPTION</strong></td>
<td><strong>2 UNITS</strong></td>
<td>Formerly listed as: OFADM – 328B: Machine Transcription Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 311 or satisfactorily complete OFADM 304 and have the ability to keyboard 40 gross words per minute on a three-minute timing. Instruction and practice in the use of software designed to assist in the transcription of audio recordings. Individualized instruction in the keyboarding of general business documents including letters, memos, press releases, and reports. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
</tr>
<tr>
<td><strong>OFADM 330</strong> — <strong>BEGINNING WORD PROCESSING</strong></td>
<td><strong>3 UNITS</strong></td>
<td>Introduction to the use and capabilities of word processing software with hands-on experience in creating, revising, and printing documents. Course designed for initial exposure to word processing. Students who have completed OFADM 356 should enroll in OFADM/CMPSC 231. Two completions allowed. Field trips are not required. (A-F or P/NP) Lecture/Lab.</td>
</tr>
<tr>
<td><strong>OFADM 335</strong> — <strong>INTRODUCTION TO COMPUTERS AND WINDOWS</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have the ability to keyboard by touch. Basic introduction to computers and the Windows operating environment. Explains components of a computer system and provides hands-on training using a personal computer. Intended for students new to using personal computers and the Windows environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
</tr>
<tr>
<td><strong>OFADM 335</strong> — <strong>INTRODUCTION TO COMPUTERS AND WINDOWS</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have the ability to keyboard by touch. Basic introduction to computers and the Windows operating environment. Explains components of a computer system and provides hands-on training using a personal computer. Intended for students new to using personal computers and the Windows environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
</tr>
<tr>
<td><strong>OFADM 336</strong> — <strong>INTRODUCTION TO WORD PROCESSING</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed OFADM 301 and/or have the ability to keyboard by touch. Beginning course in the use of word processing software. Features of the software will be explained and demonstrated in a hands-on learning environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
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<tr>
<td><strong>OFADM 356</strong> — <strong>INTRODUCTION TO WORD PROCESSING</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed OFADM 301 and/or have the ability to keyboard by touch. Beginning course in the use of word processing software. Features of the software will be explained and demonstrated in a hands-on learning environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
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<tr>
<td><strong>OFADM 359</strong> — <strong>INTRODUCTION TO SPREADSHEET SOFTWARE</strong></td>
<td><strong>1 UNIT</strong></td>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to have satisfactorily completed OFADM 353. Beginning course in the use of spreadsheet software. Features of software will be explained and demonstrated in a hands-on learning environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.</td>
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OFADM 359—INTRODUCTION TO SPREADSHEET SOFTWARE 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 353. A beginning course in the use of spreadsheet software. Features of software will be explained and demonstrated in a hands-on learning environment. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 361—INTRODUCTION TO DATABASES 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed OFADM 352, 356, 359, and/or 362. A beginning course using features of database software. Course is designed to enable students to learn and apply the features of database software to organize information and to work with stored information. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 361—INTRODUCTION TO DATABASES 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 353 and satisfactorily complete OFADM 356 and satisfactorily complete OFADM 359 and/or satisfactorily complete OFADM 362. A beginning course using features of database software. Course is designed to enable students to learn and apply the features of database software to organize information and to work with stored information. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 362—INTRODUCTION TO BUSINESS PRESENTATION SOFTWARE 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 353. A beginning course using computer software to design slides, outlines, note pages, and audience handouts for business presentations. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 362—INTRODUCTION TO BUSINESS PRESENTATION SOFTWARE 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 353. A beginning course using computer software to design slides, outlines, note pages, and audience handouts for business presentations. Two maximum completions. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 363—UNDERSTANDING THE INTERNET 1 UNIT
Fundamentals of using the Internet. Topics included in the course: Internet terminology, use of browsers, search engines and sites, downloading of files and e-mail. (A-F Only) Lecture.

OFADM 363—UNDERSTANDING THE INTERNET 1 UNIT
Fundamentals of using the Internet. Topics included in the course: Internet terminology, use of browsers, search engines and sites, downloading of files and e-mail. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 364—GRAMMAR IN THE OFFICE 1 UNIT
Basic English grammar for office employees. Emphasis on parts of speech, subject and verb agreement, pronoun usage, sentences, punctuation, number usage, and business terms. Pronoun’s marks and symbols are introduced, and strategies for effective business writing are presented. Open entry/open exit. (A-F Only) Lecture.

OFADM 364—GRAMMAR IN THE OFFICE 1 UNIT
Basic English grammar for office employees. Emphasis on parts of speech, subject and verb agreement, pronoun usage, sentences, punctuation, number usage, and business terms. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 366—PROOFREADING TECHNIQUES 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to have successfully completed OFADM 304. Self-paced course addressing the skills needed to identify mechanical and content errors in handwritten or printed text by using proofreader’s marks. Grammar, punctuation, and spelling rules will be reviewed. Field trips are not required. (A-F Only) Lecture/Lab.

OFADM 375—10 KEY ON THE COMPUTER 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete OFADM 301 or have the ability to keyboard by touch. Touch system of numeric keys on the 10-key pad. Field trips are not required. (A-F Only) Lecture.

OLDAD 820—JEWELRY AND METALCRAFT
Techniques and the construction of jewelry from copper, bronze, sterling silver, and gold; setting of stones in jewelry, and techniques of the lost wax method of casting. Designed for older adults but open to all students. Unlimited repeats. Field trips may be required. Laboratory. Not a graded course.

OLDAD 822—LAPIRATORY
Basic lapidary skills, faceting, grinding, polishing, and mounting of semiprecious, precious, and ornamental stones. How to recognize, procure, and develop gem materials, experiment with, and display gem ornamentation showing utility and craftsmanship. Diamond saw cutting, carving in stone, table tops, and the making of mosaic and intarsia. Designed for older adults but open to all students. Unlimited repeats. Field trips required. Laboratory. Not a graded course.

OLDAD 830—PUBLIC SPEAKING: TALKING IT OUT
Development of effective listening, thinking and speaking skills among the older adult population. Course builds and reinforces speech development skills. Unlimited repeats. Lecture. Not a graded course.

OLDAD 874—CLOTHING CONSTRUCTION THROUGH KNITTING
Learn care of different types of fiber such as wool, cotton, and synthetic, the importance of gauge and weights of yarn and their uses. Basic skill development in knit, purl, cast on and cast off, increase and decrease. Introduction to different knitting techniques such as intarsia, mosaic, fair isle, and decorative stitches and ways to implement them into garments. Not a graded course.

PE (Physical Education)
Dean: William Kaiser
Division Office: PE Office Building, Room 105
Phone: (209) 575-6269
Division website: www.mjc.edu/athletics
Instructors: Bobby Boswell, Demitrius Snaer, Eric Fischer, Jim Stevens, Kurt Olson, Lori Brynh, Mary Shea, Michael Girardi, Milan Motroni, Paul Aiello, Paul Brogan, Sam Young, Shawn Black, Steve Aristotelous

The Physical Education program at MJC offers a balanced approach based upon the individual interests and needs of the student. In addition to a wide spectrum of physical education activity classes, MJC offers intercollegiate competition in many sports and adaptive physical education courses. Theory classes are offered in basketball, football, track and field, wrestling, softball, and baseball. Since the majority of career opportunities in Physical Education exist for students completing a bachelor’s degree, general education and transfer courses are carefully planned so that students are well prepared for individual career needs and upper division college work.

Courses should be selected with the assistance of a Physical Education faculty advisor. Students interested in a career in Physical Education are encouraged to take a variety of activity classes each semester, thereby broadening their activity skills before transfer.
Repeat Limitations on Physical Education Courses

No activity may be taken more than four times, regardless of the number of skill levels it may have listed. Persons who have met the limit of repetition of credit courses as stated in the catalog may audit the course with the approval of the instructor. Auditors receive no credit for class work, no grade, and no record is kept of their performance in class. Enrollment is allowed after the first day of instruction. An Audit Enrollment Form can be obtained in the Admissions after staff verify that the repeat limit has been reached. This form must be signed by the instructor and the student and turned in to the Admissions Office along with a payment of $15.00 per unit paid to the Business Office. Students enrolled in ten (10) or more units at the time audit enrollment occurs will not be assessed the fee up to three (3) units.

For purposes of this limitation, activities are defined as: Adaptive, Baseball, Basketball, Body Mechanics, Bowling, Cross Country, Dance, Divining, Fencing, Football, Golf, Gymnastics, Lifesaving, Racquetball, Self-Defense, Soccer, Softball, Swimming, Table Tennis, Tennis, Track and Field, Volleyball, Water Polo, Weight Training, and Wrestling.

ACTIVITIES REQUIREMENT FOR DEGREE

Physical Education classes used to fulfill the graduation activities requirement must be from the PEA, PEC, PEW, PEVM, or PEW class listings.

PE 100 — INTRODUCTION PHYSICAL EDUCATION 3 UNITS
History, philosophy, and principles of Physical Education. Study of the aims and objectives of modern physical education with emphasis on the development of basic philosophy and background for the profession of physical education. Field trips are not required. (A-F Only) Lecture. Transfer: (CSU, UC)

PE 101 — BASKETBALL THEORY 1 UNIT
Basketball rules, mastery of position and team play. Development of strategies and philosophy. Field trips are not required. (A-F Only) Lecture/Lab. Transfer: (CSU, UC)

PE 102 — OFFENSIVE FOOTBALL THEORY 2 UNITS
An analysis of offensive position and team play. Critical analysis of offensive techniques, rules, physical and mental training procedures, and film evaluation. Three maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 103 — TRACK AND FIELD TEAM CONCEPTS 1 UNIT
Specialized approach to track and field. Rules, training procedures, strategy, and performance evaluation. Three completions allowed. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

PE 104 WRESTLING THEORY 1 UNIT
Analysis of wrestling, rule interpretation, winning psychology, film analysis. Repeatable up to 2 units maximum. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 105 — DEFENSIVE FOOTBALL THEORY 2 UNITS
An analysis of defensive position and team play. Critical analysis of defensive techniques, rules, physical and mental training, and film evaluation. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 106 — OFFENSIVE BASEBALL THEORY 2 UNITS
An analysis of offensive techniques, position and team play. Coverage of rules and training procedures. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 107 — DEFENSIVE BASEBALL THEORY 2 UNITS
An analysis of defensive techniques, position and team play. Coverage of rules and training procedures. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 108 — CARE AND PREVENTION OF ATHLETIC INJURIES 3 UNITS
Designed for prospective coaches, trainers, health and physical educators, and athletes; to aid in the recognition, evaluation, and care of athletic injuries. Techniques in taping, prevention, and rehabilitation of injuries. Sport specific injuries are examined and discussed to familiarize students with the multitude of injuries that can and will occur in sporting activities. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC HHP 4)

PE 109 — PEAK PERFORMANCE THROUGH MENTAL TRAINING 3 UNITS
Techniques for maximizing sport and dance performance through the development of mental skills and strategies for stress control, imagery, goal setting and concentration. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

PE 110 — OFFICIATING: SPRING SPORTS 3 UNITS
Regulations and techniques of officiating baseball and softball. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

PE 111 — APPLICATION OF SPORTS MEDICINE 3 UNITS
Prerequisite: Satisfactory completion of PE 108. Practical application of modalities and techniques used in the treatment and care of athletic injuries for the prospective Athletic Trainer. Emphasis on injury recognition, development of conditioning and reconditioning programs, and taping techniques to enable athletes to return to competitive activities. Lecture. (A-F Only) Transfer: (CSU, UC)

PE 112 — OFFENSIVE/DEFENSIVE SOFTBALL THEORY 1 UNIT
Analysis of offensive and defensive techniques, strategies, positions, and team play including rules and physical and mental training. Course designed to prepare the student to compete in collegiate softball. Two maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC)

PE 113 — OFFENSIVE/DEFENSIVE SOFTBALL THEORY 2 UNITS
Analysis of offensive and defensive techniques, strategies, positions, and team play including rules and physical and mental training. Course designed to prepare the student to compete in collegiate softball. Three maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lecture/Lab. Transfer: (CSU, UC)

PE 114 — CROSS COUNTRY CONCEPTS 1 UNIT
Specialized approach to cross country and long distance running. Training procedures, performance evaluation, nutritional strength, and racing strategy components. Three completions allowed. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

PE 115 — OFFICIATING: FALL SPORTS 3 UNITS
Regulations and techniques of officiating football and basketball. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)

PE 116 — FOOTBALL TEAM PLAY CONCEPTS 2 UNITS
Essential concepts of team-building in football. Goal-setting and development of individual roles. Exploration of team communication processes and activation of leadership of the successful football team. Provides both the participant and the future mentor specialized exposure for an in-depth survey of team building in regard to the sport of football. Lecture/Laboratory. Field trips may be required. (A-F or P/NP/Fall) Transfer: (CSU, UC)

PE 120 — SPORTS AND SOCIETY 3 UNITS
Examine sports as a significant aspect of modern culture and a major institution of modern society. Topics that will be analyzed include: gender and sports, the relationship between organized sports and aggression, sports as an economy, and the issues of social class and race in sports Lecture (A-F or P/NP) Transfer: (CSU, UC)

PE 121 — COACHING EFFECTIVENESS 3 UNITS
Role of coach in athletics, ethics, leadership and management principles, psycho-social aspects of athlete behavior management, motor learning, physiological systems and physical training theory. Lecture. (A-F or P/NP) Transfer: (CSU, UC)

PE 122 — ADAPTED PHYSICAL EDUCATION THEORY AND LAB 3 UNITS
Common definitions, scope and basic concepts of Adapted Physical Education. A study of specific disabilities, with a primary focus on identification, etiology and implications for physical education. Course includes practical experience in the field. Intended for students interested in pursuing a career in physical therapy, nursing, adapted physical education, gerontology or fields requiring one to work with individuals with disabilities. Lecture/Laboratory. Transfer: (CSU, UC) (A-F Only)
PE 124—INTRODUCTION TO KINESIOLOGY 3 UNITS
The musculoskeletal system and its function in human movement. Movement in sports skills and activities of daily living and the muscles involved. Emphasis on the relationship between the muscles and bones as they relate to human movement. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:C)(CSU-GE: C1)(IGETC: 3A)

PE 130—PERSONAL TRAINER HEALTH FITNESS INSTRUCTOR 3 UNITS
Formerly listed as PE 130
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 195 or satisfactorily complete PEC 197 or satisfactorily complete PEW 192.
Basic competency in designing and implementing fitness programs for a healthy population. Features both practical and theoretical instruction as well as career advice. Emphasis on safe, effective and efficient methods of teaching cardiovascular training, resistance training, balance training and flexibility training for individuals or groups. Covers a broad range of exercise physiology, exercise program design, anatomy of major muscle groups, interval and circuit training, exercise biomechanics, advanced lifting techniques, the basics of working with special populations, and exercise progression. Field trips are not required. (A-F or P/NP) Lecture. Transfer: CSU

PE 132—AQUATIC FITNESS & HEALTH INSTRUCTOR 3 UNITS
Basic competency in designing and implementing aquatic fitness programs for a healthy population. Features both practical and theoretical instruction as well as career advice. Emphasis on safe, effective, and efficient methods of teaching cardiovascular training, resistance training, balance training, and flexibility training for group aquatic exercise. Covers a broad range of exercise physiology, exercise program design, anatomy of major muscle groups, water laws, the basics of working with special populations, and modifications. Field trip may be required. (A-F or P/NP). Lecture. Transfer: CSU

PE 141—SUPERVISION IN ATHLETIC TRAINING 2 UNITS
Prerequisite: Satisfactory completion of PE 108.
Policies and procedures, emergency protocols, vital signs, Bloodborne pathogens, and daily functions that are necessary for the student to work in the Athletic Training Center. Continued development in decision-making strategies, analysis, and an awareness of the factors related to medical protocols. Basic skill development in working in the Athletic Training Center with athletes and coaches for an in-depth experience related to sports medicine. Four completions allowed. Field trips may be required. (A-F or P/NP). Lecture/Lab. Transfer: CSU

PE 194—INTRODUCTION TO WORLD DANCE 3 UNITS
Also offered as THEFR 194
A survey of dance and its development as an art form through social, political and cultural context. Investigation of cultural traditions and styles, values, aesthetics and more will be explored. (A-F only) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE:C)(CSU-GE: C1)(IGETC: 3A)

PE 349—WORK EXPERIENCE: PHYSICAL EDUCATION 1-4 UNITS
Concurrent Enrollment in a minimum of 7 units, which may include Cooperative Vocational Work Experience.
Designed for physical education and health majors who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must relate to the student's area of study. Maximum 4 units may be earned per semester. May be repeated to a maximum of 16 units work experience credit. (Cooperative General Work Experience is included in this maximum.) Also offered during May, June, and July. Lab. (A-F Only) Maximum four completions.

PEA (Physical Education: Adapted Activities)

PEA 104—ADAPTED STRENGTH DEVELOPMENT 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to provide medical verification of physical or learning disability or motor problems. Development and maintenance of muscular strength for students with physical/medical limitations. Emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEA 106—FUNCTIONAL WATER EXERCISE 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to provide medical verification of physical or learning disability or motor problems. A specialized course involving aquatic exercises which include range of motion, strength, cardiovascular endurance, and flexibility training. Specialized adapted equipment appropriate for limited mobility conditions may be used. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEA 107—ADAPTED SWIMMING 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to provide medical verification of physical or learning disability or motor problems. Basic water safety and swim skills. A specialized course in physical exercise which includes; personalized and group swim exercises which include strength, endurance, flexibility training and instruction in improving and/or modifying swimming skills. Student may repeat if required by regulation. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEA 108—ADAPTED AQUATICS 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to provide medical verification of physical or learning disability or motor problems. A specialized course in aquatic exercise which includes personalized and group exercises for strength, endurance, and flexibility. Specialized adapted equipment appropriate for limited mobility conditions may be used. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

PEA 111—ADAPTED RUN/WALK 1 UNIT
Recommended for Success: Medical verification of physical or learning disability or motor problems.
Personalized and group exercise trials that include development of an overall fitness routine involving conditions for walking and/or running; balance; gait; functional motor control; developmental movement, strength and endurance. Emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Recommended for students with physical or learning disabilities. Laboratory. Four completions allowed. MJC Activities. Transfer: (CSU, UC)

PEA 110—ADAPTED SPORTS 1 UNIT
Recommended for Success: Medical verification of physical or learning disability or motor problems.
Introduces students with a physical and/or developmental disabilities to a variety of sports. Students will safely participate in sports such as, but not limited to, softball, volleyball, tennis, frisbee, soccer, basketball, and golf. Laboratory. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

PEA 119—ADAPTED SPORTS 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to provide medical verification of physical or developmental disability.
Introduces students with physical and/or developmental disabilities to a variety of sports. Students will safely participate in sports such as, but not limited to, softball, volleyball, tennis, frisbee, soccer, basketball, and golf. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

PEA 141—ADAPTED FITNESS 1 UNIT
Recommended for Success: Provide medical verification of physical or learning disability or motor problems.
A specialized course in physical exercise which includes individual and group exercises that include development of an overall fitness routine involving all aspects of body conditioning: balance, flexibility, functional motor control, developmental movement, strength and endurance. There will be an emphasis on encouraging independence and teaching lifelong fitness knowledge and skills. Four completions allowed. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)
PEC 102, A—WATER AEROBICS ½, 1 UNIT
Formerly listed as PEC 102
Designed to elevate the heart rate to contribute to cardiovascular fitness, provide increased resistance for strength improvement with virtually no impact, help joints move through their range of motion, promoting flexibility. Lecture/Laboratory. Not offered every semester. MJC Activities. Transfer: (CSU, UC)

PEC 106X, A—BADMINTON ½, 1 UNIT
Basic skills, rules, strategy, practice in singles and doubles play. Lecture/Laboratory. MJC Activities. (A-F or P/NP) Transfers: (CSU, UC)

PEC 108, A—DEEP WATER AEROBICS ½, 1 UNIT
Recommended for Success: Basic swimming and water skills. Group aquatic exercises utilizing strength, endurance, flexibility training in deep water which can involve specialized aquatic equipment. Lab. MJC Activities. Transfer: (CSU, UC)

PEC 108 DEEP WATER AEROBICS 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to demonstrate basic swimming and/or water safety skills. A course in aquatic exercise which includes group exercises utilizing strength, endurance, and flexibility training in deep water which can involve specialized aquatic equipment. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education. (MJC-GE: Activities.)

PEC 111—BEGINNING RACQUETBALL 1 UNIT
Fundamentals of racquetball. Participation at local court. Expenses are the responsibility of the student. Materials fee required. Four completions allowed. Field trips are not required. Lab. MJC Activities. Transfer: (CSU, UC)

PEC 112—INTERMEDIATE RACQUETBALL 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 111. Intermediate skills and theory. Basic singles and doubles play. Participation at local court. Expenses are the responsibility of the student. Materials Fee Required. Four completions allowed. Field trips are not required. Lab. MJC Activities. Transfer: (CSU, UC)

PEC 118, A—BOWLING ½, 1 UNIT
Fundamentals of bowling. Students are required to pay line and shoe charges at bowling alley. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 118—BOWLING 1 UNIT
Fundamentals of bowling. Students are required to pay line and shoe charges at bowling alley. Four Maximum completions. Field trips are not required. Lab. Transfer: (CSU, UC) General Education. (MJC-GE: Activities.)

PEC 120, X,A—HIP HOP ½, 1 UNIT
Also listed as THETR 170
Fundamental skills of hip hop dance derived from the current dance vernacular and culture. Dance movement education, exploration, and recreation. May be completed up to 4 times. Lecture/Lab. (A-F or P/NP) MJC Activities. Transfer: (CSU, UC)

PEC 122, X,A—BEGINNING MODERN DANCE ½, 1 UNIT
Also offered as THETR 185
Emphasis on modern dance technique, beginning composition, improvisation, dance history and philosophy. Dance as an art form and recreation. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 123X, A—INTERMEDIATE MODERN DANCE ½, 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 122X, A or THETR 185X, A. Emphasis on modern dance technique, intermediate composition, improvisation, partnering, dance history and philosophy. Dance as an art form and recreation. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 124X, A—ADVANCED MODERN DANCE ½, 1 UNIT
Also offered as THETR 187
Recommended for Success: Before enrolling in this course, students are strongly advised to complete PEC 123X, A or THETR 186X, A or equivalent. Emphasis on composition, improvisation, expression, dance history and philosophy; an outlet for expressive movement ideas. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEC 125—BEGINNING BALLROOM DANCE 1 UNIT
Formerly listed as PEC 125 - Beginning Social Dance
An introduction to ballroom dancing, including basic steps in some of the most popular Latin and American dance rhythms; may include the waltz, foxtrot, rhumba, swing, samba, cha cha, tango, contemporary hustles, line dancing, square dancing, and polka. Student will learn to identify musical beats and rhythms appropriate for each dance. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEC 126—JAZZ DANCE 1 UNIT
Also offered as THETR 188
Technique of Jazz Dance with explorations into contemporary derivations of jazz. Emphasis is given to technical style of this form, and to the interrelationship of music and movement. Field trips may be required. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 127—BALLET 2 1 UNIT
Also offered as: THETR - 177
Intermediate level ballet technique and terminology. Students are required to have appropriate dance shoes and dance attire. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education. (MJC-GE: Activities.)

PEC 128X, A—AEROBICS ½, 1 UNIT
Aerobic movements for improved cardiovascular condition, muscle tone, flexibility, balance, agility, coordination and weight control. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 129—JAZZ 2 1 UNIT
Also offered as: THETR 179
Intermediate technique of Jazz Dance with explorations into contemporary derivations of jazz. Emphasis on technical style of the form and the interrelationship of music and movement. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lab. Transfer: (CSU, UC) General Education. (MJC-GE: Activities.)

PEC 130X, A—INTERNATIONAL FOLK DANCE ½, 1 UNIT
International folk dance is accessible to the average person in good condition at this introductory level. Dances which originated with people living in or native to various countries/areas, such as Middle East, Balkans, Russia, etc. Dance exploration and recreation. Three maximum completions. (A-F or P/NP)Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)
PEC 132X, A—BALLET 1 1/2, 1 UNIT
Also offered as: THETR 189
Fundamental ballet technique and terminology. Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 133 BEGINNING BALLET 1 UNIT
Also offered as: THETR - 189. Ballet 1
Formerly listed as: PEC - 133. Ballet 1. Fundamental ballet technique and terminology. Students are required to have appropriate dance shoes and dance attire. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) /Lab Transfer (CSU, UC) General Education: (MJC-GE: Activities)

PEC 134X, A—CONTACT IMPROVISATION 1/2, 1 UNIT
Contact improvisation is an exciting movement art form, exploring the vast potential for movement generated by two or more people, communicating spontaneously through weight, motion and touch. Four completions allowed. Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 135—SPRINGBOARD DIVING 1 UNIT
Springboard diving course for students of all ability levels. Workouts will include stretching, strength development, flexibility and coordination exercises, techniques of the approach, hurdle, press, takeoff, flight and entry. Mid-air maneuvers will be identified and practiced on one meter and three meter diving boards as skill levels increase. Basic water safety and related safety issues will be included. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 136 —INDOOR ROCK CLIMBING 1 UNIT
Indoor rock climbing class covering climbing techniques, safety equipment, and basic skills used by climbers and belayers. Classes will be held at StoneHenge Climbing Gym of Modesto. Facility use fee required. Field trips may be required. Four completions allowed. Laboratory. (A-F or P/NP) MJC Activities. Transfer: (CSU, UC)

PEC 140—EXERCISE FOR FITNESS 1 UNIT
Cardiovascular improvement and respiratory efficiency through a variety of physical activities consisting of continuous motion exercises. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer (CSU, UC) General Education: (MJC-GE: Activities)

PEC 144—INTERMEDIATE GOLF 1 UNIT
Recommended for Success: PEC 143 or equivalent. Further application of golf fundamentals and rules. Maximum four completions. (A-F or P/NP) Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 145X, A—ADVANCED GOLF 1/2, 1 UNIT
Recommended for Success: PEC 144 or equivalent. Golf course play and skill improvement on individual basis. Maximum four completions. (A-F or P/NP) Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 147X, A—GYMNASTICS 1/2, 1 UNIT
Tumbling, floor exercise, stunts, and acrobatic skills are taught and practiced in progression and combined for skill development. (A-F or P/NP) Four completions allowed. Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 148—YOGA FOR BETTER HEALTH 1 UNIT
Fitness class using yoga postures, breathing, and relaxation techniques to increase flexibility and strength, balance and coordination. Appropriate for all ages and learning abilities. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 150X, A—INTERMEDIATE YOGA FOR BETTER HEALTH 1/2, 1 UNIT
Recommended for Success: PEC 148 or prior experience in yoga. Intermediate class using yoga postures, breathing, and relaxation techniques to increase flexibility, strength, balance and coordination. Lecture/Laboratory. (MJC Activities. Transfer: (CSU, UC)

PEC 154—BASKETBALL 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 150 or PEC 148. A practical course in self defense. Practice of various basic techniques and principles of balance, leverage, and momentum. Discussion of how to avoid threatening situations in the home or on the street. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 155—SOFTBALL 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 150 or PEC 148. Softball class covering batting, fielding, pitching, and catching techniques. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 156—BEACH TENNIS 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 150 or PEC 148. A practical course in self defense. Practice of various basic techniques and principles of balance, leverage, and momentum. Discussion of how to avoid threatening situations in the home or on the street. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 157—ADVANCED JUDO 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 165 or PEC 166 or PEW 167 or demonstrate basic judo skills and competencies, along with a knowledge and understanding of judo concepts, terminology, etquette, and methods of scoring, timekeeping, and elimination systems. Intermediate and advanced skills (standing, mat and falling techniques) and strategies to improve judo techniques and enhance competitiveness. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 158—JUNIOR LEADERSHIP TRAINING 3 UNITS
Instruction, training and development of a corps of spirit leaders to promote enthusiasm for school athletic activities. Lecture. (MJC Activities. Transfer: (CSU, UC)

PEC 162—AIKIDO 1 BASIC 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to be able to demonstrate physical activity, such as falling down and standing up. Students are also advised to consult a physician if they are pregnant, or have significant health problems. An introduction to the fundamental principles and techniques of Aikido, an ethicial Japanese martial art based on non-aggressive, non-resistant, co-creative conflict resolution and internal personal growth by non-competitive means. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 163—AIKIDO 2, INTERMEDIATE 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to demonstrate the Aikido Techniques: Yonkyu, Sanmi Otoshi, Tenchi Nage, Ikkyo, Kotegeashi and Irimi Nage or hold Kyu rank from an Aikido Dojo. A continuing exploration of the fundamental principles and techniques of Aikido, an ethicial Japanese martial art based on non-aggressive, non-resistant, co-creative conflict resolution and internal personal growth by non-competitive means. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 164—SELF DEFENSE 1 UNIT
A practical course in self defense. Practice of various basic techniques and principles of balance, leverage, and momentum. Discussion of how to avoid threatening situations in the home or on the street. Four completions allowed. Field trips are not required. (A-F or P/NP) Lab. (MJC Activities. Transfer: (CSU, UC)

PEC 165—BEGINNING JUDO 1 UNIT
Formerly listed as PEC—165: Judo. A challenging martial art based on the philosophy of using maximum efficiency and maximum effort. This course is designed to teach the fundamental skills and techniques to the student as a recreational activity and/or on a competitive basis. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) /Lab Transfer (CSU, UC) General Education: (MJC-GE: Activities)
PEC 166XA—INTERMEDIATE JUDO 1/2, 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 165.
Instruction and practice in the intermediate skills of the sport of Judo. Course will cover the terminology, etiquette along with throwing and grappling techniques, with integration of various Katas (forms) and Randon (free exercise). Four completions allowed. (A-F or P/NP) Lecture/Lab. MJC Activities. Transfer: (CSU, UC)

PEC 168,A—BEGINNING SWIMMING 1/2, 1 UNIT
Recommended for Success: Must be comfortable in shallow water. Class conducted in a shallow pool.
Basic skills of floating, breathing, kicking, pulling, using arms and legs. Lecture/Laboratory. (A-F or P/NP) Four completions allowed. MJC Activities. Transfer: (CSU, UC)

PEC 169 X,A—INTERMEDIATE SWIMMING 1/2, 1 UNIT
Recommended for success: Satisfactory completion of PEC 168A. Continued development in basic stroke techniques and endurance for intermediate swimming. May be completed up to 4 times. Lecture/Lab. (A-F or P/NP). MJC Activities. Transfer: (CSU, UC)

PEC 170—ADVANCED SWIMMING 1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 168A. Continued development in stroke techniques, and workout knowledge for advanced swimming. Four Maximum completions. Field trips are not required. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 171,A—SWIM FOR FITNESS 1/2, 1 UNIT
Recommended for Success: Ability to handle self in deep water.
To meet individual needs in basic stroke techniques and endurance swimming for intermediate and/or advanced swimmers. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 172—LIFEGUARD TRAINING 1 UNIT
Prerequisite: Pass swimming pre-test, be at least 15 years old on the first day of class.
Preventive lifeguarding, learning how to recognize specific characteristic behaviors of patrons at an aquatic facility; facility emergency planning; First Aid and CPR for the Professional Rescuer included. Successful course completion results in American Red Cross certification in Lifeguard Training, CPR and first aid. Lab. (A-F or P/NP). Four completions allowed. Materials fee required. MJC Activities. Transfer: (CSU, UC)

PEC 174,X,A—TABLE TENNIS 1/2, 1 UNIT
Instruction in basic skills, rules, strategy, practice in singles and doubles play, plus supplemental films, video tapes and class competition. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 175—BEGINNING TENNIS 1/2, 1 UNIT
Fundamental skills in tennis. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 175,Y,A—BEGINNING TENNIS 1 UNIT
Fundamental skills in tennis. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 176—BEGINNING TENNIS 1 UNIT
Fundamental skills in tennis. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 176,A—INTERMEDIATE TENNIS 1/2, 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 175.
Development of net and back-court skills and strategies, net play, volleying, and proficiency in rules, terminology, and etiquette. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 177,A—ADVANCED TENNIS 1/2, 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 176 or equivalent.
Skills and strategy of competitive tennis; including tournaments and ladder play. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 177—ADVANCED TENNIS 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 176.
Skills and strategies of competitive tennis, including tournaments and ladder play. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 178—TOURNAMENT TENNIS 1/2, 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 177.
Designed for the expert tennis player and includes intraclass competition. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 178,A—TOURNAMENT TENNIS 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 177.
This course is designed for the experienced tennis player, includes in-class competition. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 179,A—TRACK AND FIELD 1/2, 1 UNIT
Generalized training and techniques for track and field. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 179—TRACK AND FIELD 1 UNIT
Generalized training and techniques for track and field. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 179,A—TRAINING FOR DISTANCE RUNNING 1/2, 1 UNIT
Become better prepared for endurance distance running with organized training runs. Information on creating an effective training program, nutrition, weight training and cross training. Field trips may be required. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 179—TRAINING FOR DISTANCE RUNNING 1 UNIT
Endurance distance running with organized training runs. Creating an effective training program, nutrition, weight training and cross training. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 183,A—Volleyball 1 UNIT
Fundamentals of volleyball. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 183—Volleyball 1 UNIT
Fundamentals of volleyball. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 184,A—POWER VOLLEYBALL 1/2, 1 UNIT
Recommended for Success: PEC 183 or equivalent.
Power volleyball for team play. Advanced offensive and defensive strategy and game skills. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 184—POWER VOLLEYBALL 1 UNIT
Power volleyball for team play. Advanced offensive and defensive strategy and game skills. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 196,A—INTERMEDIATE VOLLEYBALL 1/2, 1 UNIT
Recommended for Success: Satisfactory completion of PEC 182.
Intermediate skills and strategy: Intermediate offensive and defensive strategy. Lecture/Laboratory. (A-F Only) Four completions allowed. MJC Activities. Transfer: (CSU, UC)

PEC 197—ADVANCED VOLLEYBALL 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 183.
Advanced offensive and defensive strategy and game skills. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)

PEC 197—ADVANCED VOLLEYBALL 1 UNIT
Recommended for Success: Before enrolling in this course students are strongly advised to satisfactorily complete PEC 183.
Advanced offensive and defensive strategy and game skills. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer. (CSU, UC) General Education: (MJC-GE: Activities)
PEC 186 — INTERMEDIATE VOLLEYBALL  1 UNIT
Intermediate volleyball skills, theories, offensive, and defensive strategy. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer: (CSU, UC) General Education: (MJC: GE - Activities)

PEC 187,A — PILATES FOR FITNESS  ½,1 UNIT
A fitness class that utilizes the Pilates exercise system focused on improving flexibility and strength for the total body through a series of controlled movements. Pilates exercises can improve posture, alignment, coordination and balance. Movements are designed to tone muscles without putting stress on the spine. For people of all ages and fitness levels. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEC 190X,A — ADVANCED WATER POLO  ½,1 UNIT
Recommended for Success: Satisfactory completion of PEC 189 or equivalent.
Advanced team play and game strategy in water polo for recreation exercise. Four completions allowed. Lecture/Laboratory. (A-F or P/NP)(Summer) MJC Activities. Transfer: (CSU, UC)

PEC 191 — POWERLIFTING  1 UNIT
Prerequisite: Satisfactory completion of PEC 195 or PEVM 192.
Advanced techniques of effective strength training in a supervised program with an emphasis on traditional powerlifting using free weights and supplemental exercise programs. (P/NP). May be completed up to 4 times. MJC Activities. Transfer: (CSU, UC)

PEC 195 — WEIGHT TRAINING  1 UNIT
Principles and procedures of effective strength training techniques in a supervised weight training program. Lecture/Laboratory. (P/NP only.) Four completions allowed. MJC Activities. Transfer: (CSU, UC)

PEC 197 — ADVANCED WEIGHT TRAINING  1 UNIT
Recommended for Success: Satisfactory completion of PEC 195
Strength training in a supervised weight training program with emphasis on olympic lifts with free weights. May be completed up to 4 times. Lab. (P/NP Only). MJC Activities. Transfer: (CSU, UC)

PEC 841 — FITNESS FOR LIFE  ½,1 UNIT
Exercises designed to modify personal attitudes and actions toward health and physical activity. Exercise modalities may include, but are not limited to; pilates, weight training, aerobics, walking/jogging, and yoga. Four completions allowed Non-graded. Unlimited repeats. Lecture/Laboratory.

PEM 114X, A — ADVANCED BASKETBALL  ½,1 UNIT
Advanced skills, theory and concepts of competitive team play. May be completed four times. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEM 140X, A — TOUCH FOOTBALL AND KANAKI  1½ UNIT
Discussion and practical applications of rules and strategy, with emphasis on individual movements found in offensive and defensive touch football and kanaki. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEM 141X, A — ADVANCED TOUCH FOOTBALL  ½,1 UNIT
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEM 140A.
Conditioning, skills, rules, and strategies with emphasis on the passing game to prepare for participation in advanced football. (A-F or P/NP) Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEM 162X, A — SOCCER  ½,1 UNIT
Practical application of basic offensive and defensive tactics, individual and team skills; strategy and rules review, scrimmages. (A-F or P/NP). Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEM 196X, A — ADVANCED WRESTLING  ½,1 UNIT
Advanced wrestling and training methods, and the philosophy behind winning at advanced levels of competition. Four completions allowed. (A-F or P/NP). Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

PEVM (Physical Education: Varsity Men's Activities)
Courses listed below offer advanced instruction and intensive training in sports fundamentals to develop teams for intercollegiate competition. A varsity activity may be taken a maximum of four times. Participation in intercollegiate sports requires concurrent enrollment in not less than 12 units of work, nine of which must be in courses counting toward the associate degree, remediation, transfer and/or certification. Special medical examinations are required for students participating in competitive sports. Verification of insurance is also required. Participation in a second sport or a second year of a sport requires a 2.0 grade point average and 24 units passed.

PEVM 100 VARSITY BASEBALL  3 UNITS
Instruction, training, and competition in intercollegiate baseball. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 105 — MENS VARSITY BASKETBALL (FALL)  3 UNITS
Recommended for Success: PE 101
Instruction, training, and competition in intercollegiate basketball. Laboratory/Other. (Fall) Four completions allowed. (A-F Only) MJC Activities. Transfer: (CSU, UC)

PEVM 106 — MENS VARSITY BASKETBALL - SPRING  1½ UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEVM 105.
Continued instruction, training, and competition in intercollegiate basketball (Spring semester) Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 110 — MENS VARSITY CROSS COUNTRY  3 UNITS
Instruction, training, and competition in intercollegiate Cross Country. (Fall) Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 115 — VARSITY FOOTBALL  3 UNITS
Instruction, training, and competition in intercollegiate football. Four completions allowed. Field trips may be required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 120 — MENS VARSITY GOLF  3 UNITS
Instruction, training, and competition in intercollegiate golf Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 122 — MENS VARSITY SOCCER  3 UNITS
Instruction, training, and competition in intercollegiate soccer. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)
PEVM 125—MEN’S VARSITY SWIMMING AND DIVING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 170 and satisfactorily complete PEC 195.
Instruction, training, and competition in intercollegiate swimming and diving. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 130—MEN’S VARSITY TENNIS 3 UNITS
Instruction, training, and competition in intercollegiate tennis. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 135—MEN’S VARSITY TRACK AND FIELD 3 UNITS
Instruction, training, and competition in intercollegiate track and field events. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 140—MEN’S VARSITY WATER POLO 3 UNITS
Instruction, training, and competition in intercollegiate water polo. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVM 145—VARSITY WRESTLING 3 UNITS
Instruction, training, and competition in intercollegiate wrestling. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 100—WOMEN’S VARSITY BASKETBALL - FALL 3 UNITS
Instruction, training, and competition in intercollegiate basketball. (Fall semester) Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 101—WOMEN’S VARSITY BASKETBALL - SPRING 1 ½ UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEVM 100.
Continued instruction, training, and competition in intercollegiate basketball. (Spring Semester) Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 103—WOMEN’S VARSITY CROSS COUNTRY 3 UNITS
Instruction, training, and competition in intercollegiate cross country running. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 115—WOMEN’S VARSITY GOLF 3 UNITS
Instruction, practice, and competition in intercollegiate golf. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 120—WOMEN’S VARSITY SOFTBALL 3 UNITS
Instruction, training, and competition in intercollegiate softball. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 123—WOMEN’S VARSITY SOCCER 3 UNITS
Instruction, training, and competition in intercollegiate soccer. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 125—WOMEN’S VARSITY SWIMMING AND DIVING 3 UNITS
Instruction, training, and intercollegiate competition in swimming and diving. Field trips are not required. Lab. (A-F or P/NP) MJC Activities. Transfer: (CSU, UC)

PEVW 130—WOMEN’S VARSITY TENNIS 3 UNITS
Instruction, training, and competition in intercollegiate tennis. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 135—WOMEN’S VARSITY TRACK AND FIELD 3 UNITS
Instruction, training, and competition in intercollegiate track and field events. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 140—WOMEN’S VARSITY VOLLEYBALL 3 UNITS
Instruction, training, and competition in intercollegiate volleyball. Four completions allowed. Field trips are not required. (A-F Only) Lab. MJC Activities. Transfer: (CSU, UC)

PEVW 145—WOMEN’S VARSITY WATER POLO 3 UNITS
Instruction, training and competition in intercollegiate water polo. Four completions allowed. Laboratory/Other. (Fall) MJC Activities. Transfer: (CSU, UC)

PEVW (Physical Education: Varsity Women’s Activities)
Courses listed below offer advanced instruction and intensive training in sports fundamentals to develop teams for intercollegiate competition. A varsity activity may be taken a maximum of four times.

Participation in intercollegiate sports requires concurrent enrollment in not less than 12 units of work, nine of which must be in courses counting toward the associate degree, remediation, transfer, and/or certification. Special medical examinations are required for students participating in competitive sports. Insurance is also required. Participation in a second sport or a second year of a sport requires a 2.0 grade point average and 24 units passed.
PEW 166, A—WOMEN'S SELF DEFENSE ½, 1 UNIT
A practical course in women’s self defense. Practice of various basic techniques and principles of balance, leverage and momentum. Discussion and practical exercises on how to avoid threatening situations in the home or on the street. Open to all female students. Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC).

PEW 167X, A—WOMEN’S BEGINNING JUDO ½, 1 UNIT
Instruction and practice in the basic skills of Judo used for women as self defense. Course will cover terminology, etiquette, throwing and grappling techniques with integration of various Karas (forms), Randori (free exercise) and Japanese jujutsu. Four completions allowed. Lecture/Lab. (A-F or P/NP) MJC Activities. Transfer: (CSU, UC).

PEW 180X, A—WOMEN'S SOFTBALL ½, 1 UNIT
Discussion and practical application of rules, strategy, fielding, throwing, base running, team offense, and team defense used in fastpitch softball. Four completions allowed. (A-F or P/NP) Lecture/Laboratory. Not offered every semester. MJC Activities. Transfer: (CSU, UC).

PEW 192—WOMEN'S WEIGHT TRAINING 1 UNIT
Introduction to individual opportunities in development of power, strength, flexibility and/or endurance through weight training. (P/NP only). MJC Activities. Transfer: (CSU, UC).

PHILO 101—PHILOSOPHY 3 UNITS
A careful and critical examination of some of the “Great Questions” philosophers have pursued from ancient times to the present. Some of these include: What is human nature? What is real? Do we have free will? Does God exist? What can we know? How should we act? What is the source of evil? And, what is the nature of truth? (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC PHILO 101). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 103—SYMBOLIC LOGIC 3 UNITS
Also offered as CMPSC 103

PHILO 105—REASONING 3 UNITS
Prerequisite: Satisfactory completion of ENGL 101

PHILO 107—PHILOSOPHY OF SCIENCE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 101

PHILO 108—PHILOSOPHY OF SCIENCE 3 UNITS
Prerequisite: Satisfactory completion of ENGL 101
Systematic study of the methods of scientific inquiry through the application of critical thinking through philosophical analysis of scientific methodology. Field trips are not required. (A-F or P/NP - Student choice) Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: D2) (CSU-GE: A3) (IGETC: 18).

PHILO 111—ETHICS: THEORY AND APPLICATION 3 UNITS
Systematic study of reflective choice, standards of right and wrong by which it may be guided and attainable goods toward which it may be directed. Readings on concepts of good, duty, egoism, altruism, freedom, personal and social responsibility. Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 113—PHILOSOPHY OF ART 3 UNITS
An examination of the central features of art as well as alternative accounts of art and aesthetic experience including discussions of beauty, representation, and truth. Field trips may be required. Lecture. (A-F or P/NP) Transfer: (CSU, UC). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 115—RELIGION: A PHILOSOPHICAL AND COMPARATIVE INQUIRY 3 UNITS
Introduction to the philosophical problems of religion and a comparative analysis of religious traditions and spiritual practices. Topics include the nature and existence of God, faith and reason, religious knowledge, language and experience in human life. Lecture. (A-F or P/NP) Transfer: (CSU, UC) (CC HUMAN/PHILO 4). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 120—HISTORY OF PHILOSOPHY: ANCIENT 3 UNITS
Western ideas and philosophies from ancient Greece to the 15th century, with a consideration of prominent Eastern philosophies. The primary focus is on Greek and Roman philosophy, and the development of Christian philosophy through the middle ages. Some of the topics include free will/determinism, the nature of existence, being, definition and logic. (A-F or P/NP) Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 121—HISTORY OF PHILOSOPHY: MODERN 3 UNITS
Western ideas and philosophers in the 17th and 18th centuries, with a consideration of the rise of modern science, rationalist and empiricist philosophies, and the critical and transcendental philosophy of Kant. (A-F and P/NP) Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC: 3B).

PHILO 122—TWENTIETH CENTURY PHILOSOPHY 3 UNITS

PHILO 123—TWENTIETH CENTURY PHILOSOPHY 3 UNITS
PHILO 101—GENERAL PHYSICS: MECHANICS  
Prerequisite: Satisfactory completion of PHYS 165 and MATH 171.
Introduction to calculus-based physics: linear, rotational, and oscillatory mechanics with computer applications. Field trips may be required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) (CC PHYS 5A) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 102—GENERAL PHYSICS: WAVES, THERMODYNAMICS, & OPTICS  
Prerequisite: Satisfactory completion of PHYS 101 and MATH 172.
Continuation of calculus-based physics: thermodynamics, wave motion, acoustics and optics. Field trips may be required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 103—GENERAL PHYSICS: ELECTRICITY, MAGNETISM, & MODERN PHYSICS  
Prerequisite: Satisfactory completion of PHYS 101 and MATH 172.
Continuation of calculus-based physics: electricity, magnetism and modern physics. Field trips may be required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) (CC PHYS 5B) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 104—MECHANICS, HEAT, & WAVES  
Prerequisite: Satisfactory completion of MATH 122.
Non-calculus introduction to principles and laws of mechanics, thermodynamics and waves. Field trips may be required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) (CC PHYS 4A) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 105—ELECTRICITY, MAGNETISM, OPTICS, ASOMIC AND NUCLEAR STRUCTURES  
Prerequisite: Satisfactory completion of PHYS 104.
Continuation of PHYS 142, including electricity, magnetism, light and atomic structure. Field trips may be required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) (CC PHYS 4B) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 160—DESCRIPTIVE INTRODUCTION TO PHYSICS  
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A survey course of selected topics in physical inquiry to include mechanics, wave motion, thermodynamics, electromagnetism and modern physics. Physical theory is explored on a conceptual level with emphasis placed on applying physical principles to everyday phenomena. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC PHYS 1) General Education: (MJC-GE: A) (CSU-GE: B1) (IGETC: 5A)

PHILO 164—PHYSICS ENVIRONMENTAL LABORATORY  
Corequisite: Concurrent enrollment required in or satisfactory completion of PHYS 160.
Laboratory and practical experience in physics. Emphasis on measuring techniques, data analysis, and the scientific method. Field trips may be required. (A-F or P/NP) Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B3)

PHILO 165—INTRODUCTORY PHYSICS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MATH 121 or be eligible for enrollment in MATH 171 as determined by the MJC assessment process.
Introduction to physics through the study of laboratory measurement in selected topic areas to include mechanics, wave motion, thermodynamics, electromagnetism and modern physics. Develops the theoretical and experimental foundation for PHYS 101 and PHYS 142. Field trips are not required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

PHILO 180—CONCEPTUAL PHYSICS: A HANDS-ON APPROACH  
Prerequisite: Satisfactory completion of MATH 90 or qualification by the MJC assessment process.
A survey course of selected topics in physical inquiry to include motion, waves, heat, energy, electricity, magnetism and modern physics. Physical theory is explored on a conceptual level with emphasis placed on applying physical principles to everyday phenomena. To include a weekly activity/laboratory session designed to provide students with practical experience in applying physical concepts. Field trips are not required. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B1, B3) (IGETC: 5A)

Phlebotomy  
Courses are offered through MJC Community Education (209) 575-6063
PHYSO (Physiology)

Dean: Brian Sanders  
Division Office: Science Building, Room 126  
Phone: (209) 575-6173  
Division website: www.mjc.edu/current/programs/divdeps/sme/  
Instructors: David Ward, Michele Monlux, Pamela Upton, Robert Droual, Sandra Uyeshiro

PHYSO 101—INTRODUCTORY HUMAN PHYSIOLOGY 5 UNITS  
Prerequisite: Satisfactory completion of BIO 116 or BIO 111 or BIO 101 and ANAT 125 and CHEM 143.  
Study of body function, organ system integration, communication, and homeostasis at the biochemical, cellular, and system levels. Includes control of osmolarity, protein synthesis and cellular metabolism; cellular communication; neural information processing; blood movement; blood balance; respiration and digestion; reproduction; sensory perception and control of movement. Intended for students entering the health professions. Field trips are not required. (A-F or P/NP) Lecture/Lab/Discussion. Transfer: (CSU, UC) (MJC-GE: A) (CSU-GE: B2, B3) (IGETC: SB)

PHYSO 103—INTRODUCTION TO NEUROSCIENCE 3 UNITS  
Prerequisite: Satisfactory completion of PSYCH 101  
Also offered as PSYC 103  
Introduction to the biological basis of behavior. Emphasis on divisions of the nervous system, neuroanatomy, neurophysiology, psychopharmacology as applied to the understanding of perceptual processes, psychoactive drugs, movement, regulation of hunger and thirst, sexual behavior, sleep, learning and memory, language, emotion, reward and stress, psychopathology. Appropriate for all students interested in the behavioral and biological sciences. Lecture. (A-F and P/NP) Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2) (IGETC: SB)

PLSC (Plant Science)

Dean: Mark A. Anglin  
Division Office: Agriculture, Room 100  
Phone: (209) 575-6700  
Division website: www.mjc.edu/prospective/programs/agens/index.html  
Instructors: David Baggett, Mike Morales, Dale Pollard

PLSC 50—PREPARATORY PLANT SCIENCE 3 UNITS  
Preparation in plant science including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants. (A-F or P/NP) Lecture.

PLSC 200—INTRODUCTION TO PLANT SCIENCE 3 UNITS  
Introduction to plant science, including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants. Lecture. (A-F Only) Transfer: (CSU, UC) General Education: (MJC-GE: A) (CSU-GE: B2)

PLSC 205—FIELD CROPS 3 UNITS  
Economic importance, adaptation, cultural practices, irrigation, integrated pest management, cost analysis, calendar of operations, and marketing in the production of field crops (including: barley, oats, wheat, corn, grain sorghum, alfalfa, rice, dry beans, sugar beets, cotton, and seed crops). Lecture/Laboratory. (A-F Only) Transfer: CSU

PLSC 215—VEGETABLE CROPS 3 UNITS  
Vegetable crops common to the area; economic importance, cultural sequence, fertilization, irrigation, cultivation, integrated pest control, harvest and related factors; marketing, cost analysis, risks; environmental relationships including moisture, temperature, soil and weather in the production of vegetable crops. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

PLSC 230—FRUIT SCIENCE 3 UNITS  
Elementary culture of fruit and nut crops including growth and fruiting habits, varieties, characteristics and adaptations; environmental factors influencing local fruit production, pruning and training procedures on local fruit crops. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC) General Education: (MJC-GE: A)

PLSC 235—PLANT PROPAGATION/PRODUCTION 3 UNITS  
Also offered as EHS 235  
Recommended for Success: Satisfactory completion of PLSC 200 and/or EHS 210. Plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, pest and disease control, structures and site layout. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Regulations pertaining to plant production. Field trips required. Lecture/Laboratory. Not offered every semester. (A-F Only) Transfer: CSU

PLSC 241—VITICULTURE 3 UNITS  
California grape production; study of table and wine grape varieties, uses, adaptations and products, production practices, propagation and planting, training, pruning and irrigation systems, recognition and control of grape pests and diseases. Student is required to design a new vineyard and critique an existing operation. Field trips required. Lecture/Laboratory. (A-F Only) Transfer: (CSU, UC)

PLSC 250—PLANT NUTRITION AND FERTILIZER 3 UNITS  
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete NR 200. An overview of plant nutrition principles in order to understand fertilizers, amendments, their uses, value, application, and relationship to soils and to crops grown in this area. Deficiency symptoms, pH, soil and plant tissue testing, and environmental factors and concerns. Field trips required. Lecture/Laboratory. Transfer: CSU (A-F Only)

PLSC 255—PLANT PEST CONTROL 3 UNITS  
Study of crop mites and insects, their morphology, identification, life cycles, host and habitat relationships, methods and materials of control. Lecture/Laboratory. (A-F Only) Transfer: CSU

PLSC 260—PLANT DISEASE CONTROL 3 UNITS  
Study of common local crop diseases, their economic importance, identification, life cycles, host and habitat relationships, and methods of control. Field trips are required. (A-F Only) Lecture/Lab. Transfer: CSU

PLSC 287—INTEGRATED PEST MANAGEMENT 1 UNIT  
Formerly listed as PLSC 387  
Current topics and discussion on integrated pest management, designed to satisfy Department of Pesticide Regulation requirements for certified pesticide applicator’s continuing education. Field trips may be required. Unlimited completions. Lecture. (A-F Only) Transfer: CSU

PLSC 385—PRUNING 1 UNIT  
Pruning of deciduous fruits, nuts and vines. Care and maintenance of tools and equipment. Proper irrigation, fertilization, and insect control also included. Field trips required. Lecture/Laboratory. Saturday labs. (A-F Only)
POLSC—101 AMERICAN POLITICS  3 UNITS
Introduction to United States politics emphasizing the essential institutions, groups, beliefs, behaviors, and processes that comprise the American political system at the national, state, and local levels. Special attention to rights and obligations of citizenship.
Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC POLSC 10) (TCSU POLSC 110) General Education: (MJC-GE: B) (CSU-GE:DB) (IGETC: 4H) (AI: Group b)

POLSC—102 THE CONSTITUTION AND RIGHTS OF AMERICANS  3 UNITS
Introduction to U.S. constitutional government emphasizing the principles and problems of a constitutional system, governmental powers and sources of power at the national, state, and local levels. Special emphasis on the role of the courts and the rights and responsibilities of democratic citizenship, including issues on racial and sexual discrimination, the rights of the accused, privacy, political participation, and freedom of expression and religion. Special attention to current constitutional problems at the national and state levels.
Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC:4H) (AI: GROUP B)

POLSC—110 INTERNATIONAL RELATIONS  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Introduction to principles and practices of international politics, emphasizing problems of war and peace, foreign policies of major powers, and problems of developing countries. Field trips might be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (CC POLSC 14) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

POLSC—111 WAR & PEACE: FROM LENIN TO AL QAEDA  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101.
Survey of major events and personalities in the history of international politics since 1917. Topics include Origins of WWII, the rise of Communism, key personalities—Lenin, Stalin, Churchill, Truman, origins and demise of cold war, role of nuclear weapons, and the rise of terrorism. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

POLSC—120 CALIFORNIA POLITICS AND PROBLEMS  3 UNITS
Analysis of government institutions, politics, issues and political behavior in California in constitutional, social, economic and cultural perspective. Included are studies of issues confronted by U.S. and California state, county, city and regional governments including political representation, resources and energy, land use and planning, population growth, poverty, education, criminal justice, pollution, budgets and taxation. Special attention to the rights and obligations of citizenship.
Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

POLSC—130 POLITICAL THEORY  3 UNITS
Studies major political theorists and their analyses of political concepts, including democracy, freedom, authority, equality, and political leadership. Investigates how political theory is practically relevant and connected to current political issues.
Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

POLSC—131 AMERICAN POLITICAL THOUGHT  3 UNITS
Examines American political thought and culture from the European discovery of the New World to the present. Detailed study of the writings of the Puritans, Jefferson, Madison, Hamilton, and others. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE:DB) (IGETC: 4H)

PSYCH—101—GENERAL PSYCHOLOGY  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGL 101 and satisfactorily complete POLSC 101.
Comparative survey of major totalitarian, authoritarian and democratic political systems. Emphasis on Great Britain, France, Germany, Russia, People's Republic of China, Japan and selected Third World countries. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

POLSC 195—INTERNSHIP IN POLITICAL SCIENCE DISCUSSION  1 UNIT
Formerly listed as POLSC 195 - Internship in Political Science
Corequisite: Concurrent enrollment in POLSC 196.
Examines political internship experiences of students concurrently enrolled in POLSC 196A or 196B or 196C. Class meetings are for sharing learning experiences, analyzing issues related to public service, and collectively addressing issues associated with the internships.
Two maximum completions. Field trips are not required. (A-F or P/NP) Discussion.
Transfer: CSU

POLSC 196A,B,C—INTERNSHIP IN POLITICAL SCIENCE  1,2,3 UNITS
Corequisite: Concurrent enrollment in POLSC 195.
Supervised internship in a federal, state, or local government office; court; or political organization. Two maximum completions. Field trips are not required. (A-F or P/NP) Lab Transfer: CSU

PSYCH 101—PSYCHOLOGY IN EVERYDAY LIFE  3 UNITS
Recommended for Success: POLSC 101.
Introduction to principles and practices of international politics, emphasizing problems of war and peace, foreign policies of major powers, and problems of developing countries. Field trips are not required. (A-F or P/NP)

PSYCH 140 COMPARATIVE POLITICS  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete POLSC 101.
Comparative survey of major totalitarian, authoritarian and democratic political systems. Emphasis on Great Britain, France, Germany, Russia, People's Republic of China, Japan and selected Third World countries. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B) (CSU-GE: DB) (IGETC: 4H)

PORTG—110 INTRODUCTION TO PRACTICAL PORTUGUESE 1  3 UNITS
Basic conversational Portuguese. Emphasis on the development of conversational skills rather than on reading and writing. Designed for students who need to speak Portuguese in their work or who wish to refresh their Portuguese-language background, or who need preparation for PORTG 101.
Lecture/Laboratory. (Fall) General Education: (MJC-GE: C)

PORTG 52—INTRODUCTION TO PRACTICAL PORTUGUESE 2  3 UNITS
Recommended for Success: PORTG 51.
A continuation of PORTG 51. Designed for those who need it for their work, travel, or to prepare for PORTG 101. Lecture/Laboratory. (Spring)

PSYCH—PSYCHOLOGY IN EVERYDAY LIFE  3 UNITS
Recommended for Success: Satisfactory completion of ENGL 49.
Principles of human behavior and personality development and their application to today's world, including personal and job-related problem solving skills. Lecture. (A-F and P/NP)

PSYCH—PSYCHOLOGY IN EVERYDAY LIFE  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to meet the eligibility requirements for ENGL 101.
Introduction to the areas, concepts, methods and facts of the science of psychology as they relate to the understanding of behavior. Lecture: (A-F and P/NP) Transfer: (CSU, UC) (CC PSYCH 1) General Education: (MJC-GE: B)(CSU-GE: D9)(IGETC: 4H)
PSYCH 102—RESEARCH METHODS 3 UNITS
Prerequisite: Satisfactory completion of PSYCH 101
Recommended for Success: Before enrolling in this course, students are strongly advised to complete ENGL 101.
An introductory examination and application of various research methods used by psychologists in order to describe, predict, and explain behavior. Field trips may be required. Lecture. Transfer: (CSU, UC)

PSYCH 103—INTRODUCTION TO NEUROSCIENCE 3 UNITS
Prerequisite: Satisfactory completion of PSYCH 101
Also offered as PHYS 103
Introduction to the biological basis of behavior. Emphasis on divisions of the nervous system, neuroanatomy, neurophysiology, pharmacopsychology as applied to the understanding of perceptual processes, psychoactive drugs, movement, regulation of hunger and thirst, sexual behavior, sleep, learning and memory, language, emotion, reward, and psychopathology. Appropriate for all students interested in the behavioral and biological sciences. Lecture (A-F and P/NP) Transfer: (CSU, UC) General Education: (MUC-GE:A)(CSU-GE:B2)(IGETC: SB)

PSYCH 104—SOCIAL PSYCHOLOGY 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PSYCH 101 and to be eligible for ENGL 101.
Study of how individuals affect and are affected by other people in their interaction with one another. The relationship between social behavior and internal processes (attitudes, beliefs, self-concept) will also be examined. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE:B)(CSU-GE: D9)(IGETC: 4I)

PSYCH 105—ABNORMAL PSYCHOLOGY 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PSYCH 101 and be familiar with the theories of personality, experimental design, introductory information on diagnostic categories, diagnosis and treatment of mental illnesses.
An examination of the broad questions of normality in the context of biological, psychological, sociological, and cultural factors, including major theoretical, diagnostic and treatment approaches. Field trips are required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE:B)(CSU-GE: D9)(IGETC: 4I)

PSYCH 110—HUMAN SEXUALITIES 3 UNITS
Study of human sexualities from a biopsychosocial perspective. The intersections of biology, culture, ethnicity, race, class, sexual orientation and gender as they relate to sexualities will be explored throughout the course. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE:B)(CSU-GE: D9)(IGETC: 4I)

PSYCH 111—PSYCHOLOGY OF GENDER 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PSYCH 101.
A survey of various factors in the development of gender identity and gender roles, including psychological, sociological, biological and cultural influences. Field trips may be required. Lecture (A-F or P/NP) Transfer: (CSU, UC) General Education: (MUC-GE:B)(CSU-GE: D9)(IGETC: 4I)

PSYCH 118—PHARMACOLOGY OF ABUSED SUBSTANCES 3 UNITS
Also offered as HUMN 118
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete HUMN 116 or PSYCH 101.
An introduction to psychopharmacology and the process of drug addiction. Topics include classification of abused and psychotherapeutic drugs, basic principles of pharmacology, behavioral and physiological effects of drugs, major neurotransmitter systems and how they are influenced by drugs. Field trips are not required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MUC-GE:B)(CSU-GE: D9)(IGETC: 4I)

PSYCH 130—PERSONAL ADJUSTMENT 3 UNITS
The study of personal growth and adjustment. Includes discussion of personality, development, interpersonal relationships, stress management, work, and other concerns of individuals in society. Lecture (A-F or P/NP) Transfer: (CSU, UC) General Education: (MUC-GE:E)(CSU-GE:E)

PSYCH 141—HUMAN LIFESPAN 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PSYCH 101 and meet the eligibility requirements for ENGL 101.

Public Safety
For Public Safety course descriptions, please see FSCI (Fire Science)

RATV (Radio/Television)
Dean: Michael Sundquist
Division Office: Performing and Media Arts Center, Room 205
Phone: (209) 575-6081
Division website: www.mjc.edu/arts
Instructors: Carol Lancaster Mingus, Laura Paull

RATV 101—VOICE AND ARTICULATION 3 UNITS
Formerly listed as Basic Voice and Articulation
Also offered as SPOM 101 and HUMN 101.
Training program in basic voice and articulation. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. This is not a class for persons with a major speech or language delay or disorders. (A-F or P/NP) Lecture. Transfer: (CSU, UC) Speech Drama, Radio/Television

RATV 131—INTRODUCTION TO RADIO PRODUCTION 3 UNITS
Formerly listed as RATV 131—Radio Control Room and Studio Production
Theory and operation of broadcast audio control room and studio equipment. Basic planning and production techniques for radio programs, station promotions, commercial and public service announcements. Field trips may be required. Lecture/Lab. (A-F or P/NP)

RATV 132—ADVANCED RADIO PRODUCTION 1 4 UNITS
Prerequisite: RATV 131
Students operate a limited power radio station incorporating standard broadcast procedures and practices and exercising their skills in the production of commercials and public service announcements, promotional announcements, news, and remote broadcasts. Students may produce programs for community commercial stations. Field trips may be required. Lecture/Lab. (A-F or P/NP) Transfer: (CSU, UC) Music Activities

RATV 133—ADVANCED RADIO PRODUCTION 2 4 UNITS
Prerequisite: RATV 132
Continuation of RATV 132. Refinement of skills utilizing digital recording and equipment operation. Students will prepare an audition tape for entry level in the job market. Outside speakers from broadcast industry will be featured. Field trips may be required. Two maximum completions. Lecture/Laboratory. Transfer: (CSU, UC) Music Activities

RATV 134—TElevision Studio Production 3 UNITS
Introduction to television production techniques. This course offers and exciting blend of theoretical and practical work, with access to the college TV studio facilities. Students will work in teams to produce their own programs and have many hands-on and skill building opportunities in the areas of creative concept and script development, technical operation of television studio equipment, set direction and set design, multi-camera directing and performing in front of a camera. Lecture/Laboratory. Materials fee required. (MUC Activities, Radio/Television)

RATV 135—ADVANCED TELEVISION PRODUCTION 1 3 UNITS
Recommended for Success: RATV 134, 136
Practical applications in single and multiple camera television production. Creative use of camera, sound, editing, and production planning. Students will produce, direct, and edit individual features that will be incorporated into a half hour television program. This class will provide expanded responsibilities in producing, directing, and operating video and audio equipment in remote and studio productions. Field trips may be required. Two maximum completions. Lecture/ Laboratory. Materials fee required. Transfer: (CSU, UC) Music Activities, Radio/Television
RATV 136—ADVANCED TELEVISION PRODUCTION 2  2 UNITS
Formerly listed as RATV 135. Advanced television production utilizing techniques of color, video and audio engineering, and video editing and effects. Field trips may be required. Two maximum completions. Transfer: CSU

RATV 137—RADIO PROGRAMMING AND BROADCAST ANNOUNCING  3 UNITS
Formerly listed as RATV 137—Radio and Television-Announcing
Recommended for Success: Before enrolling in this course, students are strongly advised to complete Computer/Literacy and General Education (CSU, UC). Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. Lecture/Lab/MJC Activities. Transfer: CSU

RATV 138—WRITING FOR RADIO, TV & NEW MEDIA  3 UNITS
Formerly listed as RATV 138—Writing for Radio & TV
Recommended for Success: Before enrolling in this course, students are strongly advised to complete Computer/Literacy and General Education (CSU, UC). Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. Lectures/Lab/Discussion. Transfer: CSU

RATV 140—DOCUMENTARY PRODUCTION  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to complete Computer/Literacy and General Education (CSU, UC). Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. Lecture/Lab/MJC Activities. Transfer: CSU

RATV 141—LIGHT, SOUND, CAMERA & EDITING WORKSHOP  3 UNITS
Designed to explore the fundamental technical and aesthetic principles of lighting, sound, recording, and editing. Field trips may be required. Field trips might be required. (A-F Only) Lecture. MJC Activities. Transfer: CSU

RATV 142—NON-LINEAR VIDEO EDITING  3 UNITS
Recommended for Success: Basic computer operating skills. An introduction to the primary elements and basic interface of non-linear video editing. Students learn to perform basic editing functions and to operate the computer software and hardware user interface. Topics include basic software setup, editing and camera operation. Field trips are not required. (A-F Only) Lecture. MJC Activities. Transfer: CSU

RATV 143—INTRODUCTION TO THE MEDIA ARTS  3 UNITS
Formerly listed as RATV 150—Introduction to Mass Communications
Exploration of the impact of the mass media on American society and culture within a global and historical perspective. Topics include the origin, development and contemporary structure of the print, electronic and digital media and how they shape the economic, political and social fabric of society. The role of media in everyday life. Field trips may be required. Field trips might be required. Lecture/Lab. Transfer: CSU

RATV 145—MUSIC PRODUCTION FOR MULTIMEDIA  2 UNITS
Also offered as MUSC-126
Designed for the student with an interest in music composing, music production, sound design and sound effects, the course will explore production of music for recording artists, music videos, demos, public service announcements, radio programs, graphics animations, commercials, jingles and TV/film scoring through the use of MIDI sequencing, digital multitrack recording and SMPTE synchronizing. Four maximum completions. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 150—RECORDING ARTS 1  3 UNITS
Also offered as MUSC 111
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC-127. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 151—RECORDING ARTS 2  2 UNITS
Also offered as MUSC 112
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 111. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 152—RECORDING ARTS 3  2 UNITS
Also offered as MUSC 113
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 112. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 153—RECORDING ARTS 4  2 UNITS
Also offered as MUSC 114
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 113. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 154—RECORDING ARTS 5  2 UNITS
Also offered as MUSC 115
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 114. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 155—RECORDING ARTS 6  2 UNITS
Also offered as MUSC 116
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 115. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 156—RECORDING ARTS 7  2 UNITS
Also offered as MUSC 117
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 116. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 157—RECORDING ARTS 8  2 UNITS
Also offered as MUSC 118
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 117. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 158—RECORDING ARTS 9  2 UNITS
Also offered as MUSC 119
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 118. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 159—RECORDING ARTS 10  2 UNITS
Also offered as MUSC 120
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 119. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 160—RECORDING ARTS 11  2 UNITS
Also offered as MUSC 121
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 120. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 161—RECORDING ARTS 12  2 UNITS
Also offered as MUSC 122
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 121. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 163—RECORDING ARTS 13  2 UNITS
Also offered as MUSC 123
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 122. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 164—RECORDING ARTS 14  2 UNITS
Also offered as MUSC 124
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 123. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

RATV 165—RECORDING ARTS 15  2 UNITS
Also offered as MUSC 125
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete MUSC 124. Field trips may be required. Materials Fee Required. Two maximum completions. Field trips might be required. (A-F or P/NP) Lecture/Lab/MJC Activities. Transfer: CSU

READ (Reading)

READ 21—VOCABULARY DEVELOPMENT  3 UNITS
Course is designed to improve the vocabulary of students who are functioning at the Precollege level. Field trips are not required. (A-F Only) Lecture.

READ 40—READING COMPREHENSION  3 UNITS
Provides students the opportunity to improve their reading comprehension of pre-collegiate materials. Field trips are not required. (A-F Only) Lecture.

READ 62—COLLEGE VOCABULARY  3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to Complete, or assess above, reading 82. Development of college level vocabulary. Use of context clues and structural analysis emphasized. Field trips are not required. (A-F Only) Lecture.

READ 82—COLLEGE READING - COMPREHENSION  3 UNITS
Recommended for Success: Satisfactory completion of READ 40 or qualification by the MJC assessment process. Designed to improve student’s comprehension and retention of college level materials. Field trips are not required. (A-F Only) Lecture.

READ 84—CRITICAL READING  3 UNITS
Recommended for Success: Satisfactory completion of READ 82 or recommendation of the reading assessment. Reading for inferred ideas, evaluation of ideas, tone, mood, and style. Discussion of application of reader’s knowledge to reading material. Field trips are not required. (A-F Only) Lecture. Transfer: CSU

REC (Recreation)

Dean: William Kaiser
Division Office: PE Office Building, Room 105
Phone: (209) 575-6269
Division website: www.mjc.edu/athletics
Instructor: Paul Aiello

Color Legend:

NEW COURSE  UPDATED COURSE  INACTIVATED/HISTORICAL COURSE  COURSE UNCHANGED FROM 2011-2012 CATALOG
RLES (Real Estate)

Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129
Division website: mjc.edu/prospective/programs/bbss/

RLES 380—REAL ESTATE PRINCIPLES 3 UNITS
Real estate principles and laws in California, including contracts, deeds, land titles, liens, escrows, leases, financing, land descriptions, mandatory disclosures, terminology, ethics, fair housing and licensing. Field trips may be required. Lecture.

RLES 381—REAL ESTATE PRACTICES 3 UNITS
Prerequisite: Satisfactory completion of RLES 380
Practices and techniques of broker and salesperson including listing, prospecting, advertising, disclosures, selling, escrow procedures, financing, exchanges, property management and leases, land utilization and development, public relations and professional ethics, and fair housing in real estate business. Field trips may be required. Lecture.

RLES 382—LEGAL ASPECTS OF REAL ESTATE 1 3 UNITS
Prerequisite: Satisfactory completion of RLES 381
California real property laws including the principle legal aspects of ownership, acquisition and transfer of real property, legal descriptions, contracts, escrow procedures, forms of trust and foreclosure, liens and restrictions, legal instruments. Lecture. Not offered every semester.

RLES 384—REAL ESTATE FINANCE 3 UNITS
Prerequisite: Satisfactory completion of RLES 380 or 381.
Lending regulations, policies and procedures applicable to financing residential, multi-family, commercial and special purpose properties. Special attention to the money market, sources of funds and FHA and VA loans as factors in property financing. Lecture. Not offered every semester.

RLES 385—REAL ESTATE APPRAISAL, RESIDENTIAL 3 UNITS
Prerequisite: Satisfactory completion of RLES 380
Examination of appraisal process to determine property value on cost, sales comparison, and income basis. Consideration of neighborhood and site analysis, residential style and functional utility, three approaches to value, reconciliation of value indicators, and Uniform Standards of Professional Practice. Field trips may be required. Lecture.

RLES 392—BASIC ESCROW PROCEDURES 3 UNITS
Prerequisite: Satisfactory completion of RLES 380 or 381.
Basic escrow elements and practices. Terms, phraseology, and documents. Preparation of instructions and statements and their use, legal descriptions, vesting of title, balancing, debts and credits, loan payoffs and disbursing funds. Lecture. Not offered every semester.

RLES 383—REAL ESTATE APPRAISAL, COMMERCIAL 3 UNITS
Prerequisite: Satisfactory completion of RLES 380
Three approaches to value, reconciliation of value indicators, and Uniform Standards of Professional Examination of appraisal process to determine property value on cost, sales comparison, and income basis.

RLES 384—REAL ESTATE FINANCE 3 UNITS
Prerequisite: Satisfactory completion of RLES 380 or 381.
Lending regulations, policies and procedures applicable to financing residential, multi-family, commercial and special purpose properties. Special attention to the money market, sources of funds and FHA and VA loans as factors in property financing. Lecture. Not offered every semester.

RLES 385—REAL ESTATE APPRAISAL, RESIDENTIAL 3 UNITS
Prerequisite: Satisfactory completion of RLES 380
Examination of appraisal process to determine property value on cost, sales comparison, and income basis. Consideration of neighborhood and site analysis, residential style and functional utility, three approaches to value, reconciliation of value indicators, and Uniform Standards of Professional Practice. Field trips may be required. Lecture.

RLES 392—BASIC ESCROW PROCEDURES 3 UNITS
Prerequisite: Satisfactory completion of RLES 380 or 381.
Basic escrow elements and practices. Terms, phraseology, and documents. Preparation of instructions and statements and their use, legal descriptions, vesting of title, balancing, debts and credits, loan payoffs and disbursing funds. Lecture. Not offered every semester.

RSES (Real Estate)

Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 258-W
Phone: (209) 575-6373
Division website: www.mjc.edu/alliedhealth
Instructors: Bonnie Hunt, Philip Labrador

RSCR (Respiratory Care)

Dean: Maurice McKinnon, EdD
Division Office: John Muir Hall, Room 258-W
Phone: (209) 575-6373
Division website: www.mjc.edu/alliedhealth
Instructors: Bonnie Hunt, Philip Labrador

RSCR 220—INTRODUCTION TO RESPIRATORY CARE PRINCIPLES 5 UNITS
Prerequisite: Satisfactory completion of CHEM 143 with a grade of “C” or .
Covers basic physical principles necessary for the practice of respiratory care to include the following: medical terminology, fundamentals of general bedside patient care skills, underlying physical principles of respiratory care equipment, indications for the use of oxygen and aerosol therapy and related equipment. Field trips may be required. Lecture/Laboratory. Materials fee required. (A-F Only) Transfer: CSU

RSCR 222—BASIC CARDIOPULMONARY ANATOMY AND PHYSIOLOGY 3 UNITS
Formerly listed as RSCR 202
Prerequisites: Satisfactory completion of AP 150 or (ANAT 125 and PHYS 101)
Structure and functions of the pulmonary and cardiovascular systems. Application of laws of gas and fluid physics to the cardiopulmonary system. Field trips may be required. Lecture. (A-F Only) (Fall) Transfer: CSU

RSCR 224—RESPIRATORY CARE THEORY 2 5 UNITS
Formerly listed as RSCR 203
Prerequisites: Satisfactory completion of RSCR 220.
Theoretical foundation for basic treatment modalities utilized in respiratory care. Topics covered include: hyper-inflation therapies, chest physical therapy, basic airway care and cardiopulmonary pharmacology. Associated equipment will be covered during scheduled labs. Field trips may be required. Lecture/Laboratory. Materials fee required. (Spring) (A-F Only) Transfer: CSU

RSCR 230—CLINICAL 1 1 UNIT
Formerly listed as RSCR 205
Concurrent Enrollment: RSCR 220
Clinical experience in the various routine respiratory care procedures and the equipment used in area hospitals. Attention is paid to the student performing critical evaluations of current therapy and the application of clinical practice guidelines. Field trips may be required. Two maximum completions. Laboratory. (Fall/P/NP Only) Transfer: CSU

RSCR 232—CLINICAL 2 3½ UNITS
Formerly listed as RSCR 206
Prerequisites: Satisfactory completion of RSCR 230.
Concurrent Enrollment: RSCR 224
Clinical experience in the various routine respiratory care procedures and the equipment used in area hospitals. Attention is paid to the student performing critical evaluations of current therapy and the application of clinical practice guidelines. Field trips may be required. Two maximum completions. Laboratory. (Fall/P/NP Only) Transfer: CSU

RSCR 240—ADVANCED CARDIOPULMONARY PHYSIOLOGY AND DIAGNOSTICS 4½ UNITS
Formerly listed as RSCR 211
Prerequisites: Satisfactory completion of RSCR 222 and 224.
Advanced cardiopulmonary physiology and diagnostics for the second-year respiratory care student. Includes advanced arterial blood gas analysis, indices of oxygenation, chest x-ray interpretation, hemodynamic monitoring, laboratory testing, capnography, and ECG interpretation with an emphasis on clinical setting application. Also includes discussion of various pathologies caused by cardiovascular conditions. Field trips may be required. Lecture. (A-F Only) Transfer: CSU
RSCR 242—CRITICAL CARE PROCEDURES 4½ UNITS
Formerly listed as RSCR 212
Prerequisites: Satisfactory completion of RSCR 222, 224 and MICRO 101. Theory and application of critical care procedures for second year respiratory care students. This includes advanced theory and application of mechanical ventilators, associated pathophysiology and pharmacology, microbiological issues in respiratory care, application of ECG interpretation and chest x-ray interpretation. Field trips may be required. Lecture/Laboratory. (Spring)(A-F Only) Transfer: CSU

RSCR 244—NEONATAL-PEDIATRIC RESPIRATORY CARE 2 UNITS
Formerly listed as RSCR 214
Prerequisites: Satisfactory completion of RSCR 240 and 242. Introduction to respiratory care in the neonatal patient. Topics include fetal and neonatal development, resuscitation, pathophysiology, and neonatal and pediatric respiratory care procedures. Also open to those holding valid Respiratory Care Practitioner or Registered Nurse license. Field trips may be required. Lecture. (Summer) (A-F Only) Transfer: CSU

RSCR 246—CURRENT ISSUES IN RESPIRATORY CARE 3 UNITS
Formerly listed as RSCR 215
Prerequisites: Satisfactory completion of RSCR 240 and 242. Specialty areas in Respiratory Care: home care, skilled nursing facility care, management and administrative issues, pulmonary rehabilitation and education, metabolic studies, nutrition, sleep studies, assisting physicians in procedures, and blood gas analysis. Course also includes a comprehensive review to prepare students for state and national examination. Field trips may be required. Lecture. (A-F Only) (Fall) Transfer: CSU

RSCR 248—SELF-DIRECTED STUDY ½ UNIT
Formerly listed as RSCR 218
Prerequisites: Satisfactory completion of RSCR 242. Preparation for therapist level clinical simulation exam. Students spend 1½ hours per week on a self-directed basis completing computerized clinical teaching and testing simulations. Also open to those possessing a valid RCP license. Three maximum completions. Laboratory. Materials fee required. (P/NP Only)(Fall) Transfer: CSU

RSCR 250—CLINICAL 3 3½ UNITS
Formerly listed as RSCR 233
Prerequisites: Satisfactory completion of RSCR 232. Concurrent Enrollment: RSCR 240 and 242. Clinical experience in the various critical care respiratory procedures and the equipment used for these procedures in various area hospitals. Field trips may be required. Two maximum completions. Laboratory. Materials fee required. (P/NP Only)(Spring) Transfer: CSU

RSCR 251—NEONATAL AND PEDIATRIC CLINICAL PRACTICE 1 ½ UNIT
Prerequisites: Satisfactory completion of RSCR 242 Concurrent Enrollment: RSCR 244 Introduction to respiratory care clinical practice in perinatal, neonatal and pediatric care. Field trips may be required. Laboratory. (Summer)(P/NP Only) Transfer: CSU

RSCR 252—PHYSICIAN ROUNDS FOR RESPIRATORY CARE ½ UNIT
Formerly listed as RSCR 210
Prerequisites: Satisfactory completion of RSCR 242 Concurrent Enrollment: RSCR 244 and 246. Opportunity for interaction between physicians and respiratory care students to determine the appropriateness of a respiratory care plan, includes use of computer instruction in formulating adequate care plans and use of respiratory care protocols. Laboratory. (P/NP Only)(Fall) Transfer: CSU

RSCR 253—NEONATAL AND PEDIATRIC CLINICAL PRACTICE 2 ½ UNIT
Prerequisites: Satisfactory completion of RSCR 242 Concurrent Enrollment: RSCR 244 Additional respiratory care clinical practice in perinatal, neonatal and pediatric care. Field trips may be required. Laboratory. (Summer)(P/NP Only) Transfer: CSU

RSCR 255—CLINICAL 4 4½ UNITS
Formerly listed as RSCR 254
Prerequisites: Satisfactory completion of RSCR 244 Concurrent Enrollment: RSCR 246 Continued clinical experience in critical care units and introduction to clinical care in the neonatal intensive care unit as well as alternative site respiratory care. Field trips may be required. Laboratory. Materials fee required (items for malpractice liability insurance. (Fall)(P/NP Only) Transfer: CSU

RSCR 257—CLINICAL PRECEPTORSHIP 2½ UNITS
Formerly listed as RSCR 256
Prerequisites: Satisfactory completion of RSCR 244 Concurrent Enrollment: RSCR 246 Four week clinical preceptorship in which student must demonstrate proficiency in all areas of clinical respiratory care practice. Field trips may be required. Laboratory. (P/NP Only) (Fall) Transfer: CSU

SIGN (Sign Language)
Dean: Patrick Bettencourt
Division Office: Journalism 180
Phone: (209) 575-6149
Division website: www.mjc.edu/current/programs/divdeps/litlang/
Instructors: Barbara Wells

SIGN 125—ASL: BEGINNING COMMUNICATION WITH THE DEAF 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENGR 50.
Introduction to American Sign Language, designed to provide basic conversational skill in the language used among Deaf people in the United States. This course is equivalent to the first two years of high school ASL. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU, UC General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 6A)

SIGN 126—ASL: INTERMEDIATE COMMUNICATION WITH THE DEAF 3 UNITS
Prerequisite: Satisfactory completion of SIGN 125.
Communicating with and interpreting for the Deaf at an intermediate conversational level using American Sign Language. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU, UC General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC: 38, 6A)

SIGN 127—ASL: ADVANCED COMMUNICATION WITH THE DEAF 3 UNITS
Prerequisite: Satisfactory completion of SIGN 126.
Extensive development of and practice in American Sign Language for those who would like to interpret for the Deaf or for those want to become professionals working in the Deaf community. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU, UC General Education: (MJC-GE: C)(CSU-GE: C2)(IGETC:3B, 6A)

SM (Sheet Metal)
Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332
Division website: www.mjc.edu/prospective/programs/teched/sheetmetal/ Instructors: Sonny Guinn

The Vocational Sheet Metal courses teach layout, measurement, forming, and installation as well as the mathematics required for sheet metal fabrication. Curriculum is developed and closely monitored in consultation with local air conditioning and heating contractors.

SM 331—VOCA TIONAL SHEET METAL AND INSTALLATION 1 3 UNITS
Formerly listed as SM 31
Tools and machinery used by sheet metal trades. Training in the procedures using patterns, cutting, making seams and riveting metals. Safety in sheet metal shop. Basic mathematical application. Opportunities in the trade. Field trips may be required. Lecture. (A-F or P/NP)

SM 332—VOCA TIONAL SHEET METAL AND INSTALLATION 2 3 UNITS
Formerly listed as SM 32
Prerequisite: Satisfactory completion of SM 331
Techniques perfected in turning, burring, raising, forming, crimping, and beading. Short method of pattern development. Parallel line and radial line-development. Linear and geometric measures. Field trips may be required. Lecture (A-F Only)
SM 232 — VOCATIONAL SHEET METAL AND INSTALLATION 3 3 UNITS
Formerly listed as SM 33
Prerequisite: Satisfactory completion of SM 231

SM 234 — VOCATIONAL SHEET METAL AND INSTALLATION 4 3 UNITS
Formerly listed as SM 234
Prerequisite: Satisfactory completion of SM 233

SM 235 — VOCATIONAL SHEET METAL AND INSTALLATION 5 3 UNITS
Formerly listed as SM 235
Prerequisite: Satisfactory completion of SM 234
Sheet metal pattern development and pattern drafting. Continued study of mathematics for sheet metal fabrication. Field trips may be required. Lecture. (A-F Only)

SM 236 — VOCATIONAL SHEET METAL AND INSTALLATION 6 3 UNITS
Formerly listed as SM 36
Prerequisite: Satisfactory completion of SM 235
Continuation of mathematics for sheet metal fabrication, pattern development and pattern drafting. Field trips may be required. Lecture. (A-F Only)

SM 237 — VOCATIONAL SHEET METAL AND INSTALLATION 7 3 UNITS
Formerly listed as SM 37
Prerequisite: Satisfactory completion of SM 236
Advanced study of mathematics for sheet metal fabrication. Sheet metal pattern development and pattern drafting. Field trips may be required. Lecture. (A-F Only)

SM 238 — VOCATIONAL SHEET METAL AND INSTALLATION 8 3 UNITS
Formerly listed as SM 38
Prerequisite: Satisfactory completion of SM 237
Advanced training in conjunction with the manipulation skills acquired in daily work, to develop well qualified sheet metal workers. Field trips may be required. Lecture. (A-F Only)

SOCIO 101 — INTRODUCTION TO SOCIOLOGY 3 UNITS
The study of human social interaction, groups and societies with emphasis upon culture, social differences, institutions and change. Field trips may be required. Lecture. Transfer: (CSU, UC)(TCSU SOC 110)(CC SOCIO 115) General Education: (MJC-GE: B)(CSU-GE: DD)(IGETC: 4J)

SOCIO 102 — SOCIAL PROBLEMS IN THE UNITED STATES 3 UNITS
The experiences of caregivers and patients from several ethnic minority groups. The study of contemporary social problems within the American society emphasizing, among other topics, alcohol and drug abuse, crime and violence, family problems, power, race, and gender inequalities. Construction of possible solutions to social problems will also be discussed. Field trips may be required. Lecture. Transfer: (CSU, UC)(CC SOCIO 22)(TCSU SOC 120) General Education: (MJC-GE: B)(CSU-GE: DD)(IGETC: 4J)

SOCIO 125 — SOCIOLOGY OF THE FAMILY 3 UNITS
Comparative and historical treatment of the family. Analysis of kinship and family structure; roles and relationships within the family. Assessment of contemporary society on the family in America. Lecture. Transfer: (CSU, UC)(CC SOCIO 12) General Education: (CSU-GE: DD)(IGETC: 4J)

SOCIO 131 — SOCIOLOGY OF MEDICINE: CROSS-CULTURAL PERSPECTIVES 3 UNITS
The experiences of caregivers and patients from several ethnic minority groups (Hispanic, African American and Southeast Asian) provide access to an understanding of some of the meanings and traditions of health in the U.S. Definitions of health and strategies of healing as well as the distribution of illness in our stratified, multicultural society are examined. The influence of Western biomedicine, its network of roles and relationships and the effects of economics and bioethics on health care delivery are evaluated. Field trips may be required. Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: B)

SOCIO 150 — ETHNICITY AND CULTURE IN AMERICA 3 UNITS

SOCIO 154 — AFRICAN-AMERICAN CULTURES AND COMMUNITIES 3 UNITS
A sociological exploration of the social and historical forces shaping contemporary African-American experiences and their multiple statuses in American society. Effects of stratification, conflict and change as well as the historical and current roles of the family within dynamic communities are emphasized. Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: B)(CSU-GE: DD, D3)(IGETC: 4J)

SOCIO 156 — MEXICAN CULTURE IN THE UNITED STATES 3 UNITS

SOCSC (Social Science)
Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129
Division website: mjc.edu/prospective/programs/bbss/

SOCSC 58 — STUDENT LEADERSHIP DEVELOPMENT 2 UNITS
Theory and practice of leadership. Prepares students for productive involvement in community service, college activities, and civic governance. Designed especially, but not exclusively, for students participating in student government and club activities. Field trips may be required. Two maximum completions. Lecture/Laboratory. MJC Activities. Transfer: (CC GUIDE 115)

SOCSC 105 — WOMEN’S STUDIES 3 UNITS
Recommended for Success: Satisfactory completion of ENGL 101
A multidisciplinary introduction to the origins, purpose, subject matter, and methods of feminist theory in the social sciences. This course explores political, economic, social, cultural and historical issues from a feminist perspective. The focus is on classic feminist texts: how they have changed gender roles in society, how feminist politics have evolved, and how they have shaped contemporary world views. Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: B, C)(CSU-GE: D4)(IGETC: 4J)

SOCSC 109 — INTRODUCTION TO EDUCATION - PRACTICUM IN TUTORING 2 UNITS
Orientation to the teaching profession. Designed for prospective elementary, secondary or college teachers but open to all. Students are required to observe and tutor in an appropriate educational setting. Partially meets field experience requirement for teaching credential program at CSU Stanislaus. Fingerprint clearance and TB clearance is required. Lecture. Transfer: (CSU, UC). General Education: (MJC-GE: B)

SOCSC 110 — INTRODUCTION TO EDUCATION 3 UNITS
Orientation to the teaching profession. Designed for prospective elementary, secondary or college teachers but open to all students. Students are required to observe and participate in community classrooms. Meets field experience requirements for teaching credential program. Fingerprint clearance and TB clearance is required. Lecture. Transfer: (CSU, UC)(CC EDUC 12) General Education: (MJC-GE: B)
SPAN (Spanish)

Dean: Patrick Bettencourt
Division Office: Journalism 180
Phone: (209) 575-6149
Division website: www.mjc.edu/current/programs/divdeps/litlang/
Instructors: Laura Manzo, Marcos Contreras, PhD; Marianne Franco, PhD

SPAN 45, A, B, C—PRACTICAL SPANISH FOR THE PROFESSIONS 1½, 1, 2, 3 UNITS

Conversational Spanish for people working in the following areas: health, education, law enforcement, social work, agriculture, construction, public safety, and business. Occupational topics vary from semester to semester. May be repeated for credit as topic changes. Field trips may be required. Multiple completions not to exceed 9 units in any combination. Lecture.

SPAN 45 A, B, C, X—PRACTICAL SPANISH FOR THE PROFESSIONS 0.5 - 3 UNITS

Conversational Spanish for people working with the Spanish-speaking in the following areas: health, education, law enforcement, social work, agriculture, construction, public safety, and business. Occupational topics vary from semester to semester. May be repeated for credit as topic changes. A student may take Spanish for Nursing one semester and learn vocabulary appropriate to the nursing profession and the following semester may take Spanish for Law Enforcement and learn vocabulary appropriate for law enforcement officers. Four maximum completions. Field trips might be required. (A-F or P/NP - Student choice) Lecture

SPAN 51—INTRODUCTORY SPANISH 1 3 UNITS

Slow-paced, non-transferable course designed for people who have never studied a foreign language before, especially Spanish. Basic Spanish grammar and pronunciation. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (ICC SPAN 10A) General Education: (MJC-GE: C)

SPAN 52—INTRODUCTORY SPANISH 2 3 UNITS

Formerly listed as SPAN 52—Introduction to Practical Spanish 2
Prerequisite: Satisfactory completion of SPAN 51 or equivalent introductory course. Slow-paced, non-transferable course designed for people who wish to continue from SPAN 51. Basic Spanish grammar and pronunciation. Field trips may be required. Lecture. General Education: (MJC-GE: C)

SPAN 101—SPANISH 1 5 UNITS

Fundamentals of spoken and written Spanish. Field trips may be required. (A-F or P/NP) Equivalent to the satisfactory completion of two years of high school Spanish. Lecture Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 102—SPANISH 2 5 UNITS

Prerequisite: Satisfactory completion of SPAN 101.
Continuation of SPAN 101. Emphasis on preterite and imperfect tenses of the indicative mood. Equivalent to the completion of three years of high school Spanish. Lecture. (A-F and P/NP) Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 103—SPANISH 3 5 UNITS

Prerequisite: Satisfactory completion of SPAN 102.
Continuation of Spanish 102. Includes Spanish grammar, conversation, reading and composition. Also includes reading and discussion in Spanish of selections from literary works of Spanish and Latin American writers. Equivalent to the satisfactory completion of four years of high school Spanish. (A-F or P/NP) Transfer: (CSU, UC) (TCSU SPAN SEQ B, TCSU SPAN 130, TCSU SPAN SEQ B) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 104—SPANISH 4 5 UNITS

Prerequisite: Satisfactory completion of SPAN 103.
Review and expansion of grammatical structures covered in Spanish 101-103. Includes a review of the uses of the subjunctive and the reading and discussion of literary works of Spanish and Latin American writers. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (TCSU SPAN 130, TCSU SPAN SEQ B, TCSU SPAN 140) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 109—SPANISH FOR SPANISH SPEAKERS 1 5 UNITS

Formerly listed as SPAN 109—Spanish for Spanish Speakers: Fundamentals Recommended for Success: Before enrolling in this course, students are strongly advised to understand and be able to communicate in Spanish with near native fluency, but with some formal academic study in the language.
The first of two courses intended for native or heritage Spanish speakers who already speak, read and write in Spanish at varying levels and with some academic study in the language. This course reviews major elements of Spanish grammar and focuses on improving oral and written communication skills. Students expand on their own experiences and explore other Spanish speaking cultures through the study of selected readings. Equivalent to the satisfactory completion of two years high school Spanish. Taught in Spanish. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2)

SPAN 110—SPANISH FOR SPANISH SPEAKERS 2 5 UNITS

Prerequisite: Satisfactory completion of SPAN 109.
A continuation of SPAN 109. This course is intended for Spanish-speaking students who seek to further improve their oral and written communication skills in standard Spanish through continued grammar review, vocabulary expansion and composition. Students will analyze and discuss topics about the diverse cultures of the Spanish speaking world through selected readings. Equivalent to the satisfactory completion of three years of high school Spanish. Taught in Spanish. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 112—INTRODUCTION TO CHICANO/A LITERATURE 3 UNITS

Formerly listed as SPAN 112—Introduction to Chicano/a Literature
Prerequisite: Satisfactory completion of SPAN 104 or SPAN 110.
Overview of the historical development and current trends in Chicano/a literature, taught in Spanish. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B, 6A)

SPAN 113—SURVEY OF LATIN AMERICAN LITERATURE 3 UNITS

Prerequisite: Satisfactory completion of SPAN 104 or SPAN 110.
Introduction to Latin American literature from the Pre-Colombian Period to the present, a literary survey of major works from different literary movements and from various genres such as poetry, short story, essay, drama, and the novel. Taught in Spanish. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) General Education: (MJC-GE: C) (CSU-GE: C2) (IGETC 3B)
The Speech Communication Program at Modesto Junior College offers students a variety of courses which incorporate both theory and practice instruction. These include public speaking, argumentation and debate, organizational communication, intercultural and interpersonal communication, contest speaking and forensics competition which includes debate and individual events. The MIC Forensics Team has captured a number of state and national championships. The program also offers courses in practical speech communication and voice improvement. Most courses are available to students in both day and evening hours.

**SPCOM 100 — FUNDAMENTALS OF PUBLIC SPEAKING**

Developing individual effectiveness in various public speaking activities, emphasis on public speaking, instruction and practice in selection, organization and presentation of materials. Development of self-confidence and listening skills. Lecture. (A-F or P/NP) Transfer: (CSU, UC)(CC SPCOM 1) (TCSU COMS 110) **General Education:** (MJC-GE: D2)(CSU-GE: A1)(IGETC: 1C)

**SPCOM 101 — VOICE AND ARTICULATION**

Formerly listed as Basic Voice and Articulation

Training program in basic voice and articulation. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. This is not a class for persons with a major speech or language delay or disorder. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC DRAMA/SPOCM 18)

**SPCOM 102 — INTRODUCTION TO HUMAN COMMUNICATION**

The study of human communication including verbal, nonverbal and listening skills. Effective oral participation in interpersonal contexts, group discussions, and individual presentations in public settings. Lecture. (A-F or P/NP) Transfer: (CSU, UC)(CC SPCOM 4) **General Education:** (MJC-GE: D2)(CSU-GE: A1)(IGETC: 1C)

**SPCOM 103 — INTERPERSONAL COMMUNICATION**

Principles of interpersonal communication including perceptual, verbal and nonverbal elements. The study of theory, research findings, concepts and skills in interpersonal relationships as applied to various interactions, such as the male/female relationship, the family, and the workplace. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (TCSU COMS 130) **General Education:** (MJC-GE: D2)(CSU-GE: D7)(IGETC: 4G)

**SPCOM 104 — ARGUMENTATION**

Prerequisite: Satisfactory completion of ENGL 101

Primary emphasis on argumentation as the study of analysis, evidence, reasoning, refutation and rebuttal, etc., in oral and written communication. Significant component of instruction in written argumentation, with special attention to the essay form. "Critical Thinking" approaches to commercial, legal, political, and academic argumentation and persuasion. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC)(CC SPCOM 2) (TCSU SPAN 120) **General Education:** (MJC-GE: D2)(CSU-GE: A3)(IGETC: 1B)

**SPCOM 105 — FORENSICS DEBATE**

Formerly listed as SPCOM 105 — Forensics Workshop

Principles of debate applied through participation in competitive debate. Students will participate in intercollegiate forensics. Competitive events include parliamentary, NTA Lincoln-Douglas and policy debate. Four completions allowed. Field trips are required. Laboratory (A-F or P/NP) **MIC Activities. Transfer:** (CSU, UC)(CC SPCOM 9)

**SPCOM 106 — GROUP & ORGANIZATIONAL COMMUNICATION**

Formerly listed as SPCOM 106 — Organizational Communication

Also offered as SUPR 106

Communication within and between groups and organizations while enhancing relevant individual communication skills. Emphasis on communication and organizational theory as basis for focus on such communication processes as interviewing, task-oriented discussion, problem solving, leadership, conflict resolution and negotiation, communication climate, and organizational culture. (A-F or P/NP) Lecture. Transfer: (CSU, UC) (TCSU COMS 140) **General Education:** (MJC-GE: D2)

**SPCOM 107 — INTRODUCTION TO DEBATE**

Argumentation principles and the debate format. Emphasis on case construction, methods of attack and defense, communication strategies, and various forms of debate. Field trips may be required. (A-F or P/NP) Lecture. Transfer: (CSU, UC) **General Education:** (MJC-GE: D2)(CSU-GE: A1)(IGETC: 1C)

**SPCOM 109 — WOMEN IN MANAGEMENT**

Formerly listed as SPCOM 109 — Communication and Leadership Skills for Women in Management

Communication and leadership skills for effective business management. Emphasis on the women’s movement into management positions, effective communication strategies in organizations, building teams, supervising employees, interpersonal skills, assertiveness training and decision-making skills. (A-F or P/NP) Lecture. Transfer: (CSU, UC) **General Education:** (MJC-GE: D2)(CSU-GE: A1)(IGETC: 1C)

**SPCOM 110 — PERSUASION**

Development of abilities to plan and deliver persuasive presentations through a combination of methods involving the study of "real" communicative events; i.e., trials, sales presentations, political campaigns, sermons, etc., and the preparation and presentation of own works. Survey of recent research in attitude change and persuasive communication. Field trips may be required. Lecture. (A-F or P/NP) Transfer: (CSU, UC) **General Education:** (MJC-GE: D2)(CSU-GE: A1)(IGETC: 1C)

**SPCOM 115 — FORENSICS PLATFORM SPEECHES**

Principles of applied speech communication through participation in competitive speech performances. Students will participate in intercollegiate forensics. Competitive events include informative speaking, persuasive speaking, communication analysis, speech to entertain, after dinner speaking, extemporaneous speaking, and impromptu speaking. Field trips are required. Laboratory (A-F or P/NP) Four completions allowed. **MIC Activities. Transfer:** (CSU, UC)

**SPCOM 115 — FORENSICS PLATFORM SPEECHES**

Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete SPCOM 101.

Principles of applied speech communication through preparation for participation in competitive speech performances. Students will prepare to participate in or judge-platform events. Competitive events include informative speaking, persuasive speaking, communication analysis, speech to entertain, and after dinner speaking. Field trips are not required. (A-F or P/NP - Student choice) Lecture & Lab. Transfer: (CSU) **General Education:** (MJC-GE: C)(CSU-GE: C1)

**SPCOM 120 — ORAL READING AND INTERPRETATION**

Also offered as THETR 120

Skills in oral interpretation of literature; choice of material, involvement with material, communication of author’s thought, emotion and language; expanded knowledge of literature and literary forms. Credit given for either THETR 120 or SPCOM 120, but not both. Lecture. (A-F or P/NP) Transfer: (CSU, UC) **General Education:** (MJC-GE: C)(CSU-GE: C1)

**SPCOM 122 — INTRODUCTION TO READERS’ THEATRE**

Also offered as THETR 122

Study of oral interpretation principles as they apply to group and choral reading. Emphasis will be placed upon the preparation and performance of Readers’ Theatre productions. Students will be provided with the necessary theory, practice, and criticism to develop skills for organization and oral presentation of Readers’ Theatre materials. Lecture. Field trips may be required. **MIC Activities. Transfer:** (CSU, UC) **General Education:** (CSU-GE: C1)

**SPCOM 123 — STORYTELLING**

Formerly listed as SPCOM 123 — Storytelling: The Interpretation Of Children's Literature

Also offered as THETR 123

Introduction to the art of storytelling focusing on the preparation and presentation of literature. Emphasis is placed upon selection of materials, analysis, preparation, and presentation of various genres of stories. Designed to develop the adult reader’s knowledge, critical ability and appreciation of literature, as well as critical listening of others sharing literature. Field trips may be required. Lecture. (A-F or P/NP) **MIC Activities. Transfer:** (CSU) **General Education:** (CSU-GE: C1)
STSK 78—COLLEGE STUDY SKILLS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENG 50 and satisfactorily complete READ 82. Introduction to educational, psychological and social factors necessary for college success. Topics include: goal setting, time management, note-taking, textbook reading, test-taking skills, memorization, concentration, motivation, writing and speaking, critical and creative thinking, learning styles, use of technology, diversity, health, relationships, finances, educational planning and career development. Acquaints students with the college, its curriculum, facilities, services, regulations, programs, degree and transfer requirements. Field trips may be required. (A-F Only) Lecture / Discussion.

STSK 79—STUDENT SUCCESS STRATEGIES
Designed to increase the student's success in college and facilitate the transition to the workplace and other college courses. Practical emphasis on goal setting, time management, study skills and interpersonal communication. This class does not meet graduation requirements for graduation. Field trips are not required. (A-F Only) Lecture / Discussion.

STSK 267—THEARTER
Newly offered. The course is designed for students interested in the theatre Arts. The course will be offered in the fall of 2012.

STSK 268—THEARTER
Continued development of the construction and direction of Readers’ Theatre performances suitable for public presentation. Emphasis on analysis of reading materials and helping others enhance communication skills through vocal control and physical expression. Field trips may be required. Lecture. (A-F or P/NP) Transfer: (CSU, UC) General Education: (MJC-GE: CJ)(CSU-GE: C1)

STSK 145—PARLIAMENTARY PROCEDURE
Also offered as ASGE 145
Introduction to Parliamentary Procedure. Preparing for and participating in meetings as a member, officer, and chairperson. Rank and use of motions. Two completions allowed. Lecture. (A-F or P/NP) Transfer: CSU

STSK (Study Skills/Counseling)
Dean (Interim): Dean Tsuruda

SUPR (Supervisory Management)
Dean: Vacant
Division Office: Journalism 150
Phone: (209) 575-6129
Division website: mjc.edu/prospective/programs/bbss/

SUPR 106—GROUP & ORGANIZATIONAL COMMUNICATION
Also offered as SPCOM 106—Organizational Communication
Communication within and between groups and organizations while enhancing relevant individual communication skills. Emphasis on communication and organizational theory as basis for focus on such communication processes as interviewing, task-oriented discussion, problem solving, leadership, conflict resolution and negotiation, communication climate, and organizational culture. (A-F or P/NP) Lecture. Transfer: CSU General Education: (MJC-GE: D2)

SUPR 351—ELEMENTS OF SUPERVISION
Recommended for Success: SUPR 351, BUSAD 240. This course provides an introduction to W. Edward Deming’s philosophy of Total Quality Management and its implications for improving the competitiveness of American business in the international economy. A variety of related management topics is also presented. Lecture.

SUPR 364—TOTAL QUALITY MANAGEMENT
Also offered as BUSAD 364

SPEL (Spelling)
Dean: Patrick Bettencourt
Division Office: Journalism 180
Phone: (209) 575-6149
Division website: www.mjc.edu/current/programs/divdeps/litlang/

SPELL 31—BASIC SPELLING AND PHONICS
Designed for non-native speakers to improve reading and spelling. Emphasis on sound-symbol relationships in English and phonics rules. Discrimination between words which are similar in either spelling or sound. Field trips are not required. (A-F Only) Lecture.

SPELL 32—SPELLING AND PUNCTUATION
Designed to improve spelling and pronunciation skills by introducing and using the phonics patterns of English. Field trips are not required. (A-F Only) Lecture.

SPCOM 124—ADVANCED READERS’ THEATRE
Recommended for Success: Satisfactory completion of (SPCOM 120 or 122) or (THETR 120 or 122)
Also offered as THETR 124
Continued development of the construction and direction of Readers’ Theatre performances suitable for public presentation. Emphasis on analysis of reading materials and helping others enhance communication skills through vocal control and physical expression. Field trips may be required. Lecture. (A-F or P/NP) Transfer: CSU General Education: (MJC-GE: C)(CSU-GE: C1)

SPCOM 125—FORENSICS INTERPRETATION EVENTS
Principles of applied speech communication through participation in competitive interpretation of literary performances. Students will participate in intercollegiate forensics. Competitive events include prose, poetry, drama, duo, and oral interpretation plus readers theatre. Four completions allowed. Field trips are required. (A-F or P/NP - Student choice) Lecture / Lab Transfer: CSU Activities. Transfer: CSU

SPCOM 130—INTERCULTURAL COMMUNICATION
Examines the influence of culture on human communication. Students will learn skills to communicate effectively with people from different cultures. Theoretical and practical models are explored. Emphasis on cultural identity, relationships, stereotyping, prejudice, nonverbal and verbal cues, values, beliefs, and norms. Field trips may be required. (A-F or P/NP) Lecture. Transfer: CSU, UC (SPCOM 5) General Education: (MJC-GE: D2) (CSU-GE: D3, D7) (IGETC: 4C, 4G)

SPCOM 135—FORENSICS LIMITED PREPARATION EVENTS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete SPCOM 100.
Principles of applied speech communication through preparation for participation in competitive interpretation of literary performances. Students will prepare to participate in or judge interpretation events. Competitive events include prose, poetry, drama, duo, oral interpretation and readers theatre. Field trips are not required. (A-F or P/NP - Student choice) Lecture / Lab Transfer: CSU General Education: (MJC-GE: Activities)

SPCOM 145—PARLIAMENTARY PROCEDURE
Also offered as ASGE 145
Introduction to Parliamentary Procedure. Preparing for and participating in meetings as a member, officer, and chairperson. Rank and use of motions. Two completions allowed. Lecture. (A-F or P/NP) Transfer: CSU

SUPR 106—GROUP & ORGANIZATIONAL COMMUNICATION
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete ENG 50 and satisfactorily complete READ 82. Introduction to educational, psychological and social factors necessary for college success. Topics include: goal setting, time management, note-taking, textbook reading, test-taking skills, memorization, concentration, motivation, writing and speaking, critical and creative thinking, learning styles, use of technology, diversity, health, relationships, finances, educational planning and career development. Acquaints students with the college, its curriculum, facilities, services, regulations, programs, degree and transfer requirements. Field trips may be required. (A-F Only) Lecture. MJC Guidance. Transfer: (CC GUIDE 100)

THETR (Theatre)
Dean: Michael Sundquist
Division Office: Performing and Media Arts Center, Room 205
Phone: (209) 575-6081
Division website: www.mjc.edu/arts
Instructors: Lori Bryhni, Lynette Borelli, Michael Lynch
<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>THETR 100—INTRODUCTION TO THEATRE ARTS</td>
<td>3 UNITS</td>
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<tr>
<td>Investigation of the process of the collective art of the theatre, the role of the actor, director, playwright, designer, technician and audience. Survey of the origins of the theatre, its development as an art form, and the social, political and cultural implications of this art form at various points in history. Attendance of MUC theatre productions required. Field trips may be required. <strong>(A-F or P/NP) Lecture.</strong> <strong>Transfer:</strong> (CSU, UC) <strong>(CC DRAMA 10)</strong> <strong>General Education:</strong> (MUC-GE C) (CSU-GE C1) (IGETC 3A)</td>
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<tr>
<td>THETR 101—VOICE AND ARTICULATION</td>
<td>3 UNITS</td>
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<tr>
<td>Formerly listed as Basic Voice and Articulation. Also offered as RATV 101 and SPOCM 101. Training program in basic voice and articulation. Emphasis on critical listening, self-analysis and self-improvement in tone production and control, voice quality, articulation and pronunciation. Introduction to the International Phonetic Alphabet. This is not a class for persons with a major speech or language delay or disorder. <strong>(A-F or P/NP) Lecture.</strong> <strong>Transfer:</strong> (CSU, UC) <strong>(CC DRAMA/ SPOCM 18)</strong></td>
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<tr>
<td>THETR 102—WORLD THEATRE</td>
<td>3 UNITS</td>
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<td>Survey of world theatre and its development as an art form through social, political and cultural contexts. Investigation of cultural traditions and styles, values, aesthetics will be explored. Field trips required. <strong>Lecture.</strong> <strong>Transfer:</strong> (CSU, UC) <strong>General Education:</strong> (MUC-GE C) (CSU-GE C1) (IGETC 3A)</td>
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<tr>
<td>THETR 103—DANCE REPERTORY REHEARSAL AND PERFORMANCE</td>
<td>2 UNITS</td>
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<tr>
<td>Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 192. Preparation and presentation of a modern/contemporary dance performance for public viewing. Four completions allowed. <strong>Lecture/Lab</strong> <strong>Transfer:</strong> (CSU, UC) <strong>General Education:</strong> (MJC Activities. <strong>Transfer:</strong> (CSU, UC)</td>
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<tr>
<td>THETR 105—INTRODUCTION TO STAGECRAFT</td>
<td>3 UNITS</td>
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<tr>
<td>An introduction to technical theatre and the creation of scenic elements. Includes basic concepts of design, painting techniques, set construction, set movement, prop construction, backstage organization, and career possibilities. May include stage management, lighting, and/or sound techniques. Lecture, reading, projects, and practical experiences. Field trips are not required. <strong>(A-F or P/NP - Student choice) Lecture/Lab.</strong> <strong>Transfer:</strong> (CSU, UC) <strong>General Education:</strong> (MUC-GE Activities)</td>
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<tr>
<td>THETR 120—ORAL READING AND INTERPRETATION</td>
<td>3 UNITS</td>
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<tr>
<td>Also offered as SPOCM 120. Skills in oral interpretation of literature, choice of material, involvement with material, communication of author's thought, emotion and language, expanded knowledge of literature and literary forms. Credit given for either THETR 120 or SPOCM 120, but not both. <strong>Lecture (A-F and P/NP)</strong> <strong>Transfer:</strong> (CSU, UC) <strong>(CC DRAMA 20)</strong> <strong>General Education:</strong> (MUC-GE C) (CSU-GE C1)</td>
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<tr>
<td>THETR 122—INTRODUCTION TO READERS' THEATRE</td>
<td>3 UNITS</td>
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<tr>
<td>Also offered as SPOCM 122. <strong>Study of oral interpretation principles as they apply to group and choral reading. Emphasis will be placed upon the preparation and performance of Readers' Theatre productions. Students will be provided with the necessary theory, practice, and criticism to develop skills for organization and oral presentation of Readers' Theatre materials. Lecture. Field trips may be required. <strong>MJC Activities.</strong> Transfer:</strong> (CSU, UC) <strong>(CC DRAMA 22)</strong> <strong>General Education:</strong> (MUC-GE C) (CSU-GE C1)</td>
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<td>THETR 123—STORYTELLING</td>
<td>3 UNITS</td>
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<tr>
<td>Also offered as SPOCM 123 — Storytelling: The Interpretation Of Children's Literature. Introduction to the history of storytelling and the techniques of critical listening to, preparation and presentation of literature. Emphasis on sources, selection of materials, analysis, preparation and presentation of prose, verse, and drama. Designed to develop the adult reader's knowledge, critical ability, and appreciation of literature. Field trips may be required. <strong>Lecture.</strong> <strong>(A-F or P/NP)</strong> <strong>MJC Activities. Transfer:</strong> (CSU General Education: (MUC-GE C) (CSU-GE C1)</td>
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<td>THETR 124—ADVANCED READERS' THEATRE</td>
<td>3 UNITS</td>
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<td>Recommended for Success: Satisfactory completion of (SPOCM 120 or 122) or (THETR 120 or 122.) Also offered as SPOCM 124. Continued development of the construction and direction of Readers' Theatre performances suitable for public presentation. Emphasis on analysis of reading materials and helping others enhance communication skills through vocal control and physical expression. Field trips may be required. <strong>Lecture. Transfer:</strong> (CSU, UC) General Education: (MUC-GE C)(CSU-GE C1)</td>
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<td>THETR 129—JAZZ 2</td>
<td>1 UNIT</td>
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<td>Also offered as: PEC - 129. <strong>Recommended for Success:</strong> Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 188 or PEC 126. Intermediate technique of Jazz Dance with explorations into contemporary derivations of jazz. Emphasis on technical style of the form and the interrelationship of music and movement. Four Maximum completions. Field trips are not required. <strong>(A-F or P/NP - Student choice) /Lab Transfer:</strong> (CSU, UC) General Education: (MUC-GE Activities)</td>
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<tr>
<td>THETR 131—FUNDAMENTALS OF CHOREOGRAPHY 1</td>
<td>2 UNITS</td>
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<td>Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 185 or satisfactorily complete PEC 122. Introduction to the creative process of composing dance. Compositional components will be explored, crafted, and aesthetically analyzed. The elements of dance and performance qualities will be explored through technical practice, improvisation, and compositional studies. Four Maximum completions. Field trips may be required. <strong>(A-F or P/NP) Lecture/Lab MJC Activities. Transfer:</strong> (CSU, UC)</td>
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<td>THETR 150—ELEMENTS OF PLAYWRITING</td>
<td>3 UNITS</td>
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<td>Recommended for Success: Satisfactory completion of ENGL 101 &amp; THETR 100. Introduction to the writing of dramatic scripts for the stage, culminating in a staged reading of completed drafts with actors before an audience. Field trips required. Two maximum completions. <strong>Lecture/Laboratory Transfer:</strong> (CSU, UC) General Education: (MUC-GE C)(CSU-GE C1,C2)</td>
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<tr>
<td>THETR 156—REHEARSAL AND PERFORMANCE IN COMEDY</td>
<td>2 UNITS</td>
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<td><strong>Limitations on Enrollment:</strong> Enrollment limited to students who successfully pass audition process. Participation as actors in a fully supported theatre production. This course focuses on ensemble performance techniques that are essential for a comedic play production. Participation in rehearsals and public performances is required. Four Maximum completions. Field trips may be required. <strong>(A-F Only) Lab MJC Activities. Transfer:</strong> (CSU, UC)</td>
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<tr>
<td>THETR 157—REHEARSAL AND PERFORMANCE IN DRAMA</td>
<td>2 UNITS</td>
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<td><strong>Limitations on Enrollment:</strong> Enrollment limited to students who successfully pass audition process. Students participate as actors in a fully supported theatre production. This course focuses on individual and ensemble performance techniques that are essential for a modern dramatic, or tragic play production. Participation in rehearsals and public performances is required. Four Maximum completions. Field trips may be required. <strong>(A-F Only) Lab MJC Activities. Transfer:</strong> (CSU, UC)</td>
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<tr>
<td>THETR 158—REHEARSAL AND PERFORMANCE IN CLASSICAL THEATRE</td>
<td>2 UNITS</td>
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<tr>
<td><strong>Limitations on Enrollment:</strong> Enrollment limited to students who successfully pass audition process. Students participate as actors in a fully supported theatre production. Focuses on individual and ensemble performance techniques that are essential for a classical play production. Participation in rehearsals and public performance is required. Four Maximum completions. Field trips may be required. <strong>(A-F Only) Lab MJC Activities. Transfer:</strong> (CSU, UC)</td>
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<tr>
<td>THETR 159—REHEARSAL AND PERFORMANCE IN MUSICAL THEATRE</td>
<td>2 UNITS</td>
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<tr>
<td><strong>Limitations on Enrollment:</strong> Enrollment limited to students who successfully pass audition process. Students participate as actors, singers, dancers in a fully supported musical theatre production. This course focuses on individual and ensemble performance techniques that are essential for a musical or opera production. Participation in rehearsals and public performances is required. Four Maximum completions. Field trips may be required. <strong>(A-F Only) Lab MJC Activities. Transfer:</strong> (CSU, UC)</td>
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<tr>
<td>THETR 160—FUNDAMENTALS OF ACTING</td>
<td>3 UNITS</td>
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| Survey of the various elements of the actor’s art leading to an understanding and appreciation of the physical, mental and emotional basis of performance. Reading plays, analysis of public performances, role analysis and fundamentals of scene playing are included. Recommended for Theatre Arts majors. Recommended for those who may wish to participate in play production. Field trips may be required. **(A-F or P/NP) Lecture/Lab MJC Activities. Transfer:** (CSU, UC) **(CC DRAMA 42) General Education:** (CSU-GE C1)
THETR — 161 INTERMEDIATE ACTING 3 UNITS
Prerequisite: Satisfactory completion of THETR 160.
Intensive study of character and play development through reading scripts, group improvisations and analysis of theme, content and character. Scenes from published plays will be rehearsed and performed with a culminating final public performance. Includes preparation of dramatic/comedic material and actor psychology for auditions and scenework. Field trips may be required. (A-F or P/NP). Lecture/Lab. MJC Activities. Transfer: (CSU, UC) General Education: (CSU-GE: C1)

THETR 164 — IMPROVISATIONAL ACTING 3 UNITS
Intensive study of the basic techniques of theatre games and improvisational acting with specific concentration on improvisational theatre formats. Course will culminate in a final improvisational performance. May be completed up to 3 times. Field trips may be required. (A-F or P/NP). MJC Activities. Transfer: (CSU, UC). (IGETC 46)

THETR 165 — HISTORY OF THE AMERICAN MUSICAL THEATRE 3 UNITS
The art of the American musical theatre: the role of the performer, director, music director, book writer, composer, lyricist, choreographer, producer, designers, and audience. Survey of the origins of music theatre beginning with “The Black Crook” (1866) through the present, its development as an art form, and its relationship to other art forms and the audience. Attendance at musical theatre productions required. Lecture. Tickets fees are required. (P/NP Only). Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 170 X,A — HIP HOP 1/2, 1 UNIT
Also listed as PEC 120, X,A
Fundamental skills of hip hop dance derived from the current dance vernacular and culture. Dance movement education, exploration, and recreation. May be completed up to 4 times. (A-F or P/NP). Lecture/Lab. Transfer: (CSU, UC)

THETR 174 — STAGE MAKEUP 3 UNITS
Instruction and practice in a lecture/laboratory setting in all phases of makeup specifically designed for theatrical use. Material fees required. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) Lecture/Lab Transfer: (CSU, UC) General Education: (MC-GE: Activities )

THETR — 175 STAGE COSTUMING 3 UNITS
Principles and practice of theatrical costuming. Emphasis on the steps necessary to design costumes for a theatrical production based on a particular play and its characters. Field trips may be required. (A-F or P/NP). Lecture/Lab. MJC Activities. Transfer: (CSU, UC)

THETR 175 — STAGE COSTUMING 3 UNITS
Costume history, design, and basic construction techniques as an introduction to basic theatrical costuming. Fabrics and their various uses will be investigated. Field trips might be required. (A-F or P/NP - Student choice) Lecture /Lab Transfer: (CSU, UC) General Education: (MC-GE: Activities )

THETR 177 — BALLET 2 1 UNIT
Also offered as: THETR — 127
Referred for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 133 or THETR 189. Intermediate level ballet technique and terminology. Students are required to have appropriate dance shoes and dance attire. Four Maximum completions. Field trips might be required. (A-F or P/NP - Student choice) /Lab Transfer: (CSU, UC) General Education: (MC-GE: Activities )

THETR — 178 INTRODUCTION TO SCENERY DESIGN 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 100. Introduction to the art and practice of scenery design for the stage. History, functions and process of scene design, choosing color and texture, and the importance of lighting. Practical application will include scene painting and model building. Field trips may be required. (A-F or P/NP). Lecture /Lab. MJC Activities. Transfer: (CSU, UC)

THETR 182 — PRACTICAL STAGE LIGHTING 3 UNITS
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 100.
An introduction to the art and practice of lighting design for the stage. Lectures will include: the use and control of stage lighting instruments, choosing color, basic electricity, the physical and psychological properties of light as applied to stage illumination. Practical application in lab work will include assisting in the lighting of a fully supported play, musical or dance production. Field trips may be required. (A-F or P/NP). Lecture /Lab. Transfer: (CSU, UC)

THETR 183 — FUNDAMENTALS OF STAGE MAKE-UP 1 1 UNIT
Fundamentals of basic two-dimensional stage makeup. Types of stage makeup, features of the face and proportions, highlights and shadow, stylized types of characters including faking opera, animal, olda, and fantasy. Materials fee required. Lecture/Lab. MJC Activities. Transfer: (CSU, UC)

THETR 184 — FUNDAMENTALS OF STAGE MAKE-UP 2 1 UNIT
Prerequisite: Satisfactory completion of THETR 183
Fundamental concepts of three-dimensional stage makeup and special effects. Topics include materials for special effects; negative and positive molds; aging techniques, and making latex pieces. Lecture/Laboratory. Three maximum completions. Materials fee required. MJC Activities. Transfer: (CSU, UC)

THETR 185X,A — BEGINNING MODERN DANCE 1 1/2 UNIT
Also offered as PEC - 122X,A
Emphasis on basic modern dance technique, beginning composition, improvisation, dance history and philosophy. Dance as an art form and recreation. Four completions allowed. (A-F or P/NP). Lecture/Laboratory. MJC Activities. Transfer: (CSU, UC)

THETR 185 — MODERN DANCE 1 1 UNIT
Also offered as: PEC - 122
Formerly listed as: THETR — 185A. Beginning Modern Dance Basic modern dance technique, beginning composition, improvisation, dance history, and philosophy. Dance as an art form and as recreation. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 186X,A — INTERMEDIATE MODERN DANCE 1 1/2 UNIT
Also offered as: PEC - 122X,A
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete PEC 122X,A or THETR 185X,A.
Emphasis on intermediate modern dance technique, intermediate composition, improvisation, partnering, dance history and philosophy. Dance as art form and as recreation. Four completions allowed. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 186 — MODERN DANCE 2 1 UNIT
Also offered as: PEC - 123
Formerly listed as: THETR — 186A: Intermediate Modern Dance
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 185 or satisfactorily complete PEC 122. Introduction, exploration, and experience in choreography and performance. Movement through space, energy and time, and compositional form. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 187X,A — ADVANCED MODERN DANCE 1 1/2 UNIT
Also offered as: THETR-1245X,A
Recommended for Success: PEC 123 or THETR 186 or equivalent.
Emphasis on composition, improvisation, expression, dance history and philosophy, in an outlet for expressive movement idea. Four completions allowed. (A-F or P/NP) Lecture/Lab. Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 187 — MODERN DANCE 3 1 UNIT
Also offered as: PE - 124
Formerly listed as: THETR — 187A: Advanced Modern Dance
Recommended for Success: Before enrolling in this course, students are strongly advised to satisfactorily complete THETR 185 or satisfactorily complete PEC 123. Emphasis on advanced technical and artistic performance skills, composition, improvisation, partnering, and dance history. Four Maximum completions. Field trips are not required. (A-F or P/NP - Student choice) /Lab Transfer: (CSU, UC) General Education: (MJC-GE: Activities )

THETR 188 — JAZZ DANCE 1 UNIT
Also offered as: PEC -126
Technique, principles, terminology and the practice of jazz dance. Correct placement and execution of movement using a variety of styles and approaches within the jazz idiom. Four Maximum completions. Field trips may be required. (A-F or P/NP) Lab. MJC Activities. Transfer: (CSU, UC)
TUTOR 50 — TUTOR SEMINAR 2 UNITS
Non-degree course.

Designed for students to strengthen their effectiveness as tutors. Development of techniques of the tutoring process. Further development of strategies in the area of preparation, short and long-term planning, probing skills, critical thinking, study skills, and test-taking skills. Introduction to cultural understanding. Study of issues affecting tutors and students. Intended for students selected as tutors for the general campus. Lecture/Laboratory. (P/NP Only)

NON-CREDIT COURSES

TUTOR 810 — TUTOR TRAINING

Designed as an introduction to the tutoring process. Introduction to preparation, expectations, probing skills, situations, and application of the learned techniques Courses intended for students selected as tutors at MJC. Lecture/Laboratory.

TUTOR 850 — SUPERVISORY TUTORING

Provides for individual learning by students with expressed needs in study strategies, learning modes, and developmental materials. Learning experiences will be under instructional supervision. Repeatable. Field trips are not required. (Non-Graded course) Lab.

VOCWE (Work Experience, Vocational)

Modesto Junior College serves the needs of its students and those of the community through its Work Experience program. A program objective is to provide guidance and opportunity for career planning students in the real laboratory of the communities’ businesses, industries and public agencies. Work experience education results when it encompasses a systematic plan whereby students, while in college, gain realistic employment experiences through work.

Two Work Experience programs are offered. General Work Experience and Vocational Work Experience. Employment may be on a paid or volunteer basis and may be at work sites on or off campus.

For General Work Experience, please see WREX (Work Experience, General).

Designed to provide extended learning opportunities in students’ chosen occupational fields; Vocational Work Experience programs become practical laboratories for reinforcing in-school training. Students should consult their advisors to determine divisional practice on work experience units acceptable toward major requirements.

Vocational work experience classes are available in all discipline areas using the number 349 A, B, C, D (1-4 units) except Nursing (see Nursing Program). With the exception of Administration of Justice, Agriculture, Child Development and Nursing, Vocational Work Experience students must register for and attend VOCWE 349S. During the first lecture meeting, the instructor will assist the student in adding to his or her schedule the appropriate Vocational Work Experience class depending on the student’s academic goals and employment setting.

Two Work Experience programs are offered: General Work Experience and Vocational Work Experience. Employment may be on a paid or volunteer basis and may be at work sites on or off campus. For General Work Experience, please see WREX (Work Experience, General).

Designed to provide extended learning opportunities in students’ chosen occupational fields; Vocational Work Experience programs become practical laboratories for reinforcing in-school training. Students should consult their advisors to determine divisional practice on work experience units acceptable toward major requirements.

Vocational work experience classes are available in all discipline areas using the number 349 A, B, C, D (1-4 units) except Nursing (see Nursing Program). With the exception of Administration of Justice, Agriculture, Child Development and Nursing, Vocational Work Experience students must register for and attend VOCWE 349S. During the first lecture meeting, the instructor will assist the student in adding to his or her schedule the appropriate Vocational Work Experience class depending on the student’s academic goals and employment setting.

VOCWE 349S — VOCATIONAL WORK EXPERIENCE SEMINAR 0 UNITS

Designed to accompany vocational work experience courses in all discipline areas (with the exception of Administration of Justice, Agriculture, Child Development and Nursing). Provides an orientation to the structure of cooperative work experience education and develops specific knowledge and skills related to employment situations through the accomplishment of goals. Includes job applications, resumes, interpersonal relationships, career selection, and relevant employment laws, regulations and policies. Lecture. Non graded. Maximum completions as needed to accompany DIV 349 A, B, C, or D.

VOCWE 349 A, B, C, D — WORK EXPERIENCE 1, 2, 3, 4 UNITS

Prerequisite: Enrollment in a minimum of 7 units which may include Cooperative Work Experience and completion of or concurrent enrollment in one core or elective course in designated program.

Designed for students who wish to combine classroom experience with an expansion of skills or knowledge acquired at a site of employment on a paid or volunteer basis. Work must directly relate to the student’s area of study. Conversely, student should have a designated area of study demonstrated by completion of or concurrent enrollment in at least a minimal number of courses in that designated program. Sixteen maximum units in any combination of vocational work experience courses. Lecture: Lab. 75 paid hours or sixty unpaid hours of related work experience per semester equals 1 unit.
WELD (Welding)

Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332
Division website: www.mjc.edu/prospective/programs/teched/sheetmetal/
Instructors: Sonny Gumm

WELD 200—ARC & GAS WELDING 3 UNITS
Introduction level course with a lecture/lab format of instruction. Activities and topics include oxyacetylene welding/cutting and shielded metal arc welding processes. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

WELD 204—GAS METAL ARC WELDING (G.M.A.W) & FLUX CORE ARC WELDING (F.C.A.W).
Formerly listed as WELD 204 - Gas Metal Arc (MIG) Flux Core Arc (FCAW)
Prerequisite: Satisfactory completion of WELD 200.
Advanced occupational welding procedures for ferrous and non-ferrous metals, manual and automated oxyfuel cutting, carbon arc gouging. Includes the introduction of qualification testing procedures that meet the American Welding Society’s structural steel code (D1-1) certification. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

WELD 206—GAS TUNGSTEN ARC WELDING (G.T.A.W.)
Formerly listed as WELD 206 - Gas Tungsten Arc Welding (TIG)
Prerequisite: Satisfactory completion of WELD 200.
Advanced occupational course covering welding procedures for ferrous and non-ferrous sheet-metals and purging welding procedures for stainless steel tubing. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

WELD 300—INTERMEDIATE WELDING 3 UNITS
Prerequisite: Satisfactory completion of WELD 200.
Intermediate level course that uses a lecture/lab format of instruction. Activities and topics cover the welding procedures for mild steel plate, manual and automated oxyfuel cutting, and carbon arc gouging. Qualification testing procedures that meet the American Welding Society’s structural code (D1-1) will also be covered. Materials fee required. Field trips may be required. (A-F or P/NP) Lecture/Lab. Transfer: CSU

WELD 325—DESIGN AND FABRICATION PROCESSES 3 UNITS
Prerequisite: Satisfactory completion of WELD 204.
Theory of drawing to include techniques of sketching out ideas through the development of layout of final blueprints. Estimating cost including the selection of appropriate materials and fabrication processes. Projects are required. Field trips may be required. (A-F Only) Lecture/Lab.

WELD 340—PIPE WELDING 3 UNITS
Prerequisite: Satisfactory completion of WELD 300.
The course offers instruction (both lecture and laboratory) in mild steel pipe welding using the SMAW process. Activities and topics will include general pipe fitting, welding procedures, electrodes, applied layout, and fit-up, hangers, equipment, techniques. Practice in the certification procedure for the American Petroleum Institute (API 1104) code will also be covered. Materials fee required. Field trips are required. (A-F or P/NP) Lecture/Lab.

WKFSK (Workforce Skills)

Dean (Interim): Pedro Mendez
Office: John Muir 258W
Phone: (209) 575-6332

WKFSK 801—INTRODUCTION TO WORKFORCE DEVELOPMENT SKILLS
Training for employees on how to achieve success in any career situation. Explores elements of communication, team building, active listening and job retention skills. Open entry/open exit. Lecture. Field trips may be required. Four completions allowed.

WKFSK 802—THE ART OF ACTIVE LISTENING
Training for employees on maximizing the effectiveness of communication in the workplace and elsewhere. Explores helpful listening techniques, dealing with listening problems, and negotiating win-win situations. Open-entry/open-exit. Lecture. Field trips may be required. Four completions allowed.

WKFSK 803—TROUBLESHOOTING ON THE JOB
Training for employees on efficient and effective problem solving. Topics discussed include problem definition, finding the root cause, creating solutions, implementation of solutions and monitoring for success. Open-entry/open-exit. Lecture. Field trips may be required. Four completions allowed.

WKFSK 804—THE ART OF TEAMWORK
Training for employees on becoming a true “team player.” Topics covered include: team roles, facilitation, team communication, reaching agreements, team goal-setting, and effective leadership. Open-entry/open-exit. Lecture. Field trips may be required. Four completions allowed.

WKFSK 805—SKILLS FOR SUCCEEDING AT A NEW JOB
Intended for those just starting to work who are looking for skills to achieve success as a new employee. Explores in-depth job retention skills including job transition concepts, workplace expectations, customer service, attitude feedback and balancing work and personal life. Field trips may be required. Four completions allowed. Lecture.

WKFSK 820—APPLIED MATHEMATICS FOR THE WORKPLACE
An easy-to-use, computerized, open-entry/open-exit applied mathematics course. Methods to solve one-step mathematical operations and utilize these skills with work-related problems. Examples and situations focus on applying problem-solving skills in real-world situations. Uses a variety of interactive exercises so that the learner can practice each concept. A calculator function and formula sheet are available to the learner with a simple mouse-click. Detailed solutions to the problems are explained, allowing students to analyze their mistakes. A full-human voice sound track and immediate feedback aid learning. Non-graded.

WKFSK 821—LOCATING INFORMATION
An easy-to-use, computerized, open-entry/open-exit course. Develops skills in using information presented in workplace graphics such as memos, tables, charts, and graphs. Examples and situations focus on applying this ability in real-world situations. Uses a variety of interactive exercises so that the learner can practice each concept. A full-human voice sound track and immediate feedback aid learning. Non-graded.

ZOOL (Zoology)

Dean: Brian Sanders
Division Office: Science Building, Room 126
Phone: (209) 575-6173
Division website: www.mjc.edu/current/programs/divdeps/sme
Instructor: Teri Curtis

ZOOL 101—GENERAL ZOOLOGY 4 UNITS
Prerequisite: BIO 101

ZOOL 110—ANIMAL BIOLOGY 3 UNITS
A phylogenetic survey of animal life including structure and function, genetics, evolution, development and reproduction as they pertain to animals. Not open to students who have completed BIO 101. Not a substitute for ZOOL 101. Field trips may be required. Lecture/Laboratory. Transfer: CSU, UC General Education: (MJC-GE:A)(CSU-GE: B2,B3)(IGETC:SC)
Upon the successful completion of the Certificate of Achievement in **Accounting** at Modesto Junior College, students will be able to:

1. Demonstrate a firm understanding and working knowledge of basic accounting terminology and the process by which transactions relate to the accounting cycle.
2. Be prepared to obtain employment in an entry-level position in the accounting field.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.A. degree in **Accounting** at Modesto Junior College, students will be able to:

1. Demonstrate a firm understanding and working knowledge of basic accounting terminology and the process by which transactions relate to the accounting cycle.
2. Prepare and analyze basic financial statements.
3. Be prepared to obtain employment in an entry-level position in the accounting field.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.S. degree in **Accounting** at Modesto Junior College, students will be able to:

1. Demonstrate a firm understanding and working knowledge of basic accounting terminology and the process by which transactions relate to the accounting cycle.
2. Prepare basic financial statements.
3. Be prepared to obtain employment as an entry-level bookkeeper/accounting clerk.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the Certificate of Achievement in **Bookkeeping** at Modesto Junior College, students will be able to:

1. Demonstrate a firm understanding and working knowledge of basic accounting terminology and the process by which transactions relate to the accounting cycle.
2. Be prepared to obtain employment as an entry-level bookkeeper/accounting clerk.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

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3. Be prepared to obtain employment as an entry-level bookkeeper/accounting clerk.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.
Upon the successful completion of the A.A. degree in **Business Administration** at Modesto Junior College, students will be able to:

1. A student would be prepared to transfer to most four year universities.
2. Will be prepared for upper division coursework.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.S. degree in **Business Administration** at Modesto Junior College, students will be able to:

1. A student would be prepared to transfer to most four year universities.
2. Will be prepared for upper division coursework.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.A. degree in **Business Operations Management** at Modesto Junior College, students will be able to:

1. Be prepared to obtain employment in an entry-level management position within the for-profit or non-profit sector.
2. Demonstrate appropriate and effective business communication skills.
3. Demonstrate the ability to think critically and analyze problems.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.S. degree in **Business Operations Management** at Modesto Junior College, students will be able to:

1. Be prepared to obtain employment in an entry-level management position within the for-profit or non-profit sector.
2. Demonstrate appropriate and effective business communication skills.
3. Demonstrate the ability to think critically and analyze problems.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.A. degree in **International Business** at Modesto Junior College, students will be able to:

1. Demonstrate an understanding of domestic and international business practices.
2. Demonstrate an understanding of economic, cultural and ethical differences in conduction business.
3. Be prepared to gain employment in an organization or pursue entrepreneurial aspirations in global commerce.

Upon the successful completion of the A.S. degree in **International Business** at Modesto Junior College, students will be able to:

1. Demonstrate an understanding of domestic and international business practices.
2. Demonstrate an understanding of economic, cultural and ethical differences in conduction business.
3. Be prepared to gain employment in an organization or pursue entrepreneurial aspirations in global commerce.
Upon the successful completion of the A.A. degree in **Marketing** at Modesto Junior College, students will be able to:

1. Apply fundamental sales and marketing techniques.
2. Apply communication strategies for various audiences and contexts.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the marketing environment.

Upon the successful completion of the A.S. degree in **Marketing** at Modesto Junior College, students will be able to:

1. Apply fundamental sales and marketing techniques.
2. Apply communication strategies for various audiences and contexts.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the marketing environment.

Upon the successful completion of the Certificate of Achievement in **Professional Selling** at Modesto Junior College, students will be able to:

1. Apply communication strategies for various audiences and contexts.
2. Demonstrate the ability to recognize and analyze ethical issues as they apply to the professional selling environment.
3. Be prepared to obtain employment in entry level sales position.

Upon the successful completion of the Certificate of Achievement in **Retail Management (WAFC)** at Modesto Junior College, students will be able to:

1. Apply communication strategies for retail selling environment.
2. Demonstrate the ability to recognize and analyze ethical issues as they apply to the retail selling environment.
3. Be prepared to obtain employment in retail sales position.

Upon the successful completion of the Certificate of Achievement in **Supervisory Training** at Modesto Junior College, students will be able to:

1. Demonstrate appropriate and effective business communication skills.
2. Be prepared to obtain employment in an entry-level supervisory position within industry and/or government sectors.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the A.A. degree in **Supervisory Training** at Modesto Junior College, students will be able to:

1. Demonstrate appropriate and effective business communication skills.
2. Be prepared to obtain employment in an entry-level supervisory position within industry and/or government sectors.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.
Upon the successful completion of the A.S. degree in **Supervisory Training** at Modesto Junior College, students will be able to:

1. Demonstrate appropriate and effective business communication skills.
2. Be prepared to obtain employment in an entry-level supervisory position within industry and/or government sectors.
3. Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

Upon the successful completion of the Certificate of Achievement in **Real Estate** at Modesto Junior College, students will be able to:

1. Demonstrate a firm understanding and working knowledge of basic real estate terminology and common California real estate practices.
2. Prepare students to qualify for the basic California real estate agent’s and/or broker’s exam.
3. Be prepared to obtain employment in an entry-level position in the real estate field.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the real estate environment.

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1. Demonstrate a firm understanding and working knowledge of basic real estate terminology and common California real estate practices.
2. Prepare students to qualify for the basic California real estate agent’s and/or broker’s exam.
3. Be prepared to obtain employment in an entry-level position in the real estate field.
4. Demonstrate the ability to recognize and analyze ethical issues as they apply to the real estate environment.

Upon the successful completion of the Certificate of Achievement in **Office Administration** at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Competently communicate in support of a business office, including production and design of complex electronic and paper based correspondence and documents.
3. Actively assist in implementing general office procedures, including records management.
4. Use the Internet, a wide variety of computer applications and standard business procedures to compute, analyze business performance and solve problems.
5. Efficiently perform office-related duties utilizing prioritization and necessary communication skills.
Upon the successful completion of the A.A. degree in **Office Administration** at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Competently communicate in support of a business office, including production and design of complex electronic and paper based correspondence and documents.
3. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.
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5. Use the Internet, a wide variety of computer applications and standard business procedures to compute, analyze business performance and solve problems.
6. Efficiently perform office-related duties utilizing prioritization and necessary communication skills.

Upon the successful completion of the Certificate of Achievement in **Clerical** at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.
3. Actively assist in implementing general office procedures, including records management.

Upon the successful completion of the A.A. degree in **Clerical** at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.
3. Actively assist in implementing general office procedures, including records management.
Upon the successful completion of the A.S. degree in Clerical at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.
3. Actively assist in implementing general office procedures, including records management.

Upon the successful completion of the Certificate of Achievement in Word Processing at Modesto Junior College, students will be able to:

1. Productively work as a team member with people of diverse experiences and backgrounds in a workplace environment.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.

Upon the successful completion of the Certificate of Achievement in Office Support at Modesto Junior College, students will be able to:

1. Actively assist in implementing general office procedures, including records management.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.

Upon the successful completion of the Certificate of Achievement in Records Management/Data Entry Specialist at Modesto Junior College, students will be able to:

1. Actively assist in implementing general office procedures, including records management.
2. Efficiently perform office-related duties utilizing prioritization and necessary communication skills.
3. Utilize computer software to manage data effectively.

Upon the successful completion of the Certificate of Achievement in Office Computer Applications Specialist at Modesto Junior College, students will be able to:

1. Use the Internet, a wide variety of computer applications and standard business procedures to compute, analyze business performance and solve problems.
2. Demonstrate the ability to competently use a wide variety of office equipment, including computers, peripherals, and non-computerized office machines.

Upon the successful completion of the Certificate of Achievement in Interior Design at Modesto Junior College, students will be able to:

1. Identify, research, and creatively solve problems pertaining to the function and quality of the interior environment.
2. Address design issues related to health, safety and welfare.
3. Apply specialized knowledge of interior construction and building systems, codes, finishes and furnishings.
4. Prepare documents and drawings relative to the design of interior spaces.
5. Demonstrate knowledge of the fundamental relationship between interior design, architecture, science, engineering and the decorative arts.
Upon the successful completion of the A.A. degree in **Interior Design** at Modesto Junior College, students will be able to:

1. Identify, research, and creatively solve problems pertaining to the function and quality of the interior environment.
2. Address design issues related to health, safety and welfare.
3. Apply specialized knowledge of interior construction and building systems, codes, finishes and furnishings.
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4. Prepare documents and drawings relative to the design of interior spaces.
5. Demonstrate knowledge of the fundamental relationship between interior design, architecture, science, engineering and the decorative arts.

Upon the successful completion of the Certificate of Achievement in **Computer Graphics Applications** at Modesto Junior College, students will be able to:

1. Design and develop products and procedures for digital imaging, animation, video editing, and current and emerging technologies.
2. Critically analyze digital files and other digital media that result in timely and appropriate client solutions.
3. Build and test web sites for personal and commercial needs.
4. Proficiently operate software, hardware, and equipment according to industry standards.
5. Translate client ideas into finished 3-D animations.
6. Collect, analyze, and interpret essential information of design concepts and/or stories in preparation for client presentations.
7. Use historical, societal, and cultural context to generate visual communication.

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5. Translate client ideas into finished 3-D animations.
6. Collect, analyze, and interpret essential information of design concepts and/or stories in preparation for client presentations.
7. Use historical, societal, and cultural context to generate visual communication.
Upon the successful completion of the A.A. degree in **Spanish** at Modesto Junior College, students will be able to:

1. Communicate orally in Spanish in real-life situations at an advanced high proficiency level.
   - Demonstrate proficiency in the comprehension of oral messages
   - Demonstrate proficiency in oral expression in Spanish.
   - Understand someone else speaking about a discipline-related topic and be able to engage that person in discussion.

2. Communicate in writing in Spanish at an advanced high proficiency level with minimal errors in grammar, spelling and the mechanics of writing.
   - Write clear and coherent essays in Spanish on various topics related to everyday situation and work.
   - Exhibit research skills for producing papers including familiarity with library resources and the ability to gather and synthesize information.
   - Exhibit the ability to properly quote, paraphrase, and summarize other texts.

3. Read critically, interpret analytically, and write coherently about literatures produced in Spanish.
   - Analyze and interpret a variety of literary and cultural texts.
   - Write clear and coherent essays in Spanish on literary topics.
   - Apply critical thinking skills as they read texts.
   - Interpret the use of rhetorical and literary techniques.

4. Understand and demonstrate appreciation of the cultural values of Spanish-speaking peoples.
   - Identify significant individuals and major historical events and developments within Spanish-speaking nations and cultures.
   - Analyze social, ethnic, and linguistic diversity in the Spanish-speaking world.
   - Compare and contrast the differences and similarities between the U.S. and the Spanish-speaking cultures.

Upon the successful completion of the A.S. degree in **Respiratory Care** at Modesto Junior College, students will be able to:

1. Curriculum is developed in a logical instructional sequence and functional design to facilitate the student’s mastery of all duties/functions relevant to and authorized by the provisions of the California State Respiratory Care Practice Act and the Committee on Accreditation of Respiratory Care (CoARC).

2. Evaluation with safe quality respiratory care standards will be function-related and competency-based.

3. The teaching methodology will embody concepts which recognize the affective domain as an integral part of the learning process. Students will develop an awareness of the psychological and emotional needs of the patient.

4. In the mastery of the respiratory care duties/functions, the student will render safe, effective quality respiratory care in an ethical manner for the welfare of both the patient and Respiratory Care profession.

5. The faculty will encourage the students to assume increasing responsibility for their own learning and to develop habits, interests, and attitudes favorable to lifelong learning.

6. The students will successfully complete all required Respiratory Care curriculum in order to receive an A.S. degree in Respiratory Care.

7. The students who complete the program will pass the National Board for Respiratory Care Examination for certification as a Respiratory Care Practitioner as well as the Advance Practitioner Exam.
Upon the successful completion of the **Associate Degree Nursing** program at Modesto Junior College, students will be able to:

1. Provide competent nursing care based on scientific principles, the Roy Adaptation Model, and the nursing process, reflecting an ethic of caring evidenced by respect for patients and families, self, colleagues, and the profession.
2. Identify a nursing diagnosis following assessment of the patient’s physical condition and behavior, and analysis of information obtained from the patient and others, including members of the health care team.
3. Formulate a care plan, in collaboration with the patient that ensures direct and indirect nursing care services provide for the following patient needs: safety, comfort, hygiene, protection, disease prevention, and restorative measures.
4. As provider and manager of care, establish priorities, perform the skills required to carry out nursing interventions, explain the plan of care to the patient and family, and teach the patient and family how to care for identified health problems and needs.
5. Manage and prioritize care for groups of patients; delegate tasks to subordinates based on the legal scope of practice of the subordinates and on the preparation and competence needed for the tasks to be delegated; effectively supervise the nursing care provided by subordinates.
6. Evaluate the effectiveness of the care plan through observation of the patient’s condition and behavior, signs and symptoms of illness, and reactions to treatment, and thorough communication with the patient and the health care team; modify the plan as needed.
7. Advocate for the rights of patients by initiating actions to improve health care, facilitate changes in decisions or activities which conflict with patients’ self-determination, and provide patients’ the opportunity to make informed decisions about their health care.
8. Recognize that each person is a unique individual with biological, psychological, social, and spiritual needs; understand how a person’s self-concept, role function, and interdependence are affected by the values, attitudes, life experiences, culture, ethnicity, and support systems of each person.

Upon the successful completion of the A.S. degree in **Child Development** at Modesto Junior College, students will be able to:

1. Integrate understanding of the needs, the characteristics and multiple influences on development of children birth to age eights as related to high quality care and education of young children.
2. Design, implement and evaluate environments and activities through observation, assessment, and intentional reflection that support positive, developmental play and learning outcomes for all young children.
3. Apply effective guidance and interaction strategies that support all children’s social learning, identity and self-confidence.
4. Develop strategies that promote partnerships between programs, teachers, families, and communities.
5. Apply ethical standards and professional behaviors that demonstrate understanding and knowledge, deepening the commitment to the Early Care and Education.