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- **GUID 15**: Selected Topics in Guidance
- **GUID 16**: Orientation for International Students
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- **GUID 18A**: Single Parents as Students: Codependency Issues
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- **GUID 33**: Job Seeking Skills
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- **H ED 30**: Community First Aid and Safety
- **H ED 31**: Emergency Response
- **H ED 32**: Cardiopulmonary Resuscitation (CPR)
- **H ED 50H**: Special Studies: Health Education
- **H ED 80**: Selected Topics: Health Education

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- **H S 19**: Human Development
- **H S 34A**: Basic Electrocardiograph Reading
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- **H S 39**: Survey of Health Careers
- **H S 43**: Nursing Synthesis
- **H S 61**: Intravenous Therapy for Health Care Providers
- **H S 70**: Nurse Assistant Training
- **H S 71**: Home Health Aide
- **H S 72A**: Care Provider Training: Mental Disabilities
- **H S 72B**: Care Provider Training: Psychotropic Medication
- **H S 72C**: Care Provider Training: Behavior Management
- **H S 72D**: Care Provider Training: Normalization
- **H S 72E**: Care Provider Training: Pre-Independent Living
- **H S 72F**: Care Provider Training: Community Resources
- **H S 72G**: Care Provider Training: Recognizing other Problems
- **H S 72H**: Care Provider Training: Client Record Keeping
- **H S 72I**: Care Provider Training: Nutrition
- **H S 75**: First Responder
- **H S 76**: First Responder Refresher
- **H S 77B**: Emergency Medical Technician 1
- **H S 81**: Emergency Medical Technician 1 Refresher
- **H S 90**: Critical Thinking in the Nursing Process
- **H S 91**: Medical Nutrition Therapy
- **H S 93V**: Work Experience: Health Science
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### MUSIC

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**FREN 53 Elementary French**  
**Units:** 2.5  
**Prerequisites:** Successful completion of FREN 1 or 52.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is an introduction to the French language and French culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of FREN 53 and 54 are equivalent to FREN 2. (UC, CSU, CAN FREN 4 with both FREN 53 and 54, CAN FREN Seq A with FREN 51, 52, 53, and 54)

**FREN 54 Elementary French**  
**Units:** 2.5  
**Prerequisites:** Successful completion of FREN 53.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is an introduction to the French language and French culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of FREN 53 and 54 are equivalent to FREN 2. (UC, CSU, CAN FREN 4 with both FREN 53 and 54, CAN FREN Seq A with FREN 51, 52, 53, and 54)

**GEOGRAPHY**

**GEOG 1 Physical Geography**  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed as a study of the natural environment. Individual topics include maps, time zones, seasons, weather, climate, the hydrologic cycle, natural vegetation, soils and landforms. (UC, CSU, CAN GEOG 2, CAN GEOG 6 with both GEOG 1 and GEOG 1L)

**GEOG 1L Physical Geography Laboratory**  
**Units:** 1  
**Prerequisites:** GEOG 1 or concurrent enrollment in GEOG 1.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed as a series of laboratory exercises involving weather, climate and landforms with emphasis on problem solving, map reading and landscape interpretation. The course correlates with topics from Physical Geography. Physical Geography Laboratory plus Physical Geography satisfies the laboratory science requirements for general education. (UC, CSU, CAN GEOG 6 with both GEOG 1 and GEOG 1L)

**GEOG 2 Cultural Geography**  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed as a systematic review of the major topics in human geography: population, culture, (race, language, religion, music), economic activities, settlement patterns, including urbanization, and political geography. (UC, CSU, CAN GEOG 4)

**GEOG 10 World Regional Geography**  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to survey the physical, cultural, and economic geography of the world’s regions: Europe, Asia, Africa the Americas, and Oceania using a regional geographic approach. Current events and regional problems are examined. (UC, CSU)

**GEOG 50H Special Studies: Geography**  
**Units:** 1-2  
**Prerequisites:** Completion of survey course with grade of “B” or better and presentation of a project acceptable to the instructor and division chairperson.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is open to all students qualified to do advanced work in the field. A course project is assigned which may include research, field work, or other advanced study, and the course may be repeated for a maximum of four units. (UC, CSU)

**GEOLOGY**

**GEOL 1A Physical Geology**  
**Units:** 4  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to introduce students to the composition, structure, and surface features of Earth. The processes of building up Earth and of those destroying it are studied. (UC, CSU, CAN GEOL 2)

**GEOL 10 General Geology**  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is an introduction to earth materials, processes involved in the development of land forms, a brief survey of the history of earth is included. (UC, CSU)

**GEOL 50H Special Studies: Geology**  
**Units:** 1-2  
**Prerequisites:** Completion of survey course with grade of “B” or better and presentation of a project acceptable to the instructor and division chairperson.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to provide research opportunity for advanced students. Topics must be approved by the geography staff and the division chairperson. The course may be repeated for a maximum of four units. (UC, CSU)
GERM 1 Elementary German Units 5
Prerequisites: GERM 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU, CAN GERM 4, CAN GERM Seq A with both GERM 3 and 4)

GERM 2 Elementary German Units 5
Prerequisites: Successful completion of GERM 2 or 54.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU, CAN GERM 8, CAN GERM SEQ B with both GERM 3 and 4)

GERM 3 Intermediate German Units 5
Prerequisites: Successful completion of GERM 3.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the German language and German cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selection. (UC, CSU, CAN GERM 10, CAN GERM SEQ B with both GERM 3 and 4)

GERM 4 Intermediate German Units 5
Prerequisites: Successful completion of GERM 3.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the German language and German cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selection. (UC, CSU, CAN GERM 10, CAN GERM Seq B with both GERM 3 and 4)

GERM 36A Introductory German Conversation Units 2
Prerequisites: Successful completion of GERM 1 or GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to strengthen fundamental communication patterns based on typical daily situations. (CSU)

GERM 36B Beginning German Conversation Units 2
Prerequisites: Successful completion of GERM 2 or 53.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to achieve conversational ability based on typical daily situations. (CSU)

GERM 38A Special Assignment: Listening Units 2
Prerequisites: Concurrent enrollment in or completion of GERM 1 or GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on listening. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GERM 38B Special Assignment: Pronunciation Units 2
Prerequisites: Concurrent enrollment in or completion of GERM 1 or GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on pronunciation. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GERM 38C Special Assignment: Reading Units 2
Prerequisites: Concurrent enrollment in or completion of GERM 1 or GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on reading. The course is designed to meet the special need of the student. This course is offered for individual or group study. (CSU)

GERM 38D Special Assignment: Writing Units 2
Prerequisites: Concurrent enrollment in or completion of GERM 1 or GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on writing. The course is designed to meet the special need of the student. This course is offered for individual or group study. (CSU)

GERM 50H Special Studies: German Units 1-2
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson; GERM 4 with a grade of “B” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to allow students to do advanced work in the language. The course includes research, directed reading, field work, or other advanced study. The course may be repeated for a maximum of four units. (UC, CSU)

GERM 51 Elementary German Units 2.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GERM 51 and 52 are equivalent to GERM 1. (UC, CSU, CAN GERM 2 with both GERM 51 and 52, CAN GERM Seq A with GERM 51, 52, 53, and 54)

GERM 52 Elementary German Units 2.5
Prerequisites: Successful completion of GERM 51.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GERM 51 and 52 are equivalent to GERM 1. (UC, CSU, CAN GERM 2 with both GERM 51 and 52, CAN GERM Seq A with GERM 51, 52, 53, and 54)
GERM 53 Elementary German Units 2.5
Prerequisites: Successful completion of GERM 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GERM 53 and 54 are equivalent to GERM 2. (UC, CSU, CAN GERM 4 with both GERM 53 and 54, CAN GERM Seq A with GERM 51, 52, 53, and 54)

GERM 54 Elementary German Units 2.5
Prerequisites: Successful completion of GERM 53.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the German language and German culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GERM 53 and 54 are equivalent to GERM 2. (UC, CSU, CAN GERM 4 with both GERM 53 and 54, CAN GERM Seq A with GERM 51, 52, 53, and 54)

GREEK

GREEK 1 Elementary Greek Units 5
Prerequisites: None. Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

GREEK 2 Elementary Greek Units 5
Prerequisites: Successful completion of GREEK 1 or 52.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

GREEK 3 Intermediate Greek Units 5
Prerequisites: Successful completion of GREEK 2 or 54.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the Greek language and Greek cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selection. (UC, CSU)

GREEK 4 Intermediate Greek Units 5
Prerequisites: Successful completion of GREEK 3.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the Greek language and Greek cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selection. (UC, CSU)

GREEK 36A Introductory Greek Conversation Units 2
Prerequisites: Successful completion of GREEK 1 or GREEK 51.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to strengthen fundamental communication patterns based on typical daily situations. (CSU)

GREEK 36B Beginning Greek Conversation Units 2
Prerequisites: Concurrent enrollment in or successful completion of GREEK 2 or 53.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to achieve conversational ability based on typical daily situations. (CSU)

GREEK 38A Special Assignment: Listening Units 2
Prerequisites: Concurrent enrollment in or completion of GREEK 1 or GREEK 51.
Limitation on Enrollment: None.
Advisories: None.
This is a skill-building course with an emphasis on listening. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GREEK 38B Special Assignment: Pronunciation Units 2
Prerequisites: Concurrent enrollment in or completion of GREEK 1 or GREEK 51.
Limitation on Enrollment: None.
Advisories: None.
This is a skill-building course with an emphasis on pronunciation. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GREEK 38C Special Assignment: Reading Units 2
Prerequisites: Concurrent enrollment in or completion of GREEK 1 or GREEK 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on reading. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GREEK 38D Special Assignment: Writing Units 2
Prerequisites: Concurrent enrollment in or completion of GREEK 1 or GREEK 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on writing. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

GREEK 51 Elementary Greek Units 2.5
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GREEK 51 and 52 are equivalent to GREEK 1. (UC, CSU)
GREEK 52  Elementary Greek  Units 2.5
Prerequisites: Successful completion of GREEK 51.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of GREEK 51 and 52 are equivalent GREEK 1. (UC, CSU)

GREEK 53  Elementary Greek  Units 2.5
Prerequisites: Successful completion of GREEK 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units in GREEK 53 and 54 are equivalent to GREEK 2. (UC, CSU)

GREEK 54  Elementary Greek  Units 2.5
Prerequisites: Successful completion of GREEK 53.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Greek language and Greek culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units in GREEK 53 and 54 are equivalent to GREEK 2. (UC, CSU)

GUIDANCE

GUID 1  Enhancing Self-Esteem, Cultural Awareness, and College Success  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to enable the student to focus on the development of self-esteem and personal responsibility leading to college success. The course includes discussion of cultural awareness and cultural diversity. (CSU)

GUID 2A  Peer Advisor Training  Units 1
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to train the peer advisor and to provide the knowledge and skills to interact and communicate effectively with targeted student populations. The student develops helping skills that include active listening, basic problem-solving, completion of college forms, and appropriate referral to campus support offices. This course is designed for the student who is employed as a peer advisor. (CSU)

GUID 10  Orientation to College and Educational Planning  Units 1
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide orientation, counseling, and advisement to the new and re-entering student. This course assists the student in the development of a Student Education Plan (SEP) through individual and group counseling. The student who has successfully completed GUID 10 cannot receive credit for GUID 11. (CSU)
GUID 16 Orientation for International Students

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to assist the student enrolled in the International Student Program. The course addresses many aspects of the college experience, including: curriculum, facilities, services, academic regulations, certificate and degree programs, and transfer requirements. Information is provided concerning scholarship assistance, extra-curricular activities, and personal and social adjustment to American customs. Special emphasis is given to immigration regulations. (CSU)

GUID 17 People in Transition

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide orientation, counseling information, and support to the re-entry student whose formal education has been interrupted by family and/or job responsibilities. The course topics include building self-esteem, becoming more assertive, exploring concerns relative to the student in transition, and introducing the career life planning process. (CSU)

GUID 18A Single Parents as Students: Codependency Issues

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for Extended Opportunities Programs and Services (EOPS) student enrolled in Cooperative Agencies Resources for Education (CARE). The goal of this course is to provide information on gaining self-awareness by understanding the roots of codependency and the movement toward personal recovery. (CSU)

GUID 18B Single Parents as Students: Campus and Community Resources

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the Extended Opportunity Programs and Services (EOPS) student enrolled in Cooperative Agencies Resources for Education (CARE). The student obtains educational support information through a series of campus and community presentations. The goal of this course is to empower the student to access the necessary resources needed to be successful in college. (CSU)

GUID 18C Single Parents as Students: Stress Reduction

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for the Extended Opportunity Programs and Services (EOPS) student enrolled in Cooperative Agencies Resources for Education (CARE). The goal of this course is to assist the student in lowering his/her level of stress by understanding, recognizing, and managing interpersonal stressors. (CSU)

GUID 30 Career Self Assessment

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the student to the career life planning process. The course emphasizes self-assessment as the first major step in the career life planning process. The student explores career choices by identifying his/her personality, strengths, skills, interests, values, and preferred lifestyle. (CSU)

GUID 31 Career Exploration

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide the student with opportunities to explore specific occupations of his/her choice through utilization of career center resources. The course includes investigation of job duties, training, and educational requirements, desired employee characteristics, salary ranges, and future employment trends. (CSU)

GUID 32 Career Information Interviewing

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to assist the student in obtaining career information directly from individuals employed in areas of his/her career interest by conducting informational interviewing. The course includes information on how to create a networking system, make the initial contacts, prepare interview questions, direct the information interview, and analyze information obtained. (CSU)

GUID 33 Job Seeking Skills

Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to assist the student with development of successful job search techniques including networking, resume writing, and job interviewing skills. The course includes techniques on how to find and how to get the desired job and information about the hidden job market. (CSU)

GUID 71 Student Leadership

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to allow the student to identify important aspects of leadership. The course acquaints the student with models of leadership through readings, observation, and participation. The student is able to identify and utilize through participatory exercises at least two models of leadership.

GUID 80 Success in College

Prerequisites: None.
Limitations on Enrollment: Students on third semester or continuing academic probation.
Advisories: None.
This course is a group counseling practicum designed to assist the student who is having difficulty succeeding in college. The focus of the course is to provide practical strategies for achieving personal, educational, and career goals. This course is required for the student who is on third semester academic probation.
## HEALTH EDUCATION

### H ED 1  Health Education  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to enhance the student’s knowledge of a variety of health-related concepts and increase motivation and desire to take personal responsibility to achieve high level wellness. (UC, CSU)

### H ED 15  Selected Topics: Health Education  
**Units:** 1-2  
**Prerequisites:** Reading level II or concurrent enrollment in reading.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to offer instruction in one of the specialized areas of health education not already covered by existing curricula. (CSU)

### H ED 28  Community Health  
**Units:** 2  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to study health-related services and resources available in the college district and how they impact on current health issues and problems faced by the populace of the district. Particular emphasis is placed on substance abuse, mental health, AIDS, child abuse, HMOs (Health Maintenance Organizations), nontraditional medical treatment, family wellness, and cancer. (UC, CSU)

### H ED 30  Community First Aid and Safety  
**Units:** 2  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is the American National Red Cross course, Community First Aid and Safety. Students receive the Community First Aid and Safety and Community CPR certificates upon successful completion of the course. The course may be repeated for credit once every three years. (UC, CSU)

### H ED 31  Emergency Response  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is the American Red Cross course, Emergency Response. Those who qualify receive the American Red Cross Emergency Response and CPR for the Professional Rescuer certificates. The course may be repeated for credit once every three years. (CSU)

### H ED 32  Cardiopulmonary Resuscitation (CPR)  
**Units:** 0.5  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to prepare participants, through knowledge and skill development, to meet the needs of most situations in which emergency first aid care for cardiopulmonary resuscitation is needed and medical assistance is not excessively delayed. The course may be repeated for credit once per year. This is an open entry, open exit course. (CSU)

### H ED 50H  Special Studies: Health Education  
**Units:** 1-2  
**Prerequisites:** Completion of survey course with a grade of “B” or better and presentation of a project acceptable to the instructor and division chairperson.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is open to all students qualified to do advanced work in the field. The course includes research, directed reading, field work, or other advanced study, and the course may be repeated for a maximum of four units. (CSU)

### H ED 80  Selected Topics: Health Education  
**Units:** 0.5-2  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to offer instruction in one of the specialized areas of Health Education not already covered by existing curriculum.

## HEALTH SCIENCE

### H S 11  Selected Topics: Health Science  
**Units:** 1-2  
**Prerequisites:** None; exempt from assessment testing.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is designed to offer instruction in one of the specialized areas of Health Science not covered by existing curricula. (CSU)

### H S 11G  Acute Nursing Care  
**Units:** 1  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This topic course is a review of medical-surgical nursing content designed to prepare the individual for national nursing licensing tests. The course provides a refresher of medical-surgical nursing content for practicing and re-entry nurses. Topics include discussion of the National Council Licensure Examination (NCLEX), testing strategies, and a systematic overview of medical-surgical nursing. (CSU)

### H S 19  Human Development  
**Units:** 3  
**Prerequisites:** None.  
**Limitations on Enrollment:** None.  
**Advisories:** None.  
This course is an integration of the biological, cognitive, and psychosocial aspects of human development throughout the lifespan. The course is a study of the developmental tasks facing individuals at various points in the life cycle and the ways social interaction and cultural institutions shape the development of the individual. The course is designed as a foundation course for careers in educational, social service, psychological, and health fields. (CSU)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Limitations on Enrollment</th>
<th>Advisories</th>
</tr>
</thead>
<tbody>
<tr>
<td>H S 34A</td>
<td>Basic Electrocardiograph Reading</td>
<td>Units 1</td>
<td>Certification, licensure or employment in health care area.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 36</td>
<td>Medical Terminology and Speech</td>
<td>Units 3</td>
<td>Reading level II.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 39</td>
<td>Survey of Health Careers</td>
<td>Units 2</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 43</td>
<td>Nursing Synthesis</td>
<td>Units 3</td>
<td>None.</td>
<td>Licensed Vocational Nurse, Psychiatric Technician or graduate of an accredited vocational nursing or psychiatric technician program.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 61</td>
<td>Intravenous Therapy for Health Care Providers</td>
<td>Units 1.5</td>
<td>None.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 70</td>
<td>Nurse Assistant Training</td>
<td>Units 5</td>
<td>None; exempt from assessment.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 71</td>
<td>Home Health Aide</td>
<td>Units 2</td>
<td>None.</td>
<td>Possess Nurse Assistant Certification or be enrolled in Nursing Assistant Program.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 72A</td>
<td>Care Provider Training: Mental Disabilities</td>
<td>Units 1</td>
<td>None; exempt from assessment testing.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 72B</td>
<td>Care Provider Training: Psychotropic Medication</td>
<td>Units 1</td>
<td>None; exempt from assessment testing.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>H S 72C</td>
<td>Care Provider Training: Behavior Management</td>
<td>Units 1</td>
<td>None; exempt from assessment testing.</td>
<td>None.</td>
<td>None.</td>
</tr>
</tbody>
</table>
H S 72D  Care Provider Training:  Units 1  
Normalization  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to help care providers examine and become more aware of their attitudes toward mentally disabled residents through understanding of their individual differences and giving them techniques in increasing self-sufficiency and ways they can provide normalization experiences. Units earned in this course do not count toward an associate degree.

H S 72E  Care Provider Training:  Units 1  
Pre-Independent Living  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course provides training in helping the client develop independent living skills by motivating the resident toward independency in hygiene, social skills and manners, care of clothing, use of public transportation, meal preparation, and shopping. The course also examines vocational opportunities and socialization. Units earned in this course do not count toward an associate degree.

H S 72F  Care Provider Training:  Units 1  
Community Resources  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to familiarize care providers with available community resources to utilize in helping them assess the social, emotional, and physical needs of the residents. Selected topics include group behavior, leadership skills, components of program operation, factors affecting patient participation, motivation, developing independent and group programs in the home. Units earned in this course do not count toward an associate degree.

H S 72G  Care Provider Training:  Units 1  
Recognizing other Problems  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course provides for the study of problems and needs of the aged client, reality orientation, death and dying. The course examines several behaviors and physical illnesses dealing with hearing, visual and speech impairments, seizure disorders, and physical handicaps. Units earned in this course do not count toward the associate degree.

H S 72H  Care Provider Training:  Units 1  
Client Record Keeping  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is an implementation of a problem oriented record-keeping system setting realistic goals and objectives, familiarization with forms, bookkeeping, protection for liability, medical ethics, and state regulations. Units earned in this course do not toward the associate degree.

H S 72I  Care Provider Training: Nutrition  Units 1  
Prerequisites: None; exempt from assessment testing.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to include topics of basic food categories, meal planning and preparation, special diets, snacks, holidays and special occasions, meeting residents’ food preferences, serving attractive meals, and maintaining safe and sanitary conditions. Units earned in this course do not count toward the associate degree.

H S 75  First Responder  Units 1.5  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed for emergency personnel who routinely respond to medical emergencies to provide treatment and support to sick or injured individuals until emergency medical services (EMS) support arrives. Topics will include cardiac pulmonary resuscitation (CPR), cardiac and respiratory management, bleeding control, childbirth, splinting for fractures, and procedures for environmental emergencies (i.e., burns, drownings, hypothermia, poisoning, etc). Prior to completing this course, the student must provide proof of current CPR certification at health care provider level. This course meets San Joaquin County requirements for First Responder.

H S 76  First Responder Refresher  Units 1  
Prerequisites: Exempt from assessment; current First Responder certification; CPR certification at health care provider level.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed as a refresher course for certified first responders. The course focuses on recent changes in laws, policies and procedures pertaining to the treatment, support of sick or injured individuals, and provides a review of emergency medical treatments.

H S 77B  Emergency Medical Technician 1  Units 4  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is for persons interested in pre-hospital emergency medical care. Successful completion of this course qualifies the student to take the certification examination for Emergency Medical Technician 1 (EMT-1). EMT 1 is the minimum training required by state and local agencies for employment in many fire and ambulance service industries. The course is a combination of classroom, skills, and clinical training. Current CPR certificate at health care provider level is required prior to enrolling in this course.

H S 81  Emergency Medical Technician 1 Refresher  Units 1  
Prerequisites: Exempt from assessment; current EMT 1 and CPR certificate at health care provider level.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed as a refresher course for certified Emergency Medical Technician 1. The course focuses on recent changes in laws and policies and procedures pertaining to pre-hospital emergency medical care. Successful completion of this course provides students with 24 hours of continuing education toward recertification as EMT 1.
HIST 2A World History to 1600 Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of world societies from pre-historic times to 1600. Special emphasis is placed on the dynamic interaction and comparison of peoples and cultures. Focus is placed on tracing concurrent political, social, cultural, economic, and religious developments. The course examines the key elements of various cultures and their legacy for the global community today. (UC, CSU)

HIST 2B World History Since 1600 Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of world societies since 1600 with special emphasis on the dynamic interaction and comparison of peoples and cultures. Focus is placed on tracing concurrent political, social, cultural, economic, and religious developments. The course examines the key elements of various cultures and their legacy for the global community today. (UC, CSU)

HIST 4A History of Western Civilization Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of western civilization from pre-literate times through Reformation. Special emphasis is placed on the ancient Near East including Egypt and Mesopotamia, classical Greece and Rome, the Middle Ages, and the Renaissance and Reformation era. The approach concentrates on the highlights of each period which have shaped the destiny of western culture. HIST 4A is not a prerequisite to HIST 4B. (UC, CSU, CAN HIST 2, CAN HIST SEQ A with both HIST 4A and 4B)

HIST 4B History of Western Civilization Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of western civilization from the commercial revolution to the present. Special emphasis is on the rise of modern capitalism, the emergence of European superpowers, 18th century revolutionary thought, 19th century Colonialism, Imperialism, and Nationalism, and the dynamics of the Twentieth Century, including total war, totalitarianism, and the westernization of the entire world. (UC, CSU, CAN HIST 4, CAN HIST SEQ A with both HIST 4A and 4B)

HIST 6A History of Asian Civilization Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introductory survey of the histories, philosophies, and cultural characteristics of Asian societies. Attention is given to the impact of the West on China, Japan, Korea, and Central Asia. (UC, CSU)

HIST 6B History of Asian Civilization Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introductory survey of the histories, philosophies, and cultural characteristics of Asian societies. Attention is given to the impact of the West on India, Iran, Southeast Asia, and the Near East. (UC, CSU)

HIST 15 Selected Topics: History Units 1-2
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of history not already covered by existing curricula. (UC, CSU)
HIST 17A  History of The United States  Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of United States history from its colonial beginning through Civil War and Reconstruction. Students are encouraged to critically evaluate experiences from the nation’s past. This course fulfills the social science group A requirement for the associate degree, and it applies toward the completion of California state requirements in United States history and institutions. (UC, CSU, CAN HIST 8, CAN HIST SEQ B with both HIST 17A and HIST 17B)

HIST 17B  History of The United States  Units 3
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of United States history from reconstruction to the present. Emphasis is on the political, economic, intellectual, and social forces which have molded America. The course fulfills the social science group A requirements for the associate degree and applies toward completion of the California state requirements in United States history and institutions. A study of California state and local government is included in this course. (UC, CSU, CAN HIST 10, CAN HIST SEQ B with both HIST 17A and HIST 17B)

HIST 19  Selected Topics: Study and Travel  Units 2
Prerequisites: Reading level II.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to combine travel with study experiences to enrich the curriculum. One or more aspects of the history of the area visited is stressed in this course. (CSU)

HIST 27  Women in History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a review of the history of women in America with emphasis on achievements of women in traditional and non-traditional fields of work. The opportunities and limitations surrounding women’s roles in United States history are explored. (UC, CSU)

HIST 30A  African-American History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an examination of African-American history from early west Africa to the Civil War. This course fulfills the social science group A requirement for an associate degree and it applies toward completion of the California state requirements in United States history and institutions. (UC, CSU)

HIST 30B  African-American History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of the African-American experience from Reconstruction to the present. It fulfills the Social Science group A requirement for the associate degree and applies toward completion of the California state requirements in United States history and institutions. A study of California state and local government is included in this course. (UC, CSU)

HIST 31  Mexican-American History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of the Mexican-American experience in America from colonial beginnings to the present. It fulfills the Social Science group A requirements for the associate degree and it applies toward completion of the California state requirements in American history and institutions. (UC, CSU)

HIST 34  Asian Pacific American History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course surveys the Asian Pacific American experience in America from the Gold Rush to the present. (UC, CSU)

HIST 37  California History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of California history from the period of exploration and discovery to the present. Emphasis is on Spanish and Mexican periods, American infiltration and conquest, the Gold Rush, statehood, and the formation of government, economic growth, and social development. (UC, CSU)

HIST 50H  Special Studies: History  Units 1-2
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson in one of the following with a grade of “B” or better: HIST 2A, 2B, 4A, 4B, 6A, 6B, 17A, 17B, 27, 30A, 30B, 31, or 37.
Limitations on Enrollment: None.
Advisories: None.
This course is open to students qualified to do advanced work in the field of history. The course includes research, directed reading, field work, or other advanced study, and the course may be repeated for a maximum of four units. (UC, CSU)

HUM 3  Autobiography of Civilization  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of the artistic traditions of our western cultural heritage. The arts including painting, sculpture, architecture, music, dance, drama, and literature are studied as vehicles in the search for meaning and value from the ancient world to modern times. (UC, CSU)

HUM 4  Introduction to Linguistics  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the study of language in theory and practice. Students explore what is known about human language including its uniqueness, its structure, its use, its diversity, and its universality. An effort is made to analyze the relationship between language, culture, and social levels. (UC, CSU)
HUM 14A  Great Religions of the Eastern World  Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a survey of the historical development and essential beliefs of the major religions of the Eastern world. Primary emphasis is on the major phases of development and comparative insights among the great religions of the world. Course work consists of readings, lectures, and discussions in the areas of Hinduism, Buddhism, Jainism, Confucianism, and Taoism. (UC, CSU)

HUM 14B  Great Religions of the Western World  Units 3  
Prerequisites: Reading level II.  
Limitation on Enrollment: None.  
Advisories: None.  
This course is a survey of the historical development and essential beliefs of the major religions of the Western world. Primary emphasis is on the major phases of development and comparative insights among the great religions of the world. Course work consists of readings, lectures, and discussions in the areas of ancient religious beliefs, Mesopotamian religions, Graeco-Roman religions, Teutonic religion, Zoroastrianism, Judaism, Christianity, and Islam. (UC, CSU)

HUM 15  Selected Topics: Humanities  Units 0.5-2  
Prerequisites: Reading level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to offer instruction in one of the specialized areas of humanities not already covered by existing curricula. (UC, CSU)

HUM 19  Selected Topics: Study and Travel  Units 2  
Prerequisites: Reading level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to combine travel with study experiences to enrich the curriculum. One or more aspects of the culture of the area visited is stressed in the course. (CSU)

HUM 50H  Special Studies: Humanities  Units 1-2  
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson; HUM 3, 14A or 14B with a grade of “B” or better.  
Limitation on Enrollment: None.  
Advisories: None.  
This course is designed to allow qualified students to do advanced work in the field. The course includes research, directed reading, field work, or other advanced study. The course may be repeated for a maximum of four units. (UC, CSU)

INDUS 15  Selected Topics: Industrial Technology  Units 1-2  
Prerequisites: Reading level II or concurrent enrollment in reading.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to enable the College to offer instruction in one of the specialized areas of industrial technology not already covered by existing curriculum. (CSU)

INDUS 20  Industrial Safety and Health  Units 3  
Prerequisites: None.  
Corequisites: Reading level I with concurrent enrollment in reading.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to introduce principles of occupational safety and health for the work-site. The course includes Occupational Safety and Health Act (OSHA) regulations, employee training, accident investigation, and safety considerations. (CSU)

INDUS 31  Hydraulics and Pneumatics  Units 4  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to develop an understanding of the principles and mechanical applications of hydraulic, pneumatic and vacuum systems. Topics also include shop procedures, component disassembly, troubleshooting and certified procedures in re-assembly and installation. (CSU)

INDUS 32  Total Quality Management  Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is an introduction to the fundamentals of total quality management (TQM). The course includes the analysis, design, and implementation of quality management principles to achieve continuous management of organizational processes. (CSU)

INDUS 35  Mobile Hydraulics  Units 4  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to introduce the student to the use of hydraulics, pneumatics and vacuum in the automotive and mobile equipment industries. Laboratory skills develop competency in the analysis of trouble-shooting of circuits. Skills are developed in the recognition and construction of conduits (piping, tubing and hoses) and the rebuilding of pumps, motors and valves. (CSU)

INDUS 45  Industrial Technology  Units 5  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to cover the principles of matter and the basic laws and theories of Newtonian mechanics. Various forms and uses of energy and the laws governing them are explored. (CSU)
INDUS 50H  Special Studies: Units 1-2
Industrial Technology
Prerequisites: Completion of survey course with grade of “B” or better and presentation of a project acceptable to the instructor and division chairperson.
Limitations on Enrollment: None.
Advisories: None.
This course is open to students qualified to do advanced work in the field. The program includes research, directed reading, field work or other advanced study, and the course may be repeated for a maximum of four units. (CSU)

INDUS 51  Private Pilot Ground School Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the student to the knowledge and skills required to be a competent and safe private pilot. The course also prepares the student to take the Federal Aviation Administration written examination for a private pilot certificate. (CSU)

INDUS 69V  Internship: Units 1-8
Industrial Technology
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the requirements of an apprenticeship program, State of California Division of Apprenticeship standards, role of the apprentice, general safety, general operating procedures, and documentation.

A-IND 72A  Introduction to Apprenticeship Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is an introduction to the requirements of an apprenticeship program, State of California Division of Apprenticeship standards, role of the apprentice, general safety, general operating procedures, and documentation.

A-IND 72B  Isolated Apprentices Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 73B  Isolated Apprentices Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 74A  Isolated Apprentices Units 6
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

INDUS 94  Industrial Mathematics Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce applied mathematical principles to technical problems. The course includes aspects of mathematics, algebra, plane geometry, measurement, and fundamentals of trigonometry. Units in this course do not count towards the Associate degree.
A-IND 74B Isolated Apprentices Units 6
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued of a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-IND 76 Applied Technical Mathematics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to provide a review of the computational and problem-solving skills needed for success in a plant maintenance and operations career. The topics include basic mathematical functions, manipulation of algebraic expressions, ratio, proportions, geometric calculations, and right-angle trigonometry.

A-IND 77A Mechanical Fundamentals Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce students to basic principles of physics including the laws of motion and fluid behavior.

A-IND 77B Bearings, Pumps, and Turbines Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the effects of friction, cavitation and vibration on bearings, pumps, and turbines. The course also identifies various types of pumps and their application.

A-IND 77C Motors and Generators Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to include the theory and advanced application of alternating current motors and three-phase generators. Topics of instruction include the principles of construction of large motors and generators rated up to 10,000 horsepower.

A-IND 77D Plant Auxiliary Equipment Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to include the study of auxiliary equipment used in hydro-electric plants. Emphasis is placed on the operation and application of valves, hydraulic controls, and pneumatic controls.

A-IND 77E Hydraulics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed for students to apply schematic interpretation, troubleshooting, and problem solving techniques through the use of a hydraulics simulator.

A-IND 77F Pneumatics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed for students to apply schematic interpretation, troubleshooting, and problem solving techniques through the use of a pneumatic simulator. Emphasis is placed on pressure and flow requirements.

A-IND 77G Governor Systems Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to include the function, operation, maintenance, and troubleshooting of governors utilized in a generating plant.

A-IND 77H Computers in Hydro-Electric Plants Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the basic concepts of using a computer in hydro-electric power plants. The topics include (Microsoft) spreadsheets, word processing, reports, desktop accessories, and running commercial applications for plant operations and maintenance.

A-IND 77J Water Aqueduct Systems Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide the fundamentals of water measurement and water treatment for a statewide water system. Included are the procedures for monitoring water quality, water testing, water treatment, water management and water flow.

A-IND 77K Fundamentals of Thermodynamics Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the fundamentals of thermodynamics as it applies to air conditioning and refrigeration. The course includes the effects of heat on matter, methods of heat transfer, and properties of gases.

A-IND 77L Project Control and Power Contracts Units 2
Prerequisites: Indentured apprentice.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to provide a review of contracts related to the State Department of Water Resources; operation, power, and water contract specifications. Also included are the study of documentation control, operation procedures and electronic communication systems.
A-IND 77M Air Conditioning  
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory, application, and troubleshooting techniques for basic air conditioning systems.

A-IND 77N Electro-Mechanical Print Reading  
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is designed to introduce the theory and skills involved in reading and interpreting electrical drawings, schematics, and wiring diagrams.

A-IND 78A Defensive Driving  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to basic driving techniques in order to reduce the risk of being involved in a vehicular accident. The course includes the State of California vehicular code, defensive driving techniques, and State of California service vehicular operation and maintenance rules and regulations.

A-IND 78B Heavy Truck Operation  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of heavy trucks used by the California State Department of Water Resources, their maintenance, and their safe operation.

A-IND 78C Diesel and Small Gasoline Engines  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the basic types of small gasoline engines, diesel engines, and chain saws used by the California State Department of Water Resources.

A-IND 78D Surveying and Flood Control Systems  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to flood control systems, inspection, and major causes of levee and dam failure. The course also includes the fundamentals of surveying.

A-IND 78E Soils, Asphalt, and Concrete  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the various types of soil, asphalt, and concrete used by the California State Department of Water Resources, including their origin, composition, general description, and procedures for application.

A-IND 78F Environmental Awareness  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the federal, state, and local environmental requirements which apply to work performed by the California State Department of Water Resources.

A-IND 78G Power Lift and Four-Wheel Drive Units  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the various types of power lift and four-wheel drive units used by the California State Department of Water Resources, their maintenance, their inspection, and their safe operation.

A-IND 78H Protective Coatings  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to corrosion, painting, and protective coating control programs.

A-IND 78J Small Boat Handling  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of small boats used by the California State Departments of Water Resources and their transportation and safe operation.

A-IND 78K Mobile Cranes and Rigging  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the use of mobile cranes, their safe operation and maintenance, and approved methods of rigging for lifting work.

A-IND 78L Motor Grader Operation  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the components and operation of the types of motor graders used by the California State Department of Water Resources.

A-IND 78M Tractor Operations, Trenching, and Shoring  
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of tractor, trenching, and shoring operations conducted within the civil maintenance units of the California State Department of Water Resources.
A-IND 78B Power Actuated Equipment Units 1
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 78N Pesticides and Herbicides Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the types of pesticides and herbicides used by the California State Department of Water Resources, including uses, approved applications, and restrictions.

A-IND 92A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 92B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 93A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 93B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 94A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 94B Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.

A-IND 95A Sheet Metal Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce students to the requirements and safe operation of the powder-actuated fastening tools and rotary hammer drills used by the California State Department of Water Resources.
ITALIAN

ITAL 1 Elementary Italian Units 5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Italian language and Italian cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

ITAL 2 Elementary Italian Units 5
Prerequisites: Successful completion of ITAL 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Italian language and Italian cultures. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

ITAL 3 Intermediate Italian Units 5
Prerequisites: Successful completion of ITAL 2 or 54.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the Italian language and Italian cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selections. (UC, CSU)

ITAL 4 Intermediate Italian Units 5
Prerequisites: Successful completion of ITAL 3.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the Italian language and Italian cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selection. (UC, CSU)

ITAL 36A Introductory Italian Conversation Units 2
Prerequisites: Successful completion of ITAL 1 or 51.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to strengthen fundamental communication patterns based on typical daily situations. (CSU)

ITAL 36B Beginning Italian Conversation Units 2
Prerequisites: Successful completion of ITAL 2 or 53.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to achieve conversational ability based on typical daily situations. (CSU)

ITAL 38A Special Assignment: Listening Units 2
Prerequisites: Concurrent enrollment in or completion of ITAL 1 or ITAL 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on listening. The course is designed to meet the special need of student. The course is offered for individual or group study. (CSU)

ITAL 38B Special Assignment: Pronunciation Units 2
Prerequisites: Concurrent enrollment in or completion of ITAL 1 or ITAL 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on pronunciation. The course is designed to meet the special need of student. The course is offered for individual or group study. (CSU)

ITAL 38C Special Assignment: Reading Units 2
Prerequisites: Concurrent enrollment in or completion of ITAL 1 or ITAL 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on reading. The course is designed to meet the special need of student. The course is offered for individual or group study. (CSU)

ITAL 38D Special Assignment: Writing Units 2
Prerequisites: Concurrent enrollment in or completion of ITAL 1 or ITAL 51.
Limitation on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on writing. The course is designed to meet the special need of student. This course is offered for individual or group study. (CSU)

ITAL 50H Special Studies: Italian Units 1-2
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson; ITAL 4 with grade of “B” or better.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to allow students to do advanced work in the language. The course includes research, directed reading, field work, or other advanced study. The course may be repeated for a maximum of 4 units. (UC, CSU)

ITAL 51 Elementary Italian Units 2.5
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to the Italian language and Italian culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of ITAL 51 and 52 are equivalent to ITAL 1. (UC, CSU, CAN ITAL 2 with both ITAL 51 and 52, CAN ITAL SEQ A with both ITAL 51, ITAL 52, ITAL 53 and ITAL 54)
JAPANESE

JAPAN 1 Elementary Japanese Units 5
Prerequisites: None.
Limitations on Enrollment: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

JAPAN 2 Elementary Japanese Units 5
Prerequisites: Successful completion of JAPAN 1 or 52.
Limitations on Enrollment: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. (UC, CSU)

JAPAN 3 Intermediate Japanese Units 5
Prerequisites: Successful completion of JAPAN 2 or 54.
Limitations on Enrollment: None.
This course is designed to offer continued study of the Japanese language and the Japanese cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selections. (UC, CSU)

JAPAN 4 Intermediate Japanese Units 5
Prerequisites: Successful completion of JAPAN 3.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer continued study of the Japanese language and the Japanese cultures. Efforts to improve reading and composition skills are based on both contemporary and traditional selections. (UC, CSU)

JAPAN 36A Introductory Japanese Conversation Units 2
Prerequisites: Successful completion of JAPAN 1 or 51.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to strengthen fundamental communication patterns based on typical daily situations. (CSU)

JAPAN 36B Beginning Japanese Conversation Units 2
Prerequisites: Successful completion of JAPAN 2 or 53.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to achieve conversational ability based on typical daily situations. (CSU)

JAPAN 38A Special Assignment: Listening Units 2
Prerequisites: Concurrent enrollment in or completion of JAPAN 1 or JAPAN 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on listening. The course is designed to meet the special need of the student. The course may be offered for individual or group study. (CSU)

JAPAN 38B Special Assignment: Pronunciation Units 2
Prerequisites: Concurrent enrollment in or completion of JAPAN 1 or JAPAN 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on pronunciation. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

JAPAN 38C Special Assignment: Reading Units 2
Prerequisites: Concurrent enrollment in or completion of JAPAN 1 or JAPAN 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on reading. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)

JAPAN 38D Special Assignment: Writing Units 2
Prerequisites: Concurrent enrollment in or completion of JAPAN 1 or JAPAN 51.
Limitations on Enrollment: None.
Advisories: None.
This course is a skill-building course with an emphasis on writing. The course is designed to meet the special need of the student. The course is offered for individual or group study. (CSU)
JAPAN 50H Special Studies: Japanese Units 1-2
Prerequisites: Presentation of a project acceptable to the instructor and the division chairperson; JAPAN 4 with a grade of “B” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to allow students to do advanced work in the language. The course includes research, directed reading, field work, or other advanced study. The course may be repeated for a maximum of four units. (UC, CSU)

JAPAN 51 Elementary Japanese Units 2.5
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of JAPAN 51 and 52 are equivalent to JAPAN 1. (UC, CSU)

JAPAN 52 Elementary Japanese Units 2.5
Prerequisites: Successful completion of JAPAN 51.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of JAPAN 51 and 52 are equivalent to JAPAN 1. (UC, CSU)

JAPAN 53 Elementary Japanese Units 2.5
Prerequisites: Successful completion of JAPAN 1 or 52.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of JAPAN 53 and 54 are equivalent to JAPAN 2. (UC, CSU)

JAPAN 54 Elementary Japanese Units 2.5
Prerequisites: Successful completion of JAPAN 53.
Limitations on Enrollment: None.
Advisories: None.
This course is an introduction to the Japanese language and Japanese culture. Emphasis is placed on the following skills in the order given: listening, speaking, reading, and writing. The combined five units of JAPAN 53 and 54 are equivalent to JAPAN 2. (UC, CSU)

JOURNALISM

JOURN 1 Introduction to Mass Communications Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a comprehensive study of the history, development, and current state of the mass media, including newspapers, magazines, television, radio, on-line services, public relations, advertising, and photojournalism, emphasizing functions and obligations in a free society. The course also addresses controls on the media, including mass media law and ethics. The constitutional basis for a free press is extensively explored. (CSU, UC, CAN JOUR 4)

JOURN 2 Newswriting Units 3
Prerequisites: JOURN 1 with a grade of “C” or better; reading level II or reading level I with corequisite. Corequisite: Concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer student instruction in fundamental journalistic writing. Emphasis is placed on the personal interview as a vital process in structuring an objective presentation of news and feature stories. Accompanying the various areas of writing instruction is an introduction to the basics of photojournalism for the reporter. As a component of the course, the student prepares news and feature stories for the college newspaper. The role of the reporter and the legal and ethical issues related to reporting are also examined. (CSU, CAN JOUR 2)

JOURN 3 Reporting for the Media Units 3
Prerequisites: JOURN 1 with a grade of “C” or better; reading level II or reading level I with corequisite.
Corequisites: Concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer student advanced concepts of news gathering, interviewing, and writing, including in-depth and investigative reporting. The student serves as a staff reporter for the college newspaper. As a component of the course, the student prepares news and feature stories for the college newspaper. (CSU)

JOURN 4 Editing for the Media Units 3
Prerequisites: JOURN 3 with a grade of “C” or better; reading level II or reading level I with corequisite.
Corequisites: Concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to emphasize editing and newspaper design. Topics include copy editing, headline writing, page makeup and design, digital photography and production methods. Editorial writing, press ethics and legal issues are also discussed. The student serves as an editor on the college newspaper. (CSU)

JOURN 5 Media Management Units 3
Prerequisites: JOURN 3 or JOURN 4 with a grade of “C” or better; reading level II or reading level I with corequisite.
Corequisites: Concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to train the prospective print editor on all aspects of operating a publication, including developing a publishing schedule and story assignments, coordinating a writing staff, designing a page, writing headlines and outlines, sizing photographs, understanding the business side of print journalism, working with other editors and printers, and developing editorial and management policies. (CSU)

JOURN 6 Journalism Internship Units 3
Prerequisites: JOURN 1 and 2.
Limitations on Enrollment: None.
Advisories: None.
This course is offered to provide the advanced journalism student with the opportunity to work for either an off-campus print or electronic medium and to earn credit for such experience. (CSU)
LEARNING DISABILITY

L D 70  College Awareness Units 2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities Program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program to acquire academic, social, and vocational skills. The course offers compensatory strategies needed to be successful in college. The student participates in them mutual development of the individual education plan. Units earned in this course do not count toward the associate degree.

L D 77  Assessment and Prescription Units 0.5
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities Program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program to complete the Learning Disabilities Assessment Process. Individual Education Plans are based on individual needs according to the assessment process. In addition to the individualized assessment and prescriptive process, the student receives an introduction to the College and to the Learning Disabilities program. Units earned in this course do not count toward the associate degree.

L D 78A Auditory Discrimination and Word Attack Skills Units 0.5-2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities Program.
Advisories: None.
This course is designed to help the student qualify for the Learning Disabilities Program to improve spelling, reading, and word attack skills by improving the knowledge and use of sound-symbol correspondence, syllabification, and whole word analysis. Units earned in this course do not count toward the associate degree.

L D 78B Spelling Skills Units 0.5-2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program to improve his/her spelling skills. Based on individual diagnosis, appropriate spelling approaches are determined for each student. Units earned in this course do not count toward the associate degree.

L D 78C Modality Vocabulary Units 0.5-2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program to improve his/her college level vocabulary in order to speak more effectively, write efficiently, and read and understand key academic terms associated with college subjects. Units earned in this course do not count toward the associate degree.

L D 78D Writing Skills Units 0.5-2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program with writing skills necessary for success in the college curriculum. The purpose of this course is to guide the student through a process of writing well-organized, logical paragraphs based on their learning modality strength. Units earned in this course do not count toward the associate degree.

L D 78E Modality and Study Skills Units 0.5-2
Prerequisites: None.
Limitations on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities Program.
Advisories: None.
This course is designed to help the student qualifying for the Learning Disabilities Program with directed practice in developing reading and study skills. Units earned in this course do not count toward the associate degree.

L D 78F Applied Compensatory Strategies Units 0.5-2
Prerequisites: None.
Limitation on Enrollment: Approval by Learning Disabilities Specialist based on qualification for Learning Disabilities program.
Advisories: None.
This course is designed to provide information and coping skills to the student with learning disabilities and attention deficits who is experiencing academic difficulties. This course enhances skills in the areas of learning strategies, personal growth, and self-advocacy to minimize the obstacles presented by disabilities that directly impact the student’s success in the educational process. Units earned in this course do not count toward the associate degree.
**LIBRARY SKILLS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Limitations on Enrollment</th>
<th>Advisories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBRY 1</td>
<td>Library Information Literacy</td>
<td>1</td>
<td>Reading level II</td>
<td>None</td>
<td>None</td>
<td>This course is designed to allow the student to develop information literacy skills and to introduce the variety of information resources and information retrieval tools available in academic libraries. The student learns how to develop research strategies and how to utilize library resources and services to effectively retrieve information in this self-paced course. (UC, CSU)</td>
</tr>
<tr>
<td>LIBRY 2</td>
<td>Advanced Library Information Literacy</td>
<td>2</td>
<td>LIBRY 1 and Reading level II</td>
<td>None</td>
<td>None</td>
<td>This course is designed to further develop the student’s information literacy and critical thinking skills learned in Library Information Literacy. In this self-paced course, special emphasis is given to the Internet as a research tool, online databases, online searching strategies, general and specialized reference books, law reference sources, and career information. (UC, CSU)</td>
</tr>
</tbody>
</table>

**MATHEMATICS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Limitations on Enrollment</th>
<th>Advisories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1</td>
<td>Calculus</td>
<td>5</td>
<td>Reading level II; MATH 36, or MATH 30 and MATH 31 each with a grade of “C” or better</td>
<td>None</td>
<td>None</td>
<td>This course is the first course in the three-semester Calculus series, which concentrates on an introduction to the Calculus of single variable functions. The topics include an introduction to the concepts of numerical, graphical, and symbolic differentiation and integration of functions, with an emphasis on applications. (UC, CSU, CAN MATH 18, CAN MATH SEQ B with both MATH 1 and 2, CAN MATH SEQ C with both MATH 1, MATH 2, and MATH 3)</td>
</tr>
<tr>
<td>MATH 1L</td>
<td>Calculus Computer Laboratory</td>
<td>1</td>
<td>MATH 1</td>
<td>None</td>
<td>None</td>
<td>This course is designed to enhance the student’s understanding of calculus through the use of a Computer Algebra System. The course is based on computer laboratory experimentation centering around graphical, numerical, and algebraic analysis of topics of calculus. (CSU)</td>
</tr>
<tr>
<td>MATH 2</td>
<td>Calculus</td>
<td>4</td>
<td>MATH 1 with a grade of “C” or better</td>
<td>None</td>
<td>None</td>
<td>This course is the second course in the three semester Calculus series. Topics include techniques of integration, applications of the integral, an introduction to solutions of differential equations, and infinite series representations of functions. (UC, CSU, CAN MATH 20, CAN MATH SEQ B with both MATH 1 and 2, CAN MATH SEQ C with both MATH 1)</td>
</tr>
<tr>
<td>MATH 3</td>
<td>Vector Calculus</td>
<td>4</td>
<td>MATH 2 with a grade of “C” or better</td>
<td>None</td>
<td>None</td>
<td>This course is an introductory course in the study of calculus of multivariate functions. The course includes a computer laboratory component complementing the lecture component. Lecture and laboratory topics include vectors, parametric curves, polar, cylindrical, and spherical coordinates, partial differentiation, multiple integrals, line and surface integrals, and the theorems of Gauss, Stokes, and Green. (UC, CSU, CAN, MATH 22, CAN MATH SEQ C with both MATH 1, 2, and 3)</td>
</tr>
<tr>
<td>MATH 4</td>
<td>Differential Equations</td>
<td>4</td>
<td>MATH 2 with a grade of “C” or better</td>
<td>None</td>
<td>None</td>
<td>This course is an introductory course in the study of elementary differential equations. The course includes a computer laboratory component complementing the lecture component. Lecture and laboratory topics include first and second order linear differential equations, nonlinear differential equations, power series solution methods, the Laplace transform, solutions near ordinary and singular points, and systems of linear differential equations. (UC, CSU, CAN, MATH 24)</td>
</tr>
<tr>
<td>MATH 5</td>
<td>Linear Algebra</td>
<td>3</td>
<td>MATH 2 with a grade of “C” or better</td>
<td>None</td>
<td>None</td>
<td>This course is an introduction to linear algebra for those students anticipating a career in mathematics, engineering, the physical sciences and some business curricula. Topics include geometrical vectors, matrices and linear equations, vector spaces, linear transformations, determinants, and inner product spaces. The course includes applications. (UC, CSU, CAN MATH 26)</td>
</tr>
</tbody>
</table>
MATH 10 Introduction to Contemporary Mathematics Units 3
Prerequisites: MATH 82 or MATH 84A and 84B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a one-semester introduction to the mathematical sciences. Contemporary applications of mathematics include concepts in the areas of management science, statistics, social choice, size and growth, and computer science. Real world applications of these topics are presented. This course is designed to satisfy mathematics requirements for the liberal arts non-science major. (CSU)

MATH 12 Introduction to Probability and Statistics Units 4
Prerequisites: Reading level II; MATH 82 or MATH 84A and 84B with a grade of “C” or better; or MATH 87 with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to acquaint the student with elementary techniques used in statistical methods. Emphasis is on descriptive statistics, elementary probability concepts, probability distributions, statistical inference, and simple linear regression analysis, with applications in business administration, education, natural sciences, psychology, and social science. A graphing calculator is recommended. Instructor demonstrations utilize the TI-83 calculator. (UC, CSU, CAN STAT 2)

MATH 13 Survey of Calculus Units 3
Prerequisites: MATH 82, or MATH 84A and 84B, with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a detailed study of algebraic functions and equations, including conic sections, at the college level. Graphing calculators are used extensively. Instructor demonstrations utilize the TI-82 calculator. Trigonometry (MATH 31) may be taken concurrently with MATH 30. MATH 30 and MATH 31 together are equivalent to MATH 36. Students may not receive credit for both MATH 30 and MATH 36. (UC, CSU)

MATH 15 Selected Topics: Mathematics Units 0.5-2
Prerequisites: Reading level II or concurrent enrollment in reading; MATH 80 or MATH 83A and 83B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to enable the College to offer instruction in one of the specialized areas of mathematics not already covered by the existing curriculum. (UC, CSU)

MATH 17A Concepts and Structures of Mathematics Units 3
Prerequisites: MATH 82 or MATH 84B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is one of two courses designed for the pre-service elementary teacher. Topics include the structure of the real number system, operations on the real numbers, and elementary number theory. (UC, CSU)

MATH 17B Concepts and Structures of Mathematics Units 3
Prerequisites: MATH 82 or MATH 84B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is one of two courses designed for the pre-service elementary teacher. Topics include problem solving, probability and statistics, the metric system, measurement, and geometry. (UC, CSU)

MATH 20 Finite Mathematics Units 3
Prerequisites: MATH 82 or MATH 84A and 84B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to fulfill the finite mathematics requirements of students in business administration, management, life sciences, and the social sciences. The content includes review topics of algebra, matrices, linear programming, elementary probability theory, Markov chains, decision theory, mathematics of finance, and game theory. Graphing calculators are used extensively. Instructor demonstrations utilize the TI-82 calculator. (UC, CSU, CAN MATH 12)

MATH 30 College Algebra Units 4
Prerequisites: MATH 82, or MATH 84A and 84B, with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a detailed study of algebraic functions and equations, including conic sections, at the college level. Graphing calculators are used extensively. Instructor demonstrations utilize the TI-82 calculator. Trigonometry (MATH 31) may be taken concurrently with MATH 30. MATH 30 and MATH 31 together are equivalent to MATH 36. Students may not receive credit for both MATH 30 and MATH 36. (UC, CSU)

MATH 31 Trigonometry Units 3
Prerequisites: MATH 82, or MATH 84A and 84B, with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a detailed study of basic trigonometry and the trigonometric functions. Graphing calculators are used extensively. Instructor demonstrations utilize the TI-82 calculator. College Algebra (MATH 30) may be taken concurrently with MATH 31. MATH 30 and MATH 31 together are equivalent to MATH 36. Students may not receive credit for both MATH 31 and MATH 36. (CSU)

MATH 36 Pre-Calculus Units 5
Prerequisites: MATH 82, or MATH 84A and 84B, with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is a study of the algebra of polynomial and transcendental functions, the trigonometric functions and their applications, conic sections, and other topics necessary for success in calculus. Graphing calculators are used extensively. Instructor demonstrations utilize the TI-82 calculator. Students may not receive credit for both MATH 36 and MATH 30 or MATH 31. MATH 30 and MATH 31 are equivalent to MATH 36. (UC, CSU)
MATH 50H Special Studies: Mathematics Units 1-2
Prerequisites: MATH 1 or 12, with a grade of “B” or better; Reading Level II or concurrent enrollment in reading or permission of instructor.
Limitations on Enrollment: None.
Advisories: None.
This course is offered to any student qualified to do advanced work in mathematics. Projects and assignments must be arranged and approved by the instructor and the division chairperson before enrolling in the course, and the course may be repeated for a maximum of four units. (UC, CSU)

MATH 80 Elementary Algebra Units 4
Prerequisites: Reading level II and Math level II.
Limitations on Enrollment: None.
Advisories: None.
This course is a first course in algebra. Specific topics include polynomials, factoring of polynomials, rational expressions, ratio and proportion, solving linear and quadratic equations, elementary graphing in two dimensions, elementary systems of linear equations, square roots, and various application problems. Entering students need a satisfactory understanding of basic arithmetic, including fractions, decimals, and percentages. The course is equivalent to a first year algebra course.

MATH 80L Elementary Algebra Workshop Units 1
Prerequisites: Reading level II and Math level II; concurrent enrollment in MATH 80, MATH 83A or MATH 83B.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to supplement the lecture course Elementary Algebra (MATH 80). Students are instructed in the use of technical learning tools, such as videotapes and computer tutorial software, as well as instruction in various learning activities, such as seminars on group-study mathematics study skills, improving examination success, and conquering mathematics anxiety. Students practice these skills in application to their MATH 80 course work as part of the workshop sessions. Included is a review of arithmetic and elementary algebra skills necessary for success in MATH 82.

MATH 81 Plane Geometry Units 3
Prerequisites: Reading level II or concurrent enrollment in reading: MATH 80 or MATH 83A and 83B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course involves the fundamentals of Euclidean plane geometry necessary for understanding two dimensional spatial relationships. Logical thinking is stressed and formal proofs are required. The content includes reasoning, axiomatic foundations, basic theorems, numerical relationships, polygons and areas, circles, and surface and volume.

MATH 82 Intermediate Algebra Units 4
Prerequisites: Reading level II and Math level II; MATH 80 with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: MATH 82L.
This course is a second course in algebra. Specific topics include linear and quadratic inequalities, graphing linear and quadratic functions, polynomial factoring, rational expressions, radicals, complex numbers, solving systems of linear equations using Cramer’s Rule, conic sections, and exponential and logarithmic functions.

MATH 82L Intermediate Algebra Workshop Units 1
Prerequisites: Reading level II and Math level II; concurrent enrollment in MATH 82, MATH 84A, or MATH 84B.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to supplement the lecture course Intermediate Algebra (MATH 82). Students are instructed in the use of technical learning tools such as videotapes and computer tutorial software, as well as instruction in various learning activities, such as seminars on group-study, mathematics study skills, improving examination success and conquering mathematics anxiety. Students practice these skills in application to their MATH 82 course work as part of the workshop sessions. Included is a review of arithmetic and elementary algebra skills necessary for success in MATH 82.

MATH 83A Elementary Algebra Units 2
Prerequisites: Reading level II and Math level II.
Limitations on Enrollment: None.
Advisories: None.
This course is equivalent to the first half of MATH 80 (Elementary Algebra) and it allows students more study time for the course topics. Completion of both MATH 83A and MATH 83B is equivalent to completion of MATH 80. Entering students need to have a satisfactory understanding of basic arithmetic, including fractions, decimals, and percents.

MATH 83B Elementary Algebra Units 2
Prerequisites: Reading level II and Math level II; MATH 83A with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is equivalent to the second half of MATH 80 (Elementary Algebra) and it allows students more study time for the course topics. Completion of both MATH 83A and 83B is equivalent to completion of a first course in algebra.

MATH 84A Intermediate Algebra Units 2
Prerequisites: Reading level II and Math level II; MATH 80 or MATH 83A and 83B or equivalent, each with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is equivalent to the first half of a second course in algebra. This course is designed to allow students more time for the course topics. Completion of both MATH 84A and MATH 84B is equivalent to completion of a second course in algebra.

MATH 84B Intermediate Algebra Units 2
Prerequisites: Reading level II and Math level II; MATH 84A or MATH 80 with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is equivalent to the second half of a second course in algebra. This course is designed to allow students more time for the course topics. Completion of both MATH 84A and MATH 84B is equivalent to completion of a second course in algebra.

MATH 85A Mathematics Laboratory Units 1-3
Techniques: Mathematica
Prerequisites: MATH 36 or combination of MATH 30 and MATH 31 with a grade of “B” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to prepare the student to serve as a laboratory assistant and to aid other students using the Mathematics Laboratory. The student serves as a laboratory assistant.
MATH 87  Technical Mathematics  Units 5
Prerequisites: MATH 80; Reading Level II or concurrent enrollment in reading.
Limitations on Enrollment: None.
Advisories: None.
This course includes the essentials of geometry, certain algebraic topics, trigonometry, and an exposure to calculus as needed by engineering aides, industrial arts students, and others whose courses do not demand the more complete sequence of mathematics courses. Emphasis is placed on applying mathematical principles to technical problems.

MATH 88  Pre-Algebra  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students needing to bridge the gap between arithmetic and algebra. Instruction is provided in the computational and problem-solving skills necessary for academic, vocational, and/or professional programs. Units earned in this course do not count toward the associate degree.

MECHANICAL TECHNOLOGY

MECH 10  Basic Welding for the Trades  Units 4
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to serve students who need basic welding skills. The course covers basic theory, practice and application of metal joining processes, metal cutting, and welding for ferrous and nonferrous metals and alloys. Welding methods include shielded metal arc welding, oxy-acetylene, and an introduction to metal inert gas and tungsten inert gas. (CSU)

MECH 15  Machine Tool Process  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students who plan to enter occupations in metals technology, manufacturing, engineering, and related fields. Students learn theory and operation of metal-working machines including lathes, grinding machines, milling machines, drill presses, and sawing machines. Topics include cutting tools, measuring tools and instruments, welding, casting, heat treatment of steel, production setups, and Computer Numerical Control (CNC) machines. A combined program of lecture and laboratory allows students to have hands-on experience with a variety of machinery processes. (CSU)

MECH 30A  Refrigeration and Air Conditioning  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the proper skills required to maintain and service refrigeration and air conditioning systems. Students learn how to charge, evacuate, and recover refrigerants utilizing common equipment found in the industry. (CSU)

MECH 30B  Intermediate Refrigeration  Units 3
Prerequisites: MECH 30A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop skills necessary to service and repair systems found in the refrigeration and air conditioning industry. (CSU)

MECH 30C  Advanced Refrigeration  Units 3
Prerequisites: MECH 30A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop skills necessary to service and repair commercial and industrial refrigeration systems. Students work on industrial systems as well as other advanced projects. (CSU)

MECH 31A  Basic Air Conditioning: Components and Circuits  Units 6
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students interested in learning the fundamentals of heating and air conditioning. Emphasis is placed on the electrical and mechanical theory of operation related to common heating and air conditioning equipment. The course covers basic electricity, basic circuits, and common electrical components and their applications to heating and air conditioning. (CSU)

MECH 31B  Basic Air Conditioning: Troubleshooting  Units 6
Prerequisites: MECH 31A with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop skills necessary to properly install split systems and packaged air conditioning systems. Operation, maintenance, and repair procedures of various heating and air conditioning systems are covered. (CSU)

MECH 31C  Heat Pumps and Air Conditioning Systems  Units 6
Prerequisites: MECH 31B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to familiarize students with the electrical and mechanical operation of heat pumps and chilled water systems. Sequence of operation, temperature, pressure, and electrical analysis are covered. (CSU)
MECH 31D  Commercial Air Conditioning  Units 6  Design and Operation

Prerequisites: MECH 31C with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop skills necessary for calculating residential and commercial cooling loads and duct design. Boiler applications, operation, and controls are covered.  (CSU)

MECH 32A  Air Conditioning Control  Units 3  Circuit Analysis

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce the selection, application, and maintenance of automatic controls generally found in the air conditioning field. The course includes different types of controls found in residential, commercial, and industrial applications are covered. Schematics involving the various controls are used to analyze control problems.  (CSU)

MECH 32B  Refrigeration Control  Units 3  Circuit Analysis

Prerequisites: MECH 32A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce students to the basic refrigeration controls found in domestic refrigeration systems and advances up to industrial refrigeration controls. Control theory, application, and electrical trouble-shooting are stressed.  (CSU)

MECH 32C  Design and Troubleshooting  Units 3  Commercial Controls

Prerequisites: MECH 32B with a grade of “C” or better.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to acquaint students with the basic commercial controls used in the heating and air conditioning industry. Students work with basic set-ups of both pneumatic and direct digital control systems.  (CSU)

MECH 50A  Introductory Machine Shop  Units 8

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is based on the study of machine tool theory, blueprint reading, and related mathematics with hands-on shop experience. Topics include precision instruments, hand tools, layout, and the operation of drill presses, grinding machines, milling machines, lathes, sawing machines, with an emphasis on lathe. Students use computer software to retrieve and plot project blueprints.  (CSU)

MECH 50B  Beginning Machine Shop  Units 8

Prerequisites: MECH 50A.
Limitations on Enrollment: None.
Advisories: None.
This course is based on the skills and knowledge learned in MECH 50A, Introductory Machine Shop. The course combines the study of machine tool theory blueprint reading, and related mathematics with hands-on shop experience. Topics include advanced layout and use of precision instruments and hand tools, advanced operation of drill presses, grinding machines, lathes, sawing machines, with an emphasis on the milling machine. Students use computer software to retrieve and plot project blueprints.  (CSU)

MECH 50C  Intermediate Machine Shop  Units 8

Prerequisites: MECH 50B.
Limitations on Enrollment: None.
Advisories: None.
This course is based on the skills and knowledge learned in MECH 50B, Beginning Machine Shop. The course combines the study of machine tool theory, blueprint reading, and related mathematics with hands-on shop experience. The major emphasis of the course is the programming of the Computer Numerical Control (CNC) lathe and the CNC milling machine. Students write programs in the “G” and “M” code format and use programs to operate the CNC machine tools. Programming topics include tapers, arcs, turning cycles, threading, drilling, grooving, parting off, and cutter radius compensation.  (CSU)

MECH 50D  Advanced Machine Shop  Units 8

Prerequisites: MECH 50C.
Limitations on Enrollment: None.
Advisories: None.
This course is based on the knowledge and skills learned in MECH 50C, Intermediate Machine Shop. The course combines the study of machine tool theory, blueprint reading, and related mathematics with hands-on shop experience. The emphasis of the course is Computer-Aided Drafting/Computer-Aided Manufacturing (CAD/CAM) using the CAD/CAM software. Students construct drawings on computers, add tooling information, define tool paths, generate Computer Numerical Control (CNC) code and use the CNC code to operate the CNC machine tools.  (CSU)

MECH 52A  Computer Numerical Control (CNC)  Units 3

Prerequisites: MECH 15, or MECH 50A, or MECH 77A, or MECH 78A.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to introduce applications of computer numerical control programming for the areas of manufacturing, engineering, and machining. Topics covered include Cartesian coordinates, process planning, computer numerical control mathematics, tooling, speeds and feeds, and G and M Code programming for lathe and mill with emphasis on the lathe.  (CSU)

MECH 52B  Advanced CNC/Computer-Aided Manufacturing (CNC/CAM)  Units 3

Prerequisites: MECH 52A.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to introduce topics in advanced computer numerical control programming for lathe and mill with emphasis on the mill. Computer Numerical Control (CNC) codes are generated also from existing data bases by using Computer Aided Manufacturing (CAM) computer software.  (CSU)

MECH 60  Metal Trade Layout and Forming  Units 5

Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to teach skills in basic layout and forming to better prepare students for employment areas such as machine shop, heating and air conditioning, fabrication, and maintenance personnel.  (CSU)
MECH 67A  Elementary Machine Shop  Units 4
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to machine tool theory, blueprint reading, and related mathematics with hands-on shop experience. Subjects include precision instruments, hand tools, layout and the operation of stationary power tools with an emphasis on the lathe. Students use computer software to retrieve and plot project blueprints. Elementary Machine Shop (MECH 67A and MECH 67B) is equivalent to Introductory Machine Shop (MECH 50A). Students who successfully complete MECH 67A or MECH 67B may not receive credit for MECH 50A. (CSU)

MECH 67B  Elementary Machine Shop  Units 4
Prerequisites: MECH 67A with a grade of “C” or better.
Limitation on Enrollment: None.
Advisories: None.
This course is an introduction to machine tool theory, blueprint reading, and related mathematics with hands-on shop experience. Subjects include precision instruments, hand tools, layout and the operation of lathes and portable power tools. Students use computer software to retrieve and plot project blueprints. Elementary Machine Shop (MECH 67A and MECH 67B) is equivalent to Introductory Machine Shop (MECH 50A). Students who successfully complete MECH 67A or MECH 67B may not receive credit for MECH 50A. (CSU)

MECH 67C  Machine Shop  Units 4
Prerequisites: MECH 50A or MECH 67B; with a grade of “C” or better.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to provide general machine tool theory, blueprint reading, and related mathematics for the manufacturing of machine parts. Subjects include advanced layout, uses of precision measuring instruments, and operation of drill presses, grinding machines, lathes, vertical milling machines, and saws. Students use computer software to retrieve and plot project blueprints. Machine Shop (MECH 67C and MECH 67D) is equivalent to Beginning Machine Shop (MECH 50B). Students who successfully complete MECH 67C or MECH 67D may not receive credit for MECH 50B. (CSU)

MECH 67D  Machine Shop  Units 4
Prerequisites: MECH 67C with a grade of “C” or better.
Limitation on Enrollment: None.
Advisories: None.
This course is designed to provide students with theory and applications of advanced machine tool operations. Subjects include advanced lathe, vertical mill, horizontal mill, dividing head and rotary table applications. Students use computer software to retrieve and plot project blueprints. Machine Shop (MECH 67C and MECH 67D) is equivalent to Beginning Machine Shop (MECH 50B). Students who successfully complete MECH 67C or MECH 67D may not receive credit for MECH 50B. (CSU)

MECH 69V  Internship: Machine Tool Technology  Units 1-8
Prerequisites: None.
Limitations on Enrollment: The student must enroll in a course that is directly related in the machine tool technology internship. The student must enroll in a minimum of 7 units during the semester including internship units. For summer session, the student must enroll in one related course in addition to internship. The combined total number of units a student may take in internship, work experience, and occupational practice may not exceed a maximum of 16 units. Participation requires submission and approval of internship program objectives and an employer internship agreement.
Advisories: GUID 30, 31, 32, 33.
This course is designed for students participating in an occupational internship in machine tool technology. Application of discipline-related skills and knowledge of Secretaries Commission on Achieving Necessary Skills (SCANS) competencies is emphasized. Each student is engaged in a specific research project or on-the-job learning activities under the supervision of a worksite supervisor and a college internship instructor. (CSU)

MECH 77A  Machine Shop: Basic Trade Extension  Units 3
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is designed for persons interested in the machinists trade. Lecture topics include math, blueprint reading, layout, precision measurements, materials and processes. Laboratory assignments are arranged according to needs of individuals.

MECH 77B  Machine Shop: Basic Trade Extension  Units 3
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is designed for persons employed in the machinist trade topics covered include milling machine, heat treating, grinding, drill press, shaper, assignments are arranged according to needs of individuals.

MECH 77C  Machine Shop: Trade Extension  Units 3
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is designed for students who desire a knowledge of machining processes for employment. Lecture topics include mathematics, blueprint reading, precision measurements, materials and processes. Laboratory assignments are arranged according to needs of individuals.

MECH 78A  Machine Shop: Trade Extension  Units 3
Prerequisites: None.
Limitation on Enrollment: None.
Advisories: None.
This course is designed for students who desire a knowledge of machining processes for employment. Lecture topics include mathematics, blueprint reading, precision measurements, materials and processes. Laboratory assignments are arranged according to needs of individuals.
MECH 78B  Machine Shop: Trade Extension  Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed for students who desire a knowledge of machining processes for employment. Lecture topics include mathematics, blueprint reading, precision measurements, materials and processes. Laboratory assignments are arranged according to needs of individuals.

MECH 78C  Machine Shop: Trade Extension  Units 3  
Prerequisites: None.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed for students who desire a knowledge of machining processes for employment. Lecture topics include mathematics, blueprint reading, precision measurements, materials and processes. Laboratory assignments are arranged according to needs of individuals.

MECH 81A  Refrigeration, Heating,  Units 3  
and Air Conditioning Specialization  
Prerequisites: MECH 31C.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to assist advanced students in gaining a greater knowledge of a specialized area of the refrigeration, heating, and air trade. The work covered is developed between the student and the instructor at the beginning of the course.

MECH 87A  Machine Tool Technology  Units 3-4  
Specialization  
Prerequisites: MECH 50C.  
Limitations on Enrollment: This course requires instructor approval to enroll.  
Advisories: None.  
This course is designed for advanced students in machine technology. Students complete an advanced specialized project developed in consultation with the instructor.

MECH 87B  Machine Tool Specialization  Units 5  
Prerequisites: MECH 50C.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to assist advanced students in gaining a greater knowledge of a specialized area of machine tool technology. Student objectives are developed between the student and the instructor at the beginning of the course.

MECH 87C  Air Conditioning,  Units 2-3  
Refrigeration, and Heating Specialization  
Prerequisites: MECH 31C.  
Limitations on Enrollment: This course requires instructor approval to enroll.  
Advisories: None.  
This course is designed for advanced students in air conditioning, refrigeration, and heating (HVAC). Students complete an advanced specialized project developed in consultation with the instructor.

MECH 88A  Introductory Trade Welding  Units 8  
Prerequisites: Math level II.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to serve trade and industrial students as well as persons desiring the skills of welding for employment. The course covers theory and application of metal joining processes including metal cutting, arc welding, and joining of ferrous and nonferrous metals and alloys. Manipulative skills in the oxyacetylene process are stressed. Emphasis is placed on individualized student goals in their respective related skill area.

MECH 88B  Beginning Trade Welding  Units 8  
Prerequisites: MECH 88A.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to serve trade and industrial students along with persons desiring the skills of welding for employment. The course covers theory and application of metal joining process, metal cutting and arc welding processes, and joining of ferrous and nonferrous metals and alloys. Manipulative skills in shielded metal arc welding processes are stressed. Emphasis is placed on individualized student goals in their respective related skill area.

MECH 88C  Intermediate Trade Welding  Units 8  
Prerequisites: MECH 88B.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to serve trade and industrial students as well as persons desiring the skills of welding for employment. The course covers theory and application of metal joining process, metal cutting and arc welding processes, and joining of ferrous and nonferrous metals and alloys. Manipulative skills in tungsten inert gas (TIG) welding process are stressed.

MECH 88D  Advanced Trade Welding  Units 8  
Prerequisites: MECH 88C.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is designed to serve trade and industrial students as well as persons desiring the skills of welding for employment. The course covers theory and application of metal joining process, metal cutting and arc welding processes, and joining of ferrous and nonferrous metals and alloys. Manipulative skills in metal inert gas welding processes are stressed. Emphasis is placed on individualized student goals in their respective related skill area.

MECH 89A  Stick Welding  Units 2  
Prerequisites: Consent of instructor.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is an open-entry and open-exit course designed for students who wish to acquire skills in the Shielded Metal Arc welding (STICK) process.

MECH 89B  Metal Inert Gas (MIG) Welding  Units 2  
Prerequisites: Consent of instructor; Reading level II or concurrent enrollment in reading.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is an open-entry and open-exit course designed for students who wish to acquire skills in the Metal Inert Gas (MIG) welding process.
This course is an open-entry and open-exit course designed for students who wish to acquire skills in the Tungsten Inert Gas (TIG) welding process.

**MECHANICAL TECHNOLOGY: APPRENTICESHIP**

**A-MEC 70A Machine Shop 1**
Units 4
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 70B Machine Shop 1**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 71A Machine Shop 2**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 71B Machine Shop 2**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 72A Machine Shop 3**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 72B Machine Shop 3**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

**A-MEC 73A Machine Shop 4**
Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.
A-MEC 73B  Machine Shop 4  Units 4
Prerequisites: None.
Limitations on Enrollment: Indentured apprentice.
Advisories: None.
This course is intended for indentured apprentices and it is a course among a sequential number of courses covering the discipline. The theory portion of the sequential courses include mathematics, safety, tools, machines, blueprint reading, material, and estimating as applied to electricity. The course may be pursued for a maximum number of units in accordance with the number of class hours per semester. Students may opt for a three-hour or a six-hour lecture laboratory per week course. In addition to the one night per week class meeting, an additional 18 hours outside of class is required per semester.

A-MEC 74A  Basic Welding  Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce basic welding skills. The course includes the basic theory, practice and application of arc welding and of oxy-acetylene cutting and welding.

A-MEC 74B  Machine Shop 2  Units 2
Prerequisites: None.
Limitations on Enrollment: Indentured Apprentice.
Advisories: None.
This course is designed to introduce fundamental machine shop practices. The course includes safety procedures, lathe operation, mill operation, drilling operations, and print reading.

MICROBIOLOGY—SEE BIOLOGY

MUSIC

MUSIC 1  Music Fundamentals  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students who want a beginning background in the theory of music. No knowledge of music or music theory is assumed. The course includes: basic musical notation, rhythm and meter, major and minor scales, major and minor key signatures, intervals and inversions, triads (major, minor, diminished and augmented), some seventh chords, inversions of triads and seventh chords, elementary formal and harmonic analysis, and ear training for all of the above, plus some sight reading and melodic dictation. Some knowledge of keyboard will be included. This is NOT a music major course. (UC, CSU)

MUSIC 2A  Music History from Antiquity to 1750  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey dealing with the history of Western music from its antiquity to 1600. (UC, CSU)

MUSIC 2B  Music History  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey dealing with the history of Western music from 1600 to 1800. (UC, CSU)

MUSIC 3A  Introduction to Theory and Musicianship  Units 4
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is the study of the intervals, major and minor triads, their connections and applications to simple diatonic melodies, the dominant seventh chord and its resolutions, the common chord modulations, ear training, interval recognition, and melodic and rhythmic dictation. (UC, CSU, CAN MUS 2, CAN MUS SEQ A with both MUSIC 3A and MUSIC 3B)

MUSIC 3B  Beginning Theory and Musicianship  Units 4
Prerequisites: MUSIC 3A.
Limitations on Enrollment: None.
Advisories: None.
This course is the study of a four-part writing in common practice style including primary and secondary triads and their inversions and resolutions. Included is simple chromatic sevenths and modulation to the near key. Keyboard and aural training is included. (UC, CSU, CAN MUSIC 4, CAN MUS SEQ A with both MUSIC 3A and MUSIC 3B)

MUSIC 3C  Intermediate Theory and Musicianship  Units 4
Prerequisites: MUSIC 3B.
Limitations on Enrollment: None.
Advisories: None.
This course is a theoretical and aural study of Bach two-part interventions, chromatic harmony and modulation, augmented sixth chords, Neapolitan sixth, chromatic sevenths, and enharmonic diminished seventh chords. Included is keyboard harmony with a minimum keyboard Bach invention and four-part harmony. (UC, CSU)

MUSIC 3D  Advanced Theory and Musicianship  Units 4
Prerequisites: MUSIC 3C.
Limitations on Enrollment: None.
Advisories: None.
This course is a theoretical and aural study of advanced chromatic theory, the fugue, impressionistic techniques, and early 20th century harmonic techniques. It also includes a study of the basic two-and three-part forms, the Rondo forms, and the Sonata Allegro from the classical period to the present. (UC, CSU)

MUSIC 4  Exploring Music  Units 3
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is an exploration of growth and development of music from the 17th Century to the present. This course includes forms and styles used in Western art and surveys those factors influencing popular, rock, and commercial music as well as music used for live theater and in films. This is not a music major course. (UC, CSU)
MUSIC 5  Selected Topics: Music  Units 1-2  
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to offer instruction in one of the specialized areas of music not already covered by existing curricula. (UC, CSU)

MUSIC 7  Excursions in Music of Our World  Units 3  
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of non-western music. It addresses cultures that exhibit a minimum of western (European and American) influence from major geographic regions of the world including Australia, China, Japan, Indonesia, India, Turkey, the Arabic Middle East, eastern and western central Africa, South America, and native North America. (CSU)

MUSIC 8  Exploring Jazz, Ragtime, and Blues  Units 3  
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a survey of musical history and literature of jazz, ragtime, and blues in the United States. The course pursues an in-depth study of the genres, styles, and musical personalities involved in this unique American art form from the late nineteenth-century to the present. (UC, CSU)

MUSIC 12A  Class Voice  Units 1  
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is the development of techniques for the solo voice. The principles of posture, breathing, diction, vocal anatomy, tone production, and presentation of one’s self in public performances are stressed. Individual performance in class is a requirement. (UC, CSU)

MUSIC 12B  Class Voice  Units 1  
Prerequisites: MUSIC 12A.
Limitations on Enrollment: None.
Advisories: None.
This course is the development of techniques for the solo voice. The principles of posture, breathing, diction, vocal anatomy, tone production, and presentation of one’s self in public performances are stressed. Individual performance in class is a requirement. (UC, CSU)

MUSIC 12C  Class Voice  Units 1  
Prerequisites: MUSIC 12B.
Limitations on Enrollment: None.
Advisories: None.
This course is the development of techniques for the solo voice. The principles of posture, breathing, diction, vocal anatomy, tone production, and presentation of one’s self in public performances are stressed. Individual performance in class is a requirement. (UC, CSU)

MUSIC 12D  Class Voice  Units 1  
Prerequisites: MUSIC 12C.
Limitations on Enrollment: None.
Advisories: None.
This course is the development of techniques for the solo voice. The principles of posture, breathing, diction, vocal anatomy, tone production, and presentation of one’s self in public performances are stressed. Individual performance in class is a requirement. (UC, CSU)

MUSIC 15  Delta Singers  Units 1  
Prerequisites: Concurrent enrollment in MUSIC 17 or 17M; qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop the art of singing in the small choral ensemble. The choir will consist of 20-30 members and will include the singing of choral masterworks from all historical periods for the chamber choir. Sight-reading and proper vocal technique will also be stressed. Students may receive credit in this course for a maximum of four semesters. (UC, CSU)

MUSIC 15M  Delta Singers  Units 1  
Prerequisites: Concurrent enrollment in MUSIC 17 or 17M; concurrent enrollment in MUSIC 40 or 40M; completion of four semesters of MUSIC 15; qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop the art of singing in the small choral ensemble. The choir consists of 20-30 members and includes the singing of choral masterworks from all historical periods for the chamber choir. Sight-reading and proper vocal techniques are also stressed. Students may receive credit in this course for a maximum of two semesters. (UC, CSU)

MUSIC 17  Concert Choir  Units 1  
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop the art of singing in the large choral ensemble. This ensemble stresses singing of choral masterworks for the large choir from all historical periods. Sight-reading and proper vocal technique are also stressed. Students may receive credit in this course for a maximum of four semesters. (UC, CSU)

MUSIC 17M  Concert Choir  Units 1  
Prerequisites: Concurrent enrollment in MUSIC 40 or 40M; completion of four semesters of MUSIC 17; qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is designed to develop the art of singing in the large choral ensemble. This ensemble stresses the singing of choral masterworks for the large choir from all historical periods. Sight-reading and proper vocal technique are also stressed. Students may receive credit in this course for a maximum of two semesters. (UC, CSU)
MUSIC 18 Delta Chorale  Units 1
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is a choral ensemble for the community singer wishing to further knowledge of choral repertoire and vocal technique, and to enhance ensemble singing skills. The course stresses the study and performance of major works from the standard choral repertoire. Students may receive credit in this course for a maximum of four semesters. (UC, CSU)

MUSIC 26 Symphonic Band  Units 1-2
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is dedicated to the rehearsal and performance of symphonic band literature with emphasis on sight reading and public performance. Students may receive credit in this course for a maximum of four semesters. (UC, CSU)

MUSIC 26M Symphonic Band  Units 1-2
Prerequisites: Concurrent enrollment in MUSIC 40 or 40M; completion of four semesters of MUSIC 26; qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is dedicated to the rehearsal and performance of symphonic band literature with emphasis on sight reading and public performance. Students may receive credit in this course for a maximum of two semesters. (UC, CSU)

MUSIC 27 Orchestra  Units 1-2
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is dedicated to the rehearsal and performance of orchestral literature with emphasis on sight reading and public performance. Students may receive credit in this course for a maximum of four semesters. (UC, CSU)

MUSIC 28 Concert Band  Units 1
Prerequisites: None.
Limitations on Enrollment: Qualified performer.
Advisories: None.
This course is dedicated to the rehearsal and performance of concert band literature with emphasis on sight reading and public performance. The student may receive credit in this course for a maximum of four semesters. (CSU)

MUSIC 29 Jazz Band  Units 1-2
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is dedicated to the rehearsal and performance of jazz band literature with the emphasis on sight reading and public performance. The course includes concentration on the techniques and styles of jazz, jazz-rock, and improvisation. Students may receive credit for this course for a maximum of four semesters. (UC, CSU)

MUSIC 29M Jazz Band  Units 1-2
Prerequisites: Concurrent enrollment in MUSIC 40 or 40M; completion of four semesters of MUSIC 29; qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is dedicated to the rehearsal and performance of jazz band literature with emphasis on sight reading and public performance. The course includes concentration on the techniques and styles of jazz, jazz-rock, and improvisation. Students may receive credit for this course for a maximum of two semesters. (UC, CSU)

MUSIC 30A Class Guitar  Units 1
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a first course in development of techniques for the guitar. There is an emphasis on building chord vocabulary sufficient to accompany wide vocal ranges and learning to read music. (UC, CSU)

MUSIC 30B Class Guitar  Units 1
Prerequisites: MUSIC 30A.
Limitations on Enrollment: None.
Advisories: None.
This course is the continuation of study for students who wish to continue to play the piano for enjoyment and pleasure or who need to use the instrument as a future elementary school teacher. (UC, CSU)

MUSIC 30A Class Guitar  Units 1
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is a first course in development of techniques for the guitar. There is an emphasis on building chord vocabulary sufficient to accompany wide vocal ranges and learning to read music. (UC, CSU)

MUSIC 30B Class Guitar  Units 1
Prerequisites: MUSIC 30A.
Limitations on Enrollment: None.
Advisories: None.
This course is the continuation of study for students who wish to continue to play the piano for enjoyment and pleasure or who need to use the instrument as a future elementary school teacher. (UC, CSU)

MUSIC 32 Studio Arts Ensemble  Units 1
Prerequisites: Qualified performer.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students interested in the field of commercial music and entertainment. The ensemble consists of singer, backup instrumentalists, and technical crew who work together to study and perform selected musical arrangements. Opportunity for solo singing is frequent. The course stresses the study and performance of the unique American idioms of vocal jazz and songs of the American Musical Theater. The study of proper vocal technique, stage presence, and stage movement are also stressed. Students may receive credit for this course for a maximum of four semesters. (CSU)

MUSIC 36A Class Piano  Units 1
Prerequisites: None.
Limitations on Enrollment: None.
Advisories: None.
This course is designed for students who wish to play the piano for enjoyment and pleasure or who need to use the instrument as a future elementary school teacher. (UC, CSU)

MUSIC 36B Class Piano  Units 1
Prerequisites: MUSIC 36A.
Limitations on Enrollment: None.
Advisories: None.
This course is the continuation of study for students who wish to continue to play the piano for enjoyment and pleasure or who need to use the instrument as a future elementary school teacher. (UC, CSU)
MUSIC 36C  Class Piano  Units 1  
Prerequisites: MUSIC 36B.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is the continuation of study for students who wish to play the piano for enjoyment and pleasure, or who need to use the instrument as a future elementary classroom teacher.  (UC, CSU)

MUSIC 36D  Class Piano  Units 1  
Prerequisites: MUSIC 36C.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is the continuation of study for students who wish to play the piano for enjoyment and pleasure, or who will to use the instrument as a future elementary classroom teacher.  (UC, CSU)

MUSIC 38A  Class Piano for Music Majors  Units 1  
Prerequisites: Concurrent enrollment in MUSIC 3.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a first course for the music major which is designed to teach the skills necessary for satisfactory completion of the piano proficiency examination.  (UC, CSU)

MUSIC 38B  Class Piano for Music Majors  Units 1  
Prerequisites: MUSIC 38A; concurrent enrollment in MUSIC 3.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a second course for the music major which is designed to teach the skills necessary for satisfactory completion of the piano proficiency examination.  (UC, CSU)

MUSIC 38C  Class Piano for Music Majors  Units 1  
Prerequisites: MUSIC 38B; concurrent enrollment in MUSIC 3.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a third course for the music major which is designed to teach the skills necessary for satisfactory completion of the piano proficiency examination.  (UC, CSU)

MUSIC 38D  Class Piano for Music Majors  Units 1  
Prerequisites: MUSIC 38C; concurrent enrollment in MUSIC 3.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is a fourth course for the music major which is designed to teach the skills necessary for satisfactory completion of the piano proficiency examination.  (UC, CSU)

MUSIC 40A  Applied Music  Units 1  
Prerequisites: Completion of MUSIC 3D; or concurrent enrollment in MUSIC 3A or 3B or 3C or 3D.  
Limitations on Enrollment: Qualified performer.  
Advisories: None.  
This course is designed for individual, applied study of the student’s principal performing medium and is an integral component for the developing musician.  The course focuses on development of individual performance skills, as well as solo and orchestral repertoire for the first semester music major.  The student completes a minimum of fifteen private lessons per semester and one hour of class instruction per week.  (UC, CSU)

MUSIC 40B  Applied Music  Units 1  
Prerequisites: Completion of MUSIC 40A; completion of MUSIC 3D or concurrent enrollment in MUSIC 3A or 3B or 3C or 3D.  
Limitations on Enrollment: Qualified performer.  
Advisories: None.  
This course is designed for individual, applied study of the student’s principal performing medium and is an integral component for the developing musician.  The course focuses on development of individual performance skills, as well as solo and orchestral repertoire for the second semester music major.  The student completes a minimum of fifteen private lessons per semester and one hour of class instruction per week.  (UC, CSU)

MUSIC 40C  Applied Music  Units 1  
Prerequisites: Completion of MUSIC 40A; completion of MUSIC 3D or concurrent enrollment in MUSIC 3A or 3B or 3C or 3D.  
Limitations on Enrollment: Qualified performer.  
Advisories: None.  
This course is designed for individual, applied study of the student’s principal performing medium and is an integral component for the developing musician.  The course focuses on development of individual performance skills, as well as solo and orchestral repertoire for the third semester music major.  The student completes a minimum of fifteen private lessons per semester and one hour of class instruction per week.  (UC, CSU)

MUSIC 40D  Applied Music  Units 1  
Prerequisites: Completion of MUSIC 40C; completion of MUSIC 3D or concurrent enrollment in MUSIC 3A, or 3B, or 3C, or 3D.  
Limitations on Enrollment: Qualified performer.  
Advisories: None.  
This course is designed for individual, applied study of the student’s principal performing medium and is an integral component for the developing musician.  The course focuses on development of individual performance skills, as well as solo and orchestral repertoire for the fourth semester music major.  The student completes a minimum of fifteen private lessons per semester and one hour of class instruction per week.  Students may receive credit in this course for a maximum of three semesters.  (UC, CSU)

MUSIC 50H  Special Studies: Music  Units 1-2  
Prerequisites: Completion of survey course with grade of “B” or better and presentation of a project acceptable to the instructor and division chairperson.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is open to all students qualified to do advanced work in the field.  The course includes research, directed reading, field work or other advanced study, and the course may be repeated for a maximum of four units.  (UC, CSU)

MUSIC 51  Woodwind Ensemble  Units 1  
Prerequisites: Qualified performer.  
Limitations on Enrollment: None.  
Advisories: None.  
This course is dedicated to the rehearsal and performance of woodwind literature for various combinations of chamber ensembles such as duets, trios, and quartets.  Emphasis includes sight reading and public performance.  Students may receive credit for this course for a maximum of four semesters.  (UC, CSU)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Limitations on Enrollment</th>
<th>Advisories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 63B</td>
<td>Jazz Improvisation</td>
<td>1</td>
<td>Prerequisites: MUSIC 63C; qualified performer</td>
<td>None</td>
<td>None</td>
<td>This course is a second course dedicated to the theory and practice of the fundamentals of jazz improvisation. Emphasis includes development of performance skills, musicianship, jazz styles, and musical creativity. (UC, CSU)</td>
</tr>
<tr>
<td>MUSIC 63C</td>
<td>Jazz Improvisation</td>
<td>1</td>
<td>Prerequisites: MUSIC 63B; qualified performer</td>
<td>None</td>
<td>None</td>
<td>This course is a third course dedicated to the theory and practice of the fundamentals of jazz improvisation. Emphasis includes development of performance skills, musicianship, jazz styles, and musical creativity. (UC, CSU)</td>
</tr>
<tr>
<td>MUSIC 60</td>
<td>Selected Topics: Music</td>
<td>1-2</td>
<td>Prerequisites: Reading level II</td>
<td>None</td>
<td>None</td>
<td>This course is designed to offer instruction in one of the specialized areas of music not covered by existing curricula.</td>
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<tr>
<td>N R 2</td>
<td>Conservation of Natural Resources</td>
<td>3</td>
<td>Prerequisites: Reading level II</td>
<td>None</td>
<td>None</td>
<td>This course is designed to examine the need, importance, and philosophy of conservation of natural resources in our contemporary world. Human dependency on resources and an understanding of ecological principles and natural systems are emphasized. Topics include natural resource classification; history, importance, and methods of conservation; resource management issues; citizens’ roles in conservation; and prospects for the future. Current environmental issues are discussed from local, national, and global perspectives. The course is designed to increase student’s awareness of the importance of conservation of natural resources as a social and behavioral science and to increase student’s participation in natural resource conservation. (UC, CSU)</td>
</tr>
</tbody>
</table>