HARTNELL COMMUNITY COLLEGE

156 Homestead Avenue
Salinas, CA  93901
(831) 755-6700
www.hartnell.edu

Your Best Choice – Past, Present, and Future

2005 – 2006 College Catalogue

ACCREDITATION
Hartnell College is accredited by the Western Association of Schools and Colleges, (10 Commercial Boulevard, Suite 204, Novato, CA 94949 (415) 506-0234), the American Veterinary Medical Association, The California Board of Registered Nursing, the California Board of Vocational Nurse and Psychiatric Technician Examiners, the National Academy of Early Childhood Programs, and the California Community Colleges Board of Governors. It has the approval of the State Department of Education to train veterans under Public Law 874 and Public Law 550. It also has the approval of the U.S. Immigration and Naturalization Service to educate foreign students.
HARTNELL COMMUNITY COLLEGE DISTRICT
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TABLE OF CONTENTS
The College .................................................................1
Admissions .................................................................7
Registration .................................................................10
Student Services .........................................................15
Academic Policies .........................................................23
Instructional Programs..................................................31
Degree and Certificate Programs.................................33
Associate of Arts/Science Degree Requirements .................34
Transfer/Articulation .....................................................38
California Articulation Numbering System (CAN)...............39
California State University Requirements ........................40
University of California Requirements (IGETC) .................43
Course Listings .........................................................45
Hartnell College Administration ...................................204
Faculty and Academic Management ..............................205
Campus Maps ..........................................................210
Index ........................................................................212

OFFICE OF INSTRUCTION
The College Catalogue is produced annually by the Office of Instruction.
Allan M. Hoffman, Ed.D
Assistant Superintendent/
Vice President for Instruction
Mrs. Linda Gutierrez
Administrative Operations Specialist

ACCURACY STATEMENT
The Hartnell Community College District has made every reasonable effort to ensure
that information in this Catalogue is accurate. Courses and programs that are
offered, along with other matter contained herein, are subject to change without
notice by Hartnell College administration for reasons related to student enrollment,
level of financial support, or for any other reason, at the discretion of the District and
the College. The District and the College further reserve the right to add to, amend,
or repeal any of their rules, regulations, policies, and procedures, consistent with
application laws.

PREREQUISITES
Prerequisites are currently under review. Check the on-line schedule for prerequisites.
MISSION STATEMENT

Hartnell College provides the leadership and resources to ensure that all students shall have equal access to a quality education and the opportunity to pursue and achieve their goals. We are responsive to the learning needs of our community and dedicated to a diverse educational and cultural campus environment that prepares our students for productive participation in a changing world.

VISION STATEMENTS

- Hartnell College shall provide its diverse communities and student population with equal opportunities for educational access and success.
- Hartnell College shall implement programs and services and recognize its culturally diverse community, and provide fair and ethical treatment of its entire population.
- Hartnell College shall actively recruit, support and retain the best personnel.
- Hartnell College shall seek and dedicate resources to be a technologically advanced institution.
- Hartnell College shall support a learning environment that rewards creativity, innovation, and risk-taking.
- Hartnell College shall anticipate and respond to change.
- Hartnell College shall be a valuable resource and a facilitator of changes for its communities.
- Hartnell College shall enhance its local and global community partnerships and outreach activities.
- Hartnell College shall excel in the recruitment, retention and placement of students.

STATEMENT OF OBJECTIVES

- Provide opportunities for students whose prior academic achievements are latent in relation to their stated educational and vocational goals.
- Provide educational services for those either preparing for a career or seeking a degree.
- Promote opportunities to develop an understanding of an appreciation for our rich heritage of creativity in the arts, humanities, and sciences.
- Extend services and programs throughout the District's service area in response to community needs.
- Provide opportunities to increase students' self-understanding, self direction and social, physical, and intellectual development.

STATEMENT OF FUNCTION

1. Transfer and General Education
   A. Offer those courses necessary for students to complete all general education and lower-division major requirements prior to the time of actual transfer.
   B. Guarantee course transferability through appropriate articulation agreements with the member institutions of the CSU and UC systems.
   C. Ensure equivalency of lower-division instruction with member institutions of the CSU and UC systems by engaging in curriculum development and by maintaining adequate communication with other institutions.

2. Occupational Education
   A. Diversify the vocational-technical curriculum by offering both Associate Degree and short-term certificate programs that reflect the needs of the students and the community.
   B. Accommodate technological change by cooperatively designing inservice training programs to maintain and update skills.
   C. Offer retraining programs to meet the needs of business, industry, government and non-profit agencies.

3. Developmental Education
   A. Ensure equal opportunity of instruction on and services for disabled, disadvantaged, minority, and all non-traditional students
   B. Provide for the needs of students at whatever level they enter the college
   C. Provide developmental courses for students lacking basic skills necessary to complete general education, occupational education, or transfer education programs

4. Workforce and Community Development
   A. Provide a variety of courses that respond to the cultural, vocational, avocational, and personal development needs of the District residents
   B. Provide courses and services convenient to the public in a variety of geographic locations
   C. Provide a variety of community services, including facility use, and cultural and recreational activities, for the public
   D. Respond to requests for training, workshops and other services; these activities will be on a self supporting basis

5. Student and Career Development
   A. Provide student support services including counseling, financial aid, testing, athletics, student activities, and recreational opportunities.
   B. Offer career services which assist individuals in exploring their career interests in developing educational programs best suited to their needs, interests, and potential for personal growth and obtaining employment within their fields of study.
   C. Demonstrate consistent interest and concern for the well-being of students in all areas of the college.
   D. Provide selected services for students who have physical and psychological handicaps.
   E. Promote growth, acceptance, and practice of life-long education.
NONDISCRIMINATION AND NON-HARASSMENT POLICY

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

Hartnell College ensures that its programs and activities, including employment, are available to all qualified persons without regard to race, color, religion, sex, sexual orientation, age, disability, marital status, ancestry, national origin, or veteran status.

If a student feels he/she has suffered unlawful discrimination, harassment, or retaliation by an instructor, an administrator, or a member of the classified staff, he/she may obtain written instructions for the filing of a grievance from the office of the Vice President of Student Services. The complaint must be initiated within one year of occurrence.

College policies regarding discrimination, harassment and retaliation are in compliance with applicable federal and state laws, and the California Education Code.

En el seguimiento de estudios académicos y otros colegios que patrocinan actividades que promueven el desarrollo intelectual y personal, todos los estudiantes deberán de ser libres de discriminación ilegal por parte de cualquier miembro de la comunidad académica. (Estudiantes que sean molestados por los actos de otros estudiantes, tienen que recurrir al código de conducta estudiantil.)

El colegio Hartnell asegura que sus programas y actividades, incluyendo empleo, están disponibles a todas las personas calificadas sin tomar en cuenta su raza, color, religión, sexo, orientación sexual, edad, incapacitado, estado civil, ascendencia, origen nacional o estado veterano.

Si el estudiante siente que ha sufrido una discriminación, acoso o represalia de alguien maestro, administrador, empleado de oficina, Puede obtener una forma en la oficina del Vise-presidente de ayuda estudiantil para presentar su queja. La queja se necesita presentar dentro del año en el que ocurrió el incidente.

Las pólizas de colegio acerca de discriminación, acoso y represalia están de acuerdo con las leyes federales y estatales con los códigos de educación del estado de California.

SEXUAL HARASSMENT POLICY

It is the policy of the Governing Board of the Hartnell Community College District to provide an educational and business environment free of unwelcome sexual advances, request for sexual favors, and other verbal, visual, or physical conduct or communications constituting sexual harassment, as defined by Education Code Section 212.5 and otherwise prohibited by state and federal statutes.

It is unlawful and a violation of this policy for anyone who is authorized to recommend or make personnel or educational decisions affecting an employee or student or who is otherwise authorized to transact business or perform other acts or services on behalf of the District to engage in sexual harassment.

Allegations of sexual harassment shall be thoroughly investigated in accordance with the District’s sexual harassment/discrimination complaint procedures.

It is a violation of this policy to retaliate against a sexual harassment complainant or witness. The initiation of a complaint or participation as a witness in a sexual harassment investigation shall not affect the complainant’s or witness’s future business dealings with the District, his or her employment, compensation, work assignments, his or her grades, class standing, or other matters pertaining to his or her status as an employee or student in any District program.

A complaint and the results of the investigation shall be confidential to the extent maintenance of confidentiality is consistent with a thorough investigation and appropriate disposition of the matter. Rules and procedures for reporting charges of sexual harassment and pursuing available remedies may be obtained from the Director of Human Resources and Equal Employment Opportunity or any employee in the Office of Human Resources and Equal Employment Opportunity.

OPEN ENROLLMENT

It is the policy of Hartnell Community College District that, unless health, safety, or limited facilities is a factor in the conduct of a course, every course, course section, or class, wherever offered and maintained by the college, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets the required prerequisites for such course, course section, or class.

DISTRIBUTION OF LITERATURE TO AND/OR SOLICITING PETITION SIGNATURES FROM STUDENTS ON DISTRICT PROPERTY

Pursuant to the provisions of California Educational Code, Sections 82530 and 82531, individuals/ organizations wishing to distribute literature to and/or solicit petition signatures from students of the District, must file a copy of the petitions or materials to be distributed with the Student Activities Office. The application form must include the distributor’s name, address, and social security number.

The VPSS or designated representative will specify the time, place, and manner in which literature is distributed or petition signatures solicited. The distribution period allowed is two days. No materials shall be distributed in, around, or outside any classroom, nor in the halls of any District building.

Distributing literature or soliciting petition signatures at any place or time other than that designated, or in any manner other than that specified by the VPSS or designee, is strictly prohibited.

CLASS SCHEDULING

Day Classes

Day Classes are available from 7:00 a.m. to 4:30 p.m.

Evening Classes

Evening classes are specifically planned to reflect a full range of academic and vocational programs offered by Hartnell College. In short, the only difference between day and evening classes is the time frame. Academic standards, class contact, and student performance are the same for both evening and day classes.

Evening classes are scheduled between the hours of 4:30 p.m. and 10 p.m.

Saturday Classes

A wide range of Saturday class offerings is published in the Schedule of Classes for those persons whose schedules do not permit them to attend Hartnell during the weekdays.

Summer Session

Hartnell offers a condensed but comprehensive Summer Session. All classes offered are the same as those taught during the regular academic year. The predominant rationale behind scheduling for summer is to assure students an ongoing, uninterrupted pursuit of educational objectives.
HARTNELL COLLEGE FOUNDATION

The Hartnell College Foundation is a nonprofit corporation organized by community spirited citizens to support and benefit the Hartnell Community College District. The Foundation Board of Directors is made up of 20 volunteers from business, industry, the professions and community service. The Foundation Executive Board, including the officers and committee chairs, and the Board of Directors meet eight times a year.

The Foundation’s purpose is to raise funds to support and benefit the Hartnell Community College District. The Foundation Board of Directors has elected to raise monies for athletics, visual and performing arts, scholarships, a community lecture series, and a variety of other projects. Because it is a non-profit corporation, the Foundation can accept contributions and provide tax deductible benefits to its donors.

The Foundation, was incorporated in December 1979 and the first meeting of the Board of Directors was held in October 1981. During the early years, the Foundation established several major fund raising events to support the arts and scholarships. The annual Studio Party and Art Auction and the Music Department Extravaganza provide much needed revenue for the Hartnell Gallery and the performing arts.

In 1985, Mr. and Mrs. Villeroy Gleason bequeathed their residence in King City to the Foundation. The Gleason’s home was remodeled with classrooms and office space. The Gleason Center introduced the College’s educational presence in South County.

In memory of Phyllis and Roy Gleason, the Gleason Faculty Award and the Gleason Staff Award were established to recognize Hartnell College instructors and classified staff. The Gleason Faculty Award annually recognizes one outstanding Hartnell College teacher who receives a $2,000 cash award. The Gleason Staff Award annually recognizes an outstanding staff member with a $1,000 cash award.

In recent years, the Foundation scholarship endowment has been bolstered by numerous bequests including Eugene and Erica Horden, Dorcas Davenport Brown, California Rodeo Fiesta Day, Henry J. Willis, Betty Hathaway, Terezina A. Hackney, and Elmer and Dorothy Eade. Numerous community organizations, businesses, and individuals support the College Scholarship Program on an annual basis.

Contributions to Hartnell College and Hartnell College Foundation take many forms—gifts of cash, gifts in kind, stock or securities, appreciated art, annuities, trusts, life income trusts, gifts in memorium, wills and bequests. The Foundation Executive Director is always available to assist donors in establishing scholarships and in making other contributions. Legal counsel is provided to those wishing to make planned gifts. Please write or call:

The Hartnell College Foundation
156 Homestead Avenue
Salinas, California 93901
(831) 755-6810

THE CAMPUS

The Hartnell College main campus is located a few blocks from downtown Salinas.

The main campus at Homestead Avenue and West Alisal Street consists of many academic facilities, most of which were built within the past twenty years. The College facilities consist of: the College Center; College Annex; Child Development Center; Animal Health Technology Building; Merrill Hall (Science); Classroom, Administration, and Counseling Building; Technology Building; Library; Physical Education Buildings; Human Resources and Performing and Visual Arts facilities.

Cars on Campus

Operation of motor vehicles on Hartnell College campus must be conducted in a manner which ensures the safety of the driver, passengers, pedestrians, and/or any others, and which prevents damage to College property. The college is not responsible for loss of any property or damage to any property sustained by any person parking on campus.

The campus speed limit is 10 miles per hour.

Parking on Campus

PARKING PERMITS ARE REQUIRED TO PARK ON CAMPUS. ALL PARKING IS ON A FIRST-COME, FIRST-SERVED BASIS. PARKING PERMITS ARE SOLD WITH NO GUARANTEE OF SPACE AVAILABILITY.

Purchasing permits may be obtained from the Cashier’s Office. Please write or call:

The Hartnell College Foundation
156 Homestead Avenue
Salinas, California 93901
(831) 755-6810

Daily Parking Permits: are available from coin-operated machines ($1.00-requiring 4 quarters) in various locations throughout the campus parking lots. These are valid for the day on which the permit is purchased. Parking permits must be displayed in plain view in the appropriate location according to Parking Regulations or a citation will be issued. There are no exceptions. Should you receive a citation, follow the written instructions on the back of the citation.

Restricted parking where regular permits are not valid: 20 minute zones (green), staff spaces (orange), handicapped spaces (blue) and car pool spaces.

Car Pool Parking requires the purchase of a student permit and an additional permit which can be obtained without additional cost through the Cashier’s Office.

Enforcement

Campus parking and traffic safety regulations are enforced by Hartnell College and the Salinas Police Department. Hartnell College Security issues parking citations for violations. The Parking Enforcement Center in San Ramon, CA administers collections and appeals. For additional information contact Campus Safety at 755-6888.

College Cafeteria

The cafeteria is located in the College Center. The main dining room seats 250 and the commons area and outside patios provide seating for 200 additional patrons. An extensive menu offers a wide variety of food. Students in the food Services program plan and produce an International Dinner every Tuesday evening. This dinner is open to the public at minimal cost each week.

Vending machines are located throughout the campus.

The hours of operation are:

Fall and Spring Semesters
Monday-Thursday 7:30 a.m.-8:30 p.m.
Friday 7:30 a.m.-1:30 p.m.
Summer Session
Monday-Thursday 7:30 a.m.-2:00 p.m.

College Store

Hartnell College Store is a non-profit organization owned and operated by the College. The store stocks required books and supplies for courses at Hartnell in addition to reference materials, insignia items, and home and office supplies. Current editions of textbooks may be sold back at the store during finals week of each semester and for two days at the end of the summer session.

Operating hours are:

Monday-Thursday 7:45 a.m.-7:00 p.m.
Friday 7:45 a.m.-2:00 p.m.

The College Store has extended hours for the first two weeks of the fall and spring semesters. During the summer the store has limited hours, which are posted outside the store.
INSTRUCTIONAL FACILITIES

Computing Facilities
Hartnell College Computer Facilities consist of the following:

**Academic Computer Systems**

- **General Purpose Classrooms:**
  - C209 - 24 800mhz Pentium III, Windows XP
  - C219 - 25 800mhz Pentium III, Windows XP
  - C217 - 31 1.7Ghz Pentium 4, Windows XP
  - C213 - 21 1.7Ghz Pentium 4, Windows XP
  - C215 - 24 1.7Ghz Pentium 4, Windows XP
  - C359 - 30 350mhz Pentium II (language lab)
  - VAF(216) - 11 G4 Macintosh computers
  - 20 G5 Macintosh computers
  - 3 G3 Macintosh computers
- **Library Media Center:**
  - 18 Pentium 4, Windows XP
  - 800mhz Pentium III, Windows XP
  - 1.6 Ghz Pentium 4, Windows XP
- **TLC:**
  - 17 800mhz Pentium III, Windows XP
  - CAD - Classroom/lab
    - 30 - 2.4Ghz Pentium IV, Windows XP
- **Learning Disability Lab**
  - 9 - 800mhz Pentium III, Windows XP
  - 1 - 1.7Ghz Pentium 4, Windows XP
- **Physics computer classroom/lab**
  - 7-1.7Ghz Pentium 4, Windows XP
- **Merrill Hall:**
  - M8 - 7 800mhz Pentium III, Windows XP
  - M26 - 6 1.7Ghz Pentium 4, Windows XP
  - M24 - 6 1.7Ghz Pentium 4, Windows XP
- **Learning Skills Center:**
  - 31 1.7Ghz Pentium 4, Windows XP
  - 1.7Ghz Pentium 4, Windows XP
  - 800mhz Pentium III, Windows XP
  - 2 1.6 Ghz Pentium 4, Windows XP
- **Library Media Center - 18-Pentium 4, 800mhz Windows XP**
  - 4 - Pentium III
- **Reference and Research Center in the library**
  - 18 - 800 mhz Pentium III, Windows XP
  - 2 1.6 Ghz Pentium 4, Windows XP
- **FRC - 2 G4 Mac/Video Edit**
  - 2 -2.40 Ghz IV.

On-line library system is on Endeavor’s Voyager software.

Microcomputers used by instructors to teach courses in numerous disciplines.

**Administrative Computer Systems**

- Sun E-450 computer, with over 300 workstations run Datatel administrative software. The Datatel system provides for online registration and grades. Online application is also available. Both services can be accessed through the College’s web site at http://www.hartnell.edu.
- Standalone microcomputers used extensively in campus offices for word processing and numerous applications programs.

**Library and Instructional Services**

**Hours**
- Monday-Thursday: 8:00 am-9:00 pm
- Friday: 8:00 am-4:00 pm

*Library hours may vary slightly. Hours are slightly less during the summer session. Check the library’s web site (www.hartnell.edu/library) for current open hours.

Hartnell College Library is located at the center of the campus. A new library is under construction and will open in early 2006. The college library offers services to currently enrolled students, faculty and staff.

Reference librarians are available to answer questions and assist students and faculty with their research needs. The librarians teach orientation sessions for classes and offer drop-in sessions for students to learn about new research tools and to learn to search new online resources. Students may enroll in a one-unit self-paced course (Library Instruction 2) to develop efficient research skills to assist with college courses.

The library collection contains more than 50,000 items. Books are arranged by the Library of Congress Classification System, and access is through an online catalog. Library materials include books, electronic books, online databases, popular magazines, scholarly journals, newspapers, videos, dvds, and other media. Interlibrary loan services are available to students, faculty and staff, and faculty may place materials on reserve at the circulation desk.

Unique collections within the library include the Hartnell College Archives and the O.P. Silliman Memorial Library. The Silliman collection includes volumes relating to ornithology and the natural history of the Pacific Coast. Access to these special collections is by appointment.

Computers are available in the library to support the academic research needs of students. All computers in the library provide Internet access. The reference computers allow students to conduct class related research using the online catalog and the library’s online databases. In the Media Center students can type papers, develop PowerPoint presentations, use course related software, work on distance education classes, and view videos, dvds, and other media.

The Technology Learning Center (TLC) is the library’s electronic classroom featuring videoconferencing equipment, computers, and state-of-the-art teaching tools.

The Faculty/Staff Resource Center provides computers, scanners, and a wide variety of software applications to assist faculty in developing instructional materials. Instructional technologists are available to assist faculty and staff in the use of technologies.

The Audio Visual department provides and maintains a variety of media equipment and presentation technologies such as electronic projection systems, in support of classroom teaching. While the majority of the AV equipment is delivered upon request, some classrooms have wall-mounted video playback equipment. A limited number of computer stations along with presentation equipment are available for faculty checkout. Electronic projection units, plasma screens, lap top computers and digital cameras are also available.

**Learning Skills Center**

The Hartnell College Learning Skills Center offers students, under the supervision of instructors and instructional assistants, the opportunity to strengthen their skills in reading, writing, and math through self-paced, individualized programs. Each of the skill labs is open 8 a.m. to 5 p.m., Monday through Friday. In addition, the Math Lab is open Monday through Thursday evening from 6 p.m. to 9 p.m., and the Writing lab is open Tuesday and Thursday evenings from 6 p.m. to 9 p.m.

All students may apply to use the Learning Skills Center located in the College Center Annex. Questions may be asked in person, or by calling 755-6866.

**Specialized Courses**

The Learning Skills Center also offers specialized courses such as Business Communication Basics and Writing in the Technical Format. The Center is committed to offering valuable cross-curriculum basic skills courses.
Tutorial Services

Tutoring services are available to all students free of charge. Tutors must be approved by an instructor of the course for which they tutor, and they must complete a tutor training course prior to tutoring. Students wishing to use the tutorial services and students who wish to become tutors are encouraged to apply in Room 108 of the Annex. Tutorial assistance is available for both day and evening students. Questions may be asked in person or by calling 755-6866.

Child Development Center

The Child Development Center serves the campus and community in the following ways: as an educational center for supervised teaching experience for Hartnell students majoring in Early Childhood Education, as a center for observational experience of young children for a variety of campus instructional programs and community needs, and as a scheduled instructional program for young children in the community. The Child Development Center offers a five day morning and afternoon preschool sessions. Students, faculty and community members are invited to enroll their children in a session and to participate in classes. Information regarding fees, times of sessions, and enrollment information may be obtained by calling the Child Development Center, 755-6945.

OFF-CAMPUS INSTRUCTION

Each semester Hartnell conducts off-campus classes in King City, Soledad, Greenfield, and at Fort Hunter Liggett. Additionally, numerous classes are taught each semester at various locations throughout the City of Salinas and the District wherever a sufficient number of persons indicate a desire to enroll.

The Fort Hunter Liggett and Camp Roberts classes are evening programs leading to AA/AS Degrees and Certificates in all disciplines other than vocational. All instructional programs offered on the military bases are open to the general public and are offered in eight week cycles.

Each semester, Hartnell College provides off-campus evening instruction at the Gleason Center. The program in King City includes most academic subjects that lead to an AA Degree. For further information, contact the Coordinator for off-campus educational programs at 385-5285.

Telecourses and Distance Learning

Hartnell College offers classes to off-campus students using e-College’s courseware on the world-wide-web and Polycom’s video-conferencing equipment for real-time interactive video and audio distant learning courses. Web delivered courses will normally expect the student to have home access to a computer with Internet capabilities. For those students who do not have this access, computers with Internet connectivity will be available at satellite campuses at King City, East Campus and Natividad, in addition to the main campus (in the library and the computer classrooms). Polycom delivery will require the student to attend class at a site that has a video-conferencing system installed and operational for that class (please see Hartnell’s Schedule for this information). All telecourses are academically rigorous, require the direction of and interaction with qualified faculty, and are equivalent to traditionally taught courses.

OTHER CAMPUS PROGRAMS

Self-Paced Classes

Students have various schedule needs and Hartnell College schedules may not be suitable; hence, self-paced classes are also offered. These courses provide the flexibility of enrolling and completing the class work at the schedule that is convenient to the student.

Workforce and Community Development Center

The Workforce and Community Development Center offers not-for-credit fee supported courses that are not provided by Hartnell’s state supported curriculum. The Center provides vocational courses, classes for the business and professional community, recreational courses, personal development courses, and community and cultural events. The Center also coordinates community use of College facilities. For more information call (831) 755-6800.

Foster and Kinship Care Education

Come to FKCE When You…….

- Take care of a relative’s child
- Think you’d like to care for a child in the “system”
- Need to complete mandated state foster care education
- Care for another’s child and want to improve your parenting skills

Hartnell College Foster & Kinship Care Education cares about you. We are widening doors, so to speak, to care even more. We know caregivers like you understand that parenting another’s child is more than just caring. Whether you are taking on the responsibility of caring for a relative’s child or a child in the court system, we understand that there is much you want to know and there is much you need to know.

We offer a variety of no cost trainings and classes to meet your needs. Hartnell FKCE support the difference you make in the lives of children.

Cultural Programs

Hartnell College provides support for a wide range of cultural programs. A variety of performing arts activities are presented to local residents throughout the year.
WILLIAM EDWARD PETTY HARTNELL was born in 1798 on a country estate in Lancashire, England. He attended Cambridge University and he also studied accounting at the College of Commerce in Bremen, Germany. Upon completion of his studies, Hartnell secured a position with the John Begg Trading Company in Santiago, Chile, and began working as an accountant and trade negotiator. He became fluent in Spanish and was soon negotiating trade agreements along the western coast of South America.

In 1822, Hartnell arrived in California and set about establishing a positive relationship with Governor Pablo Vicente Solá and Padre Mariano Payeras, head of the California Missions. As a result of Hartnell’s experience and diplomatic skills, Governor Solá granted him the right to trade in California and to establish monetary trade agreements with the missions and the presidios. Hartnell’s business ventures thrived and he became well known by the Californios, the large land owners in the province. During this time, he frequented the home of Don José de la Guerra, a highly influential Californio living in Santa Barbara. Don José de la Guerra was regarded as the most wealthy, most cultivated, and most influential man in the province. He and Hartnell became friends and shared many cultural interests. La Casa de la Guerra was a mecca for distinguished visitors from all over the world, and Hartnell often attended fiestas at the de la Guerra home. It was in this setting that he met the lovely María Teresa de la Guerra, daughter of Don José.

In 1824, Hartnell converted to Catholicism and, a year later, he married María Teresa. In the week prior to the wedding, a series of parties and dinners was held in Santa Barbara followed by the wedding ceremony at the Santa Barbara Mission. William Edward Petty Hartnell and María Teresa de la Guerra Hartnell then moved to Monterey to oversee their business ventures.

In 1830, Hartnell became a Mexican citizen and received a share in the Rancho de Alisal. On the Rancho, he and María Teresa planted fruit trees, grain, and grapes. They also grazed over 500 head of cattle. In 1832, Don José wrote to his son-in-law, “... turn (your) natural inclination to teach into an asset and become a schoolmaster.” As the Rancho was an ideal setting for a school, Hartnell could combine the pleasures of teaching with those of being a ranchero. Hartnell soon received permission from Governor Figueroa to secure a license to establish a postsecondary school. On May 4, 1834, Governor Figueroa attended a blessing for the new school and made a gift of approximately $150 to support the educational venture.

On January 1, 1834, a huge fiesta formalized the opening of El Colegio de San José on the Alisal Rancho, now re-named “El Patrocinio de San José.” Spanish, mathematics, philosophy, French, English, German, and Latin formed the curriculum. Each student paid a fee of 200 pesos for a year’s study. During the first year, 15 students enrolled and the school became a social center for young people and visiting dignitaries such as Mariano Vallejo, Juan Bautista Alvarado, and Francisco Pacheco. The census of 1836 listed a total of 44 persons living on the Rancho. This included the six children born to William Edward Petty and María Teresa de la Guerra Hartnell.

Information for this article was taken from historical documents provided by the Monterey County Historical Society and the Monterey County Herald, and writings by Dr. Daniel Ipson. The following references were consulted: The Salinas: Upside-Down River by Anne B. Fisher (1977) and The Lives of William Hartnell by Susanna Dakin (1949).

The information above is correct to the best of our knowledge, but we welcome any corrections or additions. We apologize for any errors.
Admissions

Admissions & Records
The Admissions Office is an integral component of Student Services. The Admissions & Records Office is responsible for the admission and registration processes, and for the accuracy and maintenance of student records.

Hours*
Monday-Thursday: 8:00 a.m.-7:00 p.m.
Friday: 8:00 a.m.-5:00 p.m.
*Hours during student vacation periods may vary and will be posted at the entrance.

ADMISSIONS PROCEDURES
Application for Admission
Applications for Admission are available on the Hartnell College website (www.hartnell.edu/admissions/jump.html) in the Schedule of Classes, or from the Admissions & Records Office at Main Campus, East Campus, and the King City Education Center. Applications can be mailed, faxed, or delivered in person to Admissions & Records. New and returning students should submit applications early in the registration cycle to have the best opportunity to get needed courses. Students who have not attended Hartnell in the last year, must reapply for Admissions before registering. Students attending Hartnell that are in grades K-12 must submit an Application for Admission each semester that they attend until they graduate from high school; at which time a new Application for Admission would need to be submitted to show New Student status.

Criteria for Admission
In addition to the residency requirements listed in the next section, students will or may be admitted to the College as follows:
1. California residents who possess a high school diploma or equivalent, such as a Certificate of Proficiency by the State Board of Education, shall be admitted upon application.
2. Non-residents (students whose legal address is not in the state of California) may be admitted if they have completed high school with a 2.0 (“C”) grade point average or better. Foreign students may be admitted provided they meet the additional requirements outlined under “International Students.”
3. Any other students over the age of 18 who are capable of profiting from instruction offered shall be admitted.
4. Any student who meets the special admission requirements and could benefit from instruction offered shall be admitted.

Residence Requirements for Admissions
California Residents
Resident student classification shall be given to students if they qualify under one of the following conditions:
1. If 19 years of age or over, have resided in California for at least one year and one day prior to the beginning of the semester, and have “manifested the intent” to make California their residence one year and one day prior to the beginning of the semester.
2. If 18 years of age, both the student and the students parents or legal guardian have resided in California for at least one year and one day prior to the beginning of the semester and have “manifested the intent” to make California their residence one year and one day prior to the beginning of the semester.
3. If 17 years of age, the student’s parents or legal guardian have resided in California for at least one year and one day prior to the beginning of the semester and have “manifested the intent” to make California their residence one year and one day prior to the beginning of the semester.
Non-Residents
Students not meeting the above requirements, including international students, will be classified as "nonresidents" and are subject to non-resident tuition and the enrollment fee.

International Students
F-1 Visa Status
The Board of Trustees of the Hartnell Community College recognizes that an adequate program for international students makes a significant contribution to the education of students at Hartnell and to the promotion of international understanding in the District and throughout the world. The College makes every effort to maintain a balanced ratio so that many nations of the world will be represented in the student body. An international student interested in applying should write to the International Student Services Office for application materials. All transcripts (in English), test results, and other required documents must be on file in the International Student Services Office by July 15 for the Fall Semester, November 15 for the Spring Semester, and April 15 for the Summer Session. International Students who are accepted shall pay non-resident tuition prior to the beginning of any academic term at a rate set by the Board of Trustees. In addition, international students must carry a health and accident insurance policy. International students must enroll in and complete at least 12 units each semester; Failure to comply with any of the above will result in dismissal.

All international students will be required to take a diagnostic test of English proficiency upon their arrival at Hartnell College. Based on the results of this test, students will be counseled and may be required to enroll in as many as 9.0 units of English consisting of grammar composition, conversation, and/or vocabulary/spelling. Once these schedules of classes have been completed for the students, no changes will be allowed without prior approval of the International Student Advisor.

An international student who is accepted by another collegiate institution with F-1 Student Status must attend at least one semester at that institution and successfully complete with a 'C' or better average at least 12.0 units before being considered for admission to Hartnell.

An international student will not be considered for the Apprenticeship and Primary Care Programs.

International students must be familiar with the Immigration and Naturalization Service regulations, as well as Hartnell's regulations on student conduct and enrollment, and comply with those regulations.

A student who drops below full-time enrollment, twelve (12.0) units, is subject to expulsion from Hartnell. The student must complete the process for reinstatement to student status.

The College has no scholarships or loans for international students. Residents of the United States Trust Territories may apply for Federal Grants and Federal College work-study through the Hartnell College Office of Financial Aid. After one semester of successful study, a student may be permitted to work part-time on campus if there is urgent financial need. Off-campus employment is subject to the rules of the Immigration and Naturalization Service.

Housing-Hartnell College does not have residential facilities on campus. The International Student Services Office will assist students in securing accommodations, but the College is not responsible for arranging housing. Priority of admissions may be given to those students who have relatives or close personal friends who are legal residents of the Hartnell Community College District.

Maximum Enrollment-An international student is expected to complete a program in the most expeditious manner possible, generally in four or five semesters. Six semesters of enrollment is the maximum permitted.

Admission Requirements
F-1 Visa Status
1. An applicant must submit the completed International Student Application Packet.
2. An applicant must have sufficient English language ability to enable the student to profit from instruction at the college level. Standardized tests such as the Test of English as a Foreign Language (TOEFL) will be used to determine eligibility for admission. Students will not be admitted solely for special training in English.
3. An applicant must submit, by the appropriate deadline, an official transcript (translated into English) from his/her secondary school showing academic achievement equivalent to an American high school education with a grade of "C" or better.
4. An applicant who has attended other post-secondary institutions, including English Language Schools, must submit official transcripts from each school attended showing satisfactory work.
5. An applicant must present official evidence of financial resources to defray costs during the period of attendance at the College.

4. Members of the Armed Forces on active duty, except those assigned to California for educational purposes, are exempt from non-resident tuition. Military dependents, however, are allowed to attend Hartnell College without paying non-resident tuition for one year after being assigned to California. Dependent children of active duty military have one year from the date they reach 18 years of age. After this one year period, all dependents will be reclassified to non-resident status unless documentation can be provided indicating the student has "manifested the intent" to become a legal California resident and has made California their residence one year and one day prior to the beginning of the semester.

In addition, if the student is not a United States citizen, or permanent resident, or on a visa that allows the student to establish California residency, then the student must provide verification that he/she has applied for residency with the Immigration and Naturalization Service (INS) at least one year and one day prior to the beginning of the semester.

In 2001 the California legislature passed a law (AB540) that exempts certain categories of students from paying nonresident tuition. To be eligible you must have completed at least three years of high school and have graduated (or earned a high school equivalency) while living and attending school in California.

If you feel you are eligible for this special exemption, submit the California Nonresident Tuition Exemption Request Form to the Admissions & Records Office for review. The form is available in the class schedule and in the Admissions & Records Office.

Definition: "Manifested the intent" means having supportive documentation indicating the intention of making California one's legal state of residence. You may be asked to submit this documentation to verify California residency. For further information contact the Admissions and Records Office at (831) 755-6711.

Per section 54026, California Administrative Code, Title 5, the burden is on the student to demonstrate clearly both physical presence and intent to establish California residence.

CALIFORNIA RESIDENCY STATUS
CHANGE
Students who have been out-of-state/non-resident must submit a new Application for Admission in order to change their status. Residency documents along with the updated Application for Admission must be submitted to Admissions & Records prior to registering for the next semester. Out-of-state residency will not be changed automatically.

Hartnell College Catalogue – 2005/06
Concurrent Enrollment

Procedures for High School Students

Students whose age or class level is equal to grades 9-12 may attend Hartnell College as either a special part-time student, a special full-time student, or a special summer session student for advanced scholastic, vocational, or physical education courses in accordance with the following procedures. All admitted students must meet STAAR* requirements if enrolling in an English/ESL or Math 121, 122, or 123 course or any course in these series. Course prerequisites must be met prior to registering. If you have completed a prerequisite course in high school, you must provide high school transcripts to a Hartnell counselor for Prerequisite Clearance before registering.

K-12 students may enroll in up to 9.0 units in the Fall and Spring Semester, and up to 6.0 units in the Summer Session.

I. Special Part-Time Students

1. Enrolled in a public or private high school must meet each of the following criteria:
   A. Written parental or guardian consent
   B. Written school principal or designee recommendation and consent
   C. Skill level assessment through Hartnell College STAAR* Program if applicable
   D. Written approval of a Hartnell College counselor

2. Whose age or class level is equal to grades 9-12 and is not enrolled in school must meet each of the following criteria:
   A. Written parental or guardian consent
   B. Verification of non-enrollment in high school from school principal or designee
   C. Skill level assessment through Hartnell College STAAR* Program if applicable
   D. Written approval of the Vice President of Student Services.

II. Special Full-Time Students

1. Enrolled in a public or private high school must meet each of the following criteria:
   A. Written parental or guardian consent
   B. Written school principal or designee recommendation and consent
   C. Skill level assessment through Hartnell College STAAR* Program if applicable
   D. Written approval of Hartnell College Vice President of Student Services.

Note: In addition, concurrent enrollment students completing college courses will receive credit on their Hartnell College transcripts. A copy of your Hartnell College transcript will NOT be automatically sent to your K-12 school.

Grades K-8

Non-high school students enrolled in K-8 districts may attend Hartnell College for advanced scholastic courses only as special part-time students. This restriction does not include physical education or vocational courses. For admission, students must meet each of the following criteria:

A. Such courses are not being offered by local school districts and/or any other educational institution available to the student.
B. Written parental or guardian consent
C. Written school principal or designee recommendation and consent.
D. Skill level assessment through Hartnell College STAAR* Program if applicable.
E. Written approval from the Vice President of Student Services.

Important Note: By giving consent, parents of concurrently enrolled students agree and understand that the College is an adult learning environment and students are expected to behave accordingly. Additionally, they understand that classes will be taught at the college level and the curriculum and college procedures will not be modified nor will other accommodations be made.

Confidentiality Statement

Under Section 49061 of the Education Code, parents of community college students do not have a right of access to their children’s student records, regardless of whether the student is under the age of 18. Also, under federal law Section 1232g of Title 20 of the United States Code), there is a general right of parental access to student records, but not for college students, regardless of age.

Transfer Transcripts

Hartnell College students pursuing an Associate Degree or Certificate or Veteran’s Benefits may request evaluation of previous college or university credit after the completion of 6.0 units at Hartnell. It is the student’s responsibility to (1) request official transcripts be mailed directly to the Admissions Office and (2) submit a Transfer Credit Evaluation Petition. The institution must have been accredited at the time of attendance. The student may consult the Accredited Institutions of Post Secondary Education list at the Admissions Office.

Credit may also be allowed for college-level USAFI courses and for formal courses taken at military service schools if such credit is recommended in the American Council on Education Guide.

Students who have completed college or university level courses outside the United States and are requesting credit must have those transcripts evaluated by a Foreign Credit Evaluation service. A list of these Evaluation Services can be found in the Admissions & Records Office.

It is highly recommended that you send official transcripts to Admissions & Records so that they can be obtained by any College personnel. Official transcripts may be hand carried to Admissions & Records as long as the envelope seal on the college envelope has not been broken.

All transcripts submitted become the permanent property of Hartnell College and copies of these transcripts cannot be forwarded elsewhere or released to the student. These transfer transcripts can be used by authorized Hartnell College personnel only. Transfer coursework that has been evaluated and approved by Hartnell College become a permanent part of the student’s overall Hartnell academic record and cannot be removed.

Transfer Transcripts for Prerequisites

If you have met the prerequisite at another college, you must see a Hartnell College counselor prior to registration to complete a Prerequisite Clearance form along with your transfer transcript.
Impound of Student Records

Students who fail to comply with College rules or regulations, return property owned by the College, pay debts owed to the College, or pay for damaged College property may not be allowed to register, receive degrees or certificates, have transcripts forwarded, enrollment verifications, and/or receive other services related to student records. When the student has cleared the obligation with the College, the impoundment of records will be removed.

Service Member's Opportunity College

Hartnell College subscribes to the Service Member's Opportunity College (SOC) program of the American Association of Community colleges. Upon completion of six semester units at Hartnell, the student may submit military educational records and official college transcripts, and request formal evaluation by the Admissions Office. As an SOC college, Hartnell College will:

1. Accept for transfer credit all lower division work taken by a student at a regionally accredited institution.
2. Accept for credit courses completed by military personnel in accordance with the USAFI catalogue.
3. Grant credit under the Advanced Placement Program of the College Entrance Examination Board (CEEB) and the College Level Examination Program (CLEP).
4. Grant credit for military schools in accordance with the recommendations provided in the current edition of “A Guide to the Evaluation of Educational Experiences in the Armed Services”, published by the Commission on Accreditation of Service Experiences of the American Council on Education.
5. Grant credit in accordance with the United States Army Service Member's Opportunity College Associate Degree Programs Handbook (SOCAD).

Non-Traditional Credit (Military Courses, MOS, DANTES, etc.)

Credit for military school experience and MOS will be limited to a maximum of 30 semester units with graduation requirements and course offerings. Upon satisfactory completion of all sections of the Certified Professional Secretary (CPS) examination, and a verification of the CPS rating, a maximum of 25 specified Business discipline units may be granted as follows: BUS1A, 4 units; BUS18, 3 units; BUS32, 3 units; BUS71, 4 units; BUS75, 4 units; BUS152, 4 units; BUS194, 3 units. Upon satisfactory completion of one or more segments of the Automotive Service Excellence examinations, equivalent credit may be awarded.

Maximum number of units awarded for non-traditional credit is 30.0 units. Contact the Area Dean for further information. For credit to be awarded, the student must be enrolled at Hartnell, have completed a minimum of 6.0 units, and request a formal evaluation from the Admissions & Records Office.

Advanced Placement (CEEB)

Hartnell College participates in the Advanced Placement Program of the College Entrance Examination Board to assist academically talented students. Students planning to receive an Associate Degree from Hartnell College or transfer to a four-year college or university should submit the advanced placement examination test scores, from the CEEB, Educational Testing Service, and request a verification of transfer credit from the Admissions & Records Office upon completion of 6.0 units at Hartnell. Three or more units of credit may be awarded for each examination on which a minimum score of 3 is received. This is for Hartnell graduation purposes and can be certified for GE requirements for CSU's and UC's upon request. Specific course equivalents may be obtained from a Hartnell counselor or from Admissions & Records. Credit awarded shall be annotated as a Credit grade (CR), and will be shown as units completed. No grade points will be assigned. Units granted will not count toward the graduation residency requirements of the College.

College Level Examination Program (CLEP)

The College Entrance Examination Board (CEEB) has established the College Level Examination Program (CLEP) to enable those who have reached the college level of education outside the classroom to demonstrate their achievement and to use test results for college credit and/or placement. Students planning to receive an Associate Degree from Hartnell College should submit official test scores and request evaluation of credit from the Admissions & Records Office. For the general examinations, elective credit will be given for each area passed with a scale score of 50 or better. For the subject examinations, elective credit, will be given for each area passed with scale score of 50 or better. Minimum scores for Hartnell course equivalencies, where established, may be obtained from admissions & Records. Maximum units that may be granted via CLEP are 30. Credit will be awarded toward the Associate Degree, but grades and grade points will not be assigned. Units granted will not count toward the residence requirements of the College.

English Composition Placement Policy

Enrollment in any English composition course at Hartnell College will be determined on the basis of:

1. An evaluation of the Hartnell College English Placement Essay or the Hartnell College English for Speakers of Other Languages Placement Examination.
2. A qualifying grade (C or better) from a previous English composition course at Hartnell College, or an equivalent course and grade (C or better) from another college.

*The student has the option of taking a course at a level lower than the one designated by The English Placement Essay evaluation of the examination scores; however, the student will not be allowed to enroll at another level once this option is exercised.

REGISTRATION

See our new on-line services at www.hartnell.edu P.A.W.S. for Students

HOW AND WHEN TO REGISTER

All students MUST have a registration appointment to register. Continuing students are given the first opportunity to register each semester, and their registration appointment is based on units completed through the previous semester. A priority registration notice is sent to the student’s address on file about one month prior to registration starting. Continuing students may register using PAWS on-line registration (www.hartnell.edu), ASAP* Phone Registration (831) 755-6755, or Mail-In Registration. Any student who misses their registration appointment time can register any day after until the Thursday before the semester begins, or for short-courses up until the day before it begins.

New & Returning students are issued a registration appointment time at the time of submission of their Application for Admission. New & Returning students are given appointment times after continuing students have had an opportunity to register. New & Returning students may register using PAWS on-line registration (www.hartnell.edu), ASAP* Phone Registration (831) 755-6755, or Mail-In Registration. Students who miss their registration appointment time can register any day after until the Thursday before the semester begins, or for short-courses up until the day before begins.

Concurrent Enrollment Students (K-12) must register using In-Person registration which is generally held the week before the semester begins. The completed Concurrent Enrollment packet must be submitted at the time of registration. Registration for K-12 students is based on the first letter of the student’s last name and the alphabetic breakdown is rotated each
If enrolling in less than 6.0 units you may proceed to Step 4 or 5.

b) Register for Counseling 21: Orientation to College. See the Counseling course offerings section for dates and times. Register for this course at the same time you are registering for your other courses. This is a requirement for students enrolling in 6.0 or more units.

STEP 4:
All students should schedule an appointment to meet with a counselor to discuss academic goals and develop an Educational Plan. Call (831) 755-6820 to schedule an appointment.

Bring copies of official transcripts from high school and/or colleges attended.

STEP 5:
Register using the WEB at www.hartnell.edu or register using ASAP* Telephone Registration at (831) 755-6755. Classes fill quickly so register as early as possible.

Concurrent Enrollment Students must use In-Person Registration. Please consult the schedule for dates and times.

STEP 6:
Pay all registration fees at the Cashiers Office by Friday of the first week of classes to avoid any holds placed on your record

STEP 7:
Obtain or update your Student ID Card. Present your receipt of payment to the ASHC Office HCC-101.

STEP 8:
Follow up with your counselor and/or check your eligibility for Special Student Services Programs. Call (831) 755-6820 early in the semester to check on your current progress and/or update your educational plan for future semesters.

**STAAR* Assessment Requirements**

Before you can register, you must meet assessment requirements as stated in the Schedule of Classes. This is done through the STAAR* Assessment Center. STAAR* assessment sessions are scheduled daily through the registration period. To find out more about assessment requirements or to make an appointment, call the STAAR* Assessment Center at 759-6054.

**Schedule of Classes**

Prior to the beginning of each semester, the College publishes a schedule of classes indicating courses to be offered, their prerequisites, the time the class meets, the instructor, and the room assignment. Registration information and other important instructions are also included in the publication. Schedules are mailed to approximately 68,500 district residents at least two weeks prior to registration beginning. Additional copies of the schedule may also be obtained in the Admissions & Records Office. In addition to the schedule of classes, students may also access the schedule of classes on the Hartnell web site at www.hartnell.edu. Students may also use PAWS for Students (Schedule of Classes) to see active enrollments in classes. Any changes such as room changes, instructor changes, time changes to course sections in the schedule of classes are reflected immediately in PAWS.

**Enrollment in Courses**

During the registration process, students will be checked to ensure that assessments and course prerequisites have been met. While the College will make every effort to assist students in planning their programs of study, the final responsibility for the selection of proper classes rests with the student. Students must attend the first class meeting of each course or they may be dropped and will be charged for all enrollment fees associated with the section.

**Add/Drop Period**

Students have the opportunity to add and drop classes during a specified period at the beginning of each semester according to the number of weeks of the semester or session. Admissions & Records publishes these dates each semester or session in the current class schedule.

**ELECTRONIC WAITLIST**

Students can place themselves on a waitlist for closed classes. Once courses with a wait list fill to their maximum capacity, you have the option to add your name to a priority listing, in the event drops should occur or the instructor agrees to add late enrollees (at the first class meeting).

**Important Details**

1. All corequisites or prerequisite must be met before being placed on a wait list.
2. Once you have added your name to a wait list, you can check your status (i.e. you are now number 2 of 10 students on the list) by going into “Manage My Waitlist” on PAWS for Students on-line system. (www.hartnell.edu) You should check your status on PAWS frequently (daily), to allow yourself the maximum amount of time to enroll, in the event permission is granted prior to the start of class (includes weekends and holidays).
3. It is your responsibility to monitor the “Manage My Waitlist” status, you will NOT receive any notification if space becomes available in your wait list course, except to check the status yourself. Failure to monitor this yourself will NOT result in extended time to be allowed for enrollment.
MANDATORY FEES

Enrollment Fees
ALL California residents will be charged $26.00 per unit of enrollment per semester. Please note that enrollment fees are determined by the California Legislature for all community colleges, and are subject to change at any time. Should the California Legislature approved a fee increase in the 2005-2006 academic year, all students will have their enrollment fees adjusted accordingly. Financial Aid is available to those who qualify. See the Financial Aid section for more information. These fees must be paid by the Friday of the first week of each semester. Fees not paid will result in a “HOLD” being placed on the student’s academic record. See Impound of Student Records for more information.

Non-Resident Tuition
Non-resident tuition is charged to all students who are not residents of California. This includes residents of other states and foreign students. Non-Resident Tuition for the 2005-2006 school year has been set at $157.00 per unit. Enrollment fees, as indicated previously, are also required for all non-resident and foreign students for a total of $183.00 per unit. These fees must be paid by the Friday of the first week of each semester. Fees not paid will result in a “HOLD” being placed on the student’s academic record. See Impound of Student Records for more information.

To determine whether or not you are a non-resident, refer to the Admissions Residency Requirements for Admissions section of this catalogue. Further information concerning tuition and special circumstances for determining California residency is available at the Admissions & Records Office.

Student Services Activities Fee
The Student Services/Activities Fee is a student fee and costs $4.00 per semester for all students and is charged at all locations. This fee will fund activities and services for students for the entire Hartnell College student body. Part of this fee supports the ASHC Senate (student senate), student clubs, and governance activities. Student identification is required to check out books at Hartnell’s Library, for services of Admissions and Records, and for the use of math and reading labs. Other services/benefits for card holders are: ASHC scholarships, student handbooks, health and educational workshops, recognition awards, cultural workshops and events and merchant discounts (movie tickets, Hartnell home sporting events, Western Stage performances, Monterey Bay Aquarium, etc.)

A check or money order for $4.00 for this fee should accompany your registration payment if using ASAP* Telephone registration or Mail-in or PAWS registration or at the time of In-Person registration. Senior citizens and financial aid recipients will be charged $1.00 for the Student Services/Activities Fee.

This fee will be refunded ONLY if the student withdraws from Hartnell College (see refund policy for deadlines) and/or requests a refund prior to the issuance of the student I.D. card. Students may also apply for a fee waiver prior to registering for classes and/or prior to paying their fees. Refund and Fee Waiver request forms are available at the Student Activity Office and at the Cashier’s windows.

Instructional Materials Fees
Normally students are required to provide their own instructional and other materials for a credit or non-credit course if those materials are of continuing value to the student outside the classroom and provided that such materials are not solely or exclusively available from the district.

In certain cases a course materials fee is charged. This fee covers materials that are required for health and safety reasons or material provided in lieu of other generally available but more expensive materials which would otherwise be required. Classes for which a materials fee is charged are specifically designated in the printed schedule of classes. A master list of approved course materials fees is maintained in the Office of Instruction.

OPTIONAL FEE

Student Parking
This fee is optional. A student may purchase a parking permit for $25.00 each fall/spring semester or $10.00 for the summer. Financial Aid students pay $20.00 each fall/spring semester and $10.00 for summer. A student, who does not wish to purchase a semester parking permit, may purchase a daily parking permit for $1.00 (4 quarters). Look for the coin-operated machines in various parking lot locations.

Refund of Enrollment Fees
For all Enrollment and Non-Resident Tuition Refunds submit your Enrollment Fee Refund Request form to the Cashier’s Office. A refund or reversal of enrollment or tuition shall be made in accordance with the schedule listed below for reduction in program or withdrawal from class(es). This process shall be initiated upon receipt of an Enrollment Fee Refund Request form to be submitted by the 4th week of classes. Note, that class(es) must be dropped by the 2nd week for full semester classes. If no Enrollment Fee Refund Request form is submitted, credit balances may be applied or carried forward to future semesters.

Full Semester Classes (16-to 18-week Classes)
• A 100% refund is given upon withdrawal during the first two weeks of the semester.
• No refund or credit is given after withdrawal beyond the second week of the semester, even if registration occurred after the 1st week of school.

Summer and Short-Term Classes
The refund/reversal for short-term classes is based on the length of the class and the number of days per week the class meets.
• A 100% refund is given upon withdrawal by the 10% point.
• No refund is given after the 10% point.

Example:

<table>
<thead>
<tr>
<th>Course is</th>
<th>100%Refund if Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-week session</td>
<td>2nd day of session</td>
</tr>
<tr>
<td>6-week session</td>
<td>3rd day of session</td>
</tr>
<tr>
<td>8-week session</td>
<td>4th day of session</td>
</tr>
</tbody>
</table>

Note: Classes meeting fewer weeks or fewer days per week will have shorter withdrawal periods based on their 10% point.
Non-Resident/Foreign Tuition
The refund process shall be initiated upon receipt of an Enrollment Fee Refund Request form to be submitted by the 4th week of classes to the Cashier’s Office. Class(es) must be dropped before requesting a refund. If no Enrollment Fee Refund Request form is submitted, credit balances may be applied or carried forward to future semesters.

The schedule of refunds for non-resident/foreign tuition is below.

<table>
<thead>
<tr>
<th>Fall/Spring Semesters</th>
<th>Refund Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before or during the first week of the session</td>
<td>100% of the original fees paid</td>
</tr>
<tr>
<td>During the second week of the session</td>
<td>75% of the original fees paid</td>
</tr>
<tr>
<td>During the third week of the session</td>
<td>50% of the original fees paid</td>
</tr>
<tr>
<td>During the fourth week of the session</td>
<td>25% of the original fees paid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer Sessions</th>
<th>Refund Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before or during the first week of the session</td>
<td>100% of the original fees paid</td>
</tr>
<tr>
<td>During the second week of the session</td>
<td>50% of the original fees paid</td>
</tr>
<tr>
<td>During the third week of the session</td>
<td>25% of the original fees paid</td>
</tr>
</tbody>
</table>

Student Services Activities Fee
For fall, spring, and summer semesters, students must submit a refund request form to the Cashier’s Office. A 100% refund will be given through the second week of the semester (fall/spring semesters) upon complete withdrawal from classes. No refund will be given after the third week of classes. For summer semesters, 100% refund will be given through the first week of the semester upon complete withdrawal from classes.

Parking Fees
For fall and spring semesters, students must request a parking refund from the Cashier’s Office. A 100% refund will be given through the second week of the semester upon complete withdrawal from classes. The parking permit must accompany the Request for Parking Refund form. The same requirements apply to summer session; however, a 100% refund is only given through the first week of the session.

Financial Aid Enrollment Fee Refunds
If subsequent to paying enrollment fees, a student becomes eligible for financial aid and receives an enrollment fee waiver (BOGW), the student should submit a Refund Request form to the Cashier’s Office.

Cancelled Classes
A full refund will be given for courses cancelled by Hartnell College provided a petition is submitted to the Cashier’s Office within one week of cancellation.

Students who are members of an active or reserve military service, and who receive orders compelling a withdrawal from courses, upon appropriate refund petition and verification shall receive a full enrollment fee refund unless academic credit is awarded.

REQUIRED STUDY LOADS OR GPA (FOR GOVERNMENTAL SUBSISTENCE)
In order to qualify for full governmental subsistence, students must carry a minimum program of new work as indicated below:

1. Veterans under U.S. Code, Title 38, Chapters 30, 31, 32 and 35 (as required by Veterans’ Administration) - 12 Units
2. Veterans’ dependents under U.S. Code, Title 38, Chapter 35 - 12 Units
3. Veterans under the Cal-Vet Bill - 12 Units

Students indicated below must carry a minimum program of study or maintain a specific grade point average.

1. Foreign (F-1 VISA) students - 12 Units
2. Student Body Officers - 9 Units (with a 2.0 grade point average)
3. Varsity Athletes - 12 Units
4. Social Security - 12 Units

Hartnell College Emergency Communications

Campus Safety: 755-6888
Campus Safety Manager’s Pager # 644-3026
Maintenance: 755-6950
Facility Emergency Hotline: 755-6700, ext. 5700
Website Pop-Up Emergency Notice: www.hartnell.edu
Office of Instruction: 755-6720
Community Education: 755-6800

Hartnell College Catalogue – 2005/06
PREREQUISITES, COREQUISITES & ADVISORIES

PREREQUISITES
Prerequisite requirements must be met in order to register for classes with a prerequisite. A prerequisite is defined to mean “a condition of enrollment that a student must meet in order to register in a course or program.” (CCR T.5 §55200) A student may challenge any prerequisite by completing a Prerequisite Challenge Petition available in the Admissions & Records Office or the Counseling Department. It is the student’s responsibility to be certain that he/she has met the necessary prerequisite(s) for any course taken. The student will be dropped from any class where it is verified that the necessary prerequisite has not been taken and passed. Prerequisites will be validated after final grades have been posted.

See a counselor for assistance to clear any prerequisite requirement.

COURSE PREREQUISITE POLICY
Prerequisite means the preparation for the knowledge or skills considered necessary for success in a course. The college REQUIRES students to complete prerequisites as pre-enrollment preparation. Prerequisites are listed in the College Catalog/Schedule include:

1. Courses for which a specific prerequisite has been established.
2. Sequential course work in a degree-applicable program, and
3. Courses in which an equivalent prerequisite exists at a four-year transfer college or university.

PREREQUISITE CLEARANCE FORM
If you have met the prerequisite at another college, or in high school, or completed the assessment at another college, see your counselor prior to registration to complete a Prerequisite Clearance Form following the procedures below.

1. Student makes an appointment to meet with a counselor for advisement and to begin the process of submitting a Prerequisite Clearance Form.
2. Together, the counselor and student review transcripts/assessment test information, and the counselor determines a course equivalency, or using multiple measure criteria, the counselor indicates this on the form.
3. Student and counselor both sign the Prerequisite Clearance Form.
4. Unofficial transcripts, official transcripts or assessment scores are then attached to this form.

A. If the clearance form is for any reason on the front except Placement scores from another college, the form is taken to the Admissions & Records Office for clearance.
B. If the clearance form is using placement scores, the form is taken to the STAAR® Assessment Office for clearance.
C. If the clearance form is for Counseling 21 Orientation Clearance, the form is also taken to the Admissions & Records Office for clearance.

All Prerequisite Clearance Forms require 2 working days to process. Students will be able to register by PAWS Web Registration or ASAP® Telephone Registration within 2 working days of submission if “Early Bird” registration is being used, or if during In-Person registration this form must accompany the student’s registration (blue) card or add slip for a manual override.

Please note that Official College/University or High School transcripts must be on file in the Admissions & Records Office for official graduation evaluation or official transfer credit evaluations. Some programs such as AHT, and Nursing also require official transcripts. Unofficial transcripts will be accepted only for purposes of Prerequisite Clearance. All transcripts submitted become the permanent property of Hartnell College. Transfer coursework that has been evaluated and approved by Hartnell College become a permanent part of the student’s overall Hartnell academic record and cannot be removed.

NOTE: An instructor’s signature on an add card does NOT waive the student from meeting the stated prerequisite(s) from the course.

PREREQUISITE CHALLENGE PROCESS
A prerequisite challenge requires written documentation, explanation of alternative course work, background or abilities which adequately prepare the student for the course. Prerequisites may be challenged for one or more of the following reasons:

1. The student has documented knowledge and abilities equivalent to those specified in the prerequisite course.
2. The College has not made the prerequisite course reasonably available.
3. The prerequisite is discriminatory or is being applied in a discriminatory fashion.
4. The College has not developed the prerequisite according to its established procedures or has not developed the prerequisite in accord with existing statues.

Prerequisite Challenge Forms are to be filed with the Area Dean. Those specifying criteria are to be filed with the Dean of the area in which the course is taught. Upon filing the challenge, the following will occur:

1. Students may enroll in the course by taking a photocopy of the Prerequisite Challenge Form, with the Dean’s signature, to the Admissions and Records Office to enroll in the challenged class.
2. Students will be notified within five (5) instructional days regarding the outcome of the challenge. If the challenge is upheld, the student may remain in the course. (If filed after the first day of classes or if the class is filled, students will be eligible to enroll in the class the following semester.) If the challenge is not upheld, the student will be dropped.

DEFINITIONS

PREREQUISITE: “Prerequisite” means a condition of enrollment that a student must meet in order to register in a course or educational program. (CCR T.5 §55201)

COREQUISITE: “Corequisite” means a condition of enrollment consisting of a course that a student is required to take simultaneously in order to enroll in another course. (CCR T.5 §55201)

ADVISORY: “Advisory on recommended preparation” means a condition of enrollment that a student is advised, but not required, to meet before or in conjunction with enrollment in a course or educational program. (CCR T.5 §55201)
Student Services

STUDENT SERVICES

Student Services has performed an integral function at Hartnell College for over 50 years. We develop and offer a wide variety of support services dedicated to complementing instructional programs and providing educational and cultural resources to students, faculty, administrative staff, and the community.

Our goal is simple: to recruit, retain, and graduate students. We believe that education which is accessible to all is a sound investment for the individual and the community.

As a team of well-trained, dedicated professionals, we share a common objective...to facilitate student success by providing maximized support services which are tailored to the needs of the individual student. We work together as a powerful resource of ideas, experience, and energy. Because of our vision and determination, Student Services is a leader and catalyst for action and change within the Hartnell Community College District.

Counseling and Guidance

Professional counseling and guidance services are available to all students and prospective students of Hartnell College. Counselors assist students with exploring career, educational, and personal goals and planning a program of studies to fulfill the educational/course requirements to meet these goals. University transfer, vocational study, basic skills development, professional enrichment, and personal enrichment are all included in academic counseling services.

All matriculated students should meet with a counselor before their first semester is completed to formulate a Student Educational Plan (SEP).

Classes are also taught by counselors to assist the student with orientation to the College, career exploration, development of skills for academic success, etc. These classes are listed in the catalogue under the heading Counseling. Specialized counseling is also provided through the DSP&S, EOP&S, CalWORKS, Veterans and Transfer Center Programs.

Day and evening counseling services are available on both an appointment and a walk-in basis. For more information and/or to schedule a counseling appointment, contact the Counseling Appointment Office, located in the Classroom and Administration Building, Rm. C-165, 755-6820 or contact your counselor directly at his/her office.

STUDENT DEVELOPMENT SERVICES

Matriculation

Matriculation is a process that brings the college and the student into an agreement for the purpose of realizing the student’s educational objectives. Essentially it is a process designed to support and encourage student success but it is also charged with ensuring fair and consistent assessment, course placement, and equal access to campus resources.

The primary purpose of matriculation is enhancing student success. The matriculation agreement acknowledges responsibility of both the college and the student to attain this objective. All students will participate in the process unless there are specific exemptions. For the college, the agreement includes providing an admissions process, orientation to college, student services, pre-enrollment assessment, counseling and advisement on course selection, a curriculum or program of courses, follow-up on student progress with referral to support services when needed, and a program of institutional research and evaluation.
For the student, the agreement includes at least a general identification of an educational goal at the point of enrollment and declaration of a specific educational objective after reaching 15 college units. Students agree to be responsible for consistent class attendance, to complete assigned coursework, and to maintain constructive progress toward their educational goals. Students agree to participate in orientation, assessment, counseling, and other follow-up services as designated by the college to help them reach their educational goal.

“Partnership Agreement”

for success between Hartnell College and each student

Hartnell College agrees to provide

- Efficient admissions process
- Assessment of basic educational skills
- Orientation to the college’s programs, services, and policies
- Advisement/counseling
- Appropriate academic and vocational courses
- Quality instruction
- Attention to each student’s educational progress

Student agrees to

- Declare an educational goal
- Attend classes
- Work diligently to complete assignments and courses
- Meet with counselors to discuss choices and update educational plan
- Seek out support services as needed
- Strive to make progress toward your goal

STAAR®

Success through Assessment/orientation, Advisement and Registration

There are several components of the matriculation process; the activities for pre-enrollment services have come to be known by the acronym, STAAR® - Success Through Assessment/orientation, Advisement and Registration. These early matriculation components have been found crucial to student success.

The matriculation ‘partnership’ begins when a student submits an Application for Admission. This form is available in English and Spanish in each semester’s Schedule of Classes or by calling the Office of Admission and Records (C-150), (831) 755-6711. (For additional information on the Admissions process see the Admissions section of this College Catalog.)

ASSESSMENT

The purpose of the STAAR® placement assessment is to help students enter English and mathematics curriculum at an appropriate level, aid counselors in giving students academic advice, reduce frustrations and academic difficulties and increase chances of success.

All new Hartnell College students are required to take the STAAR® assessment, unless determined to be exempt. (See Exemptions from Assessment)

The STAAR® assessment lasts 3 hours and includes a multiple-choice reading assessment, an English Placement Essay on a given topic, and an appropriate mathematics assessment. Your scores on these assessments will help identify abilities and are used for advisory placement and course selection. With this profile of current skills and information about previous educational and work experiences, counselors can recommend courses to enhance academic achievement.

The STAAR® assessment is administered throughout the year at convenient times. There is no charge for the assessment, although a reservation is required. For appointments, questions and/or concerns regarding assessment, please call the STAAR® Assessment Center, (831) 759-6054. Information about the STAAR® assessment is also available online at www.hartnell.cc.ca.us~staar

English as a Second Language

English as a Second Language is offered to students whose primary language is not English. An ESL STAAR® placement assessment is offered for those students wanting to take ESL classes. The results help counselors determine advisory placement in ESL classes, other courses, or related learning laboratory courses.

Disabled Students

STAAR® placement assessments for Disabled Students are available for students with documented visual, physical, or other learning disabilities. Page magnifiers, readers, and extended testing times are some of the accommodations available. If a student is seeking alternative testing procedures, please contact the DSP&S office, HCC 102.

Reading, English, and Mathematics Courses

Students who want to enroll in reading, English or mathematics courses will need to complete the STAAR® assessment before registering for these classes, unless the appropriate prerequisite class has been completed.

Prerequisites or recommended skill levels must be completed with a “C” or better. (They are listed with the course descriptions in this College Catalog and in each semester’s Schedule of Classes). Courses that are used as prerequisites to allow enrollment in higher-level courses must be completed within five (5) years.

EXEMPTION from Assessment Services

Hartnell College students may be exempt from participation in STAAR® Placement Assessment if they:

1. Have completed the equivalent to Math 201 and English 253 at Hartnell College, or another college or university with a grade “C” or higher.
2. Have earned an Associate Degree or more advanced degree from another college or university.
3. Have completed math and English assessments at another California Community College within the last 2 years.
4. Plan to enroll in fewer than six (6) units that do not include English or mathematics course and/or courses requiring English or mathematics prerequisites, and their academic goal is personal development.

You can pick up a Request for Exemption Form from the STAAR® Assessment office or your counselor. Submit the Request for Exemption form, signed by a Hartnell counselor to the Records Evaluator in the Office of Admissions and Records (C-150.) Copies of official transcripts/diplomas must be on file with this form by the end of the third week of classes.

Exempted students may participate in matriculation services if they so choose.

ORIENTATION

All first time students to Hartnell College are required to participate in Counseling 21:Orientation before registration, unless determined to be exempt. (See Exemptions to Orientation)

Hartnell College counselors facilitate orientation classes. Topics include students’ rights and responsibilities, attendance policies, in-depth student services guidance, information on vocational certificates and degrees and transfer to 4-year institutions. The counselor during this course will also advise students on course selections and write individual educational plans.

Counseling 21: Orientation classes are available throughout the year; dates and times are listed in each semester’s Schedule of Classes.
ACADEMIC PLANNING
All first time Hartnell College students are required to meet with a Hartnell College counselor, unless determined to be exempt. (See Exemptions from Counseling Services) The primary goal of this meeting is to assist students with appropriate course selection. Although many students will see a counselor during their Counseling 21: Orientation classes, further questions and a more in-depth advising can take place during an individual advisement session.

Counselors are knowledgeable of the varied educational choices. The aspirations and interests of the student are primary considerations before a career choice is pursued. Counselors’ thoughtful suggestions make educational planning easier. Hartnell counselors are available to assist students in the areas of career, academic and personal counseling.

EXEMPTION from Orientation and Counseling Services
Hartnell college students may be exempt from Counseling 21: Orientation or Counseling advisement if they:

1. Have an Associate or more advanced degree
2. Are concurrently enrolled in and have received orientation and/or counseling services at another college or university
3. Are enrolled in less than six units and the academic goal is personal development
4. Passed the Counseling 21: Orientation exam with a score of 70% or higher.

Submit the Request for Exemption Form, signed by a Hartnell counselor to the Records Evaluator in the Office of Admissions and Records (C-150.) Copies of official transcripts/diplomas must be on file with this form by the end of the third week of classes. Exempted students may participate in matriculation services if they so choose.

FOLLOW-UP
Once a community member becomes a Hartnell College student and is enrolled in classes, Hartnell College’s commitment continues.

Because academic success is a ‘partnership’, students must commit to seeing a counselor every semester to update or change their academic plan. An academic counselor is the expert in assisting students in developing and reviewing their educational plan. Students still undecided on an academic goal or major are referred to appropriate career and life planning courses.

Hartnell College is continually COORDINATING/TRAINING, RESEARCHING and EVALUATING its Matriculation Plan to assure that students are receiving the best services to assist them in achieving their educational goal.

TRANSFER PLANNING
This section is designed to help students to plan an educational program at Hartnell College that will prepare them to transfer to the University of California, California State University, or a private college or university to earn a bachelor’s degree. Students are encouraged to meet regularly with a Hartnell counselor and use the resources of the Transfer Center to plan an academic program that will assure a smooth transition to the transfer institution of their choice. In addition to completing transfer requirements, students may also earn units toward an Associate in Arts or Associate in Science degree at Hartnell. With careful planning, both objectives can be reached by taking essentially the same set of transferable courses.

Hartnell’s Transfer Center
The Transfer Center provides information and offers workshops on choosing a college, transfer admission requirements, completing admission applications, writing the application essay, and financial aid. Transfer Center staff can provide details about special Transfer Admission Agreements that Hartnell has developed with a number of four-year institutions that can guarantee students transfer admission.

Students with a clear transfer objective stand the best chance of meeting requirements in a timely manner. They can make the best use of their time and course work by deciding on a transfer institution and major as soon as possible. Students unable to make these decisions when they enter Hartnell College may follow a general transfer pattern of courses while availing themselves of Transfer Center resources in making transfer plans.

Once you have chosen a major and the university to which you plan to transfer, students should consult a Hartnell College counselor to discuss Major Preparation.

Transfer Center staff and HC Counselors can assist students in planning for transfer, and university representatives often visit our campus to meet with students interested in transferring to their institutions. It is wise for student to consult the catalog of the university to which they plan to transfer to become familiar with specific transfer Admission requirements. Many college and university catalogs are available for reference in the Transfer Center, and students may write directly to the Admissions Office of the institution to obtain an Information Bulletin that outlines requirements for admission as a transfer student.

TRANSFER OF CREDIT
Students expecting to transfer to a four-year college or university can usually complete their freshman and sophomore years at Hartnell. Students must normally complete 60 transferable semester units to be classified as juniors upon entering a four-year college or university.

Students enrolled in a transfer program can complete most of their general education and lower division requirements before transferring. High school subject deficiencies may be made up at Hartnell in order to meet university admission requirements. In some instances students may qualify for transfer to the college of their choice by maintaining an acceptable grade point average in a minimum of 56 units of appropriate transfer courses.

REQUIREMENTS FOR TRANSFER STUDENTS
A student can transfer from Hartnell College to a four-year college or university as a junior without loss of time or credits by completing the following:

1. Lower Division Preparation for the Major. These courses, which should be completed before transferring, provide the necessary background and preparation in order for the student to transfer into their major as a junior. Check with a Hartnell Counselor regarding Major Preparation Recommendations for your particular program and university selection.

2. General Education Requirements. (Sometimes called “Breadth Requirements”). These are the courses required to obtain a bachelor’s degree regardless of major. Courses in writing, critical thinking, sciences, humanities and social sciences are included in general education.

3. Electives. When courses for the major and general education requirements have been completed, enough elective courses must be taken in order to bring the total of all course work to a minimum of 56 transferable units.

The Transfer Center and Counseling department sponsors Transfer Day/College Night each fall. Call (831) 759-6007 to schedule an appointment with the Transfer Counselor.

Hartnell College Catalogue – 2005/06
ATHLETICS and SPORTS
Counseling Sports Center
The Hartnell College Student Athlete Advising Program parallels the overall philosophical belief that gives full support to all students to develop their abilities to their fullest potential. The College Athletic Department, in concert with Student Services and Counseling, will provide organization, direction, and motivation to enable student athletes to establish competencies in academic, career, vocational, and (for some) basic skills. It is our belief that participation in Interscholastic sports is an integral part of the broader education spectrum which includes, but is not limited to, academic preparation and the acquisition of vocational and career skills. For specific information and/or an appointment, call 755-6848 or stop by the Counseling Sports Center, located in the Auxiliary Gym, Rm. PE-144.

Intercollegiate Athletics
Hartnell College is a member of the Coast Conference of the California Community and Junior College Association. The College enters into conference competition for men and women (football, cross country, soccer, basketball, volleyball, waterpolo, tennis, softball, baseball, track, swimming). Members of the Coast Conference are Monterey Peninsula College, Cabrillo College, Ohlone College, Skyline College, Mission College, Hartnell College, Cañada College, DeAnza College, Foothill College, and Los Medanos College. Intercollegiate athletic competition is governed by the Coast Conference and the California State Athletic Code. Obtaining clearance for athletic eligibility often requires considerable checking of records and code provisions. The procedures should be started well in advance of the opening of each athletic season. The Athletic Director will interpret the State Athletic Code and conference regulations for all persons concerned. A copy of the State Athletic Code is on reserve in the Library.

Athletic Eligibility
In order to be eligible to participate in the Hartnell College Intercollegiate Athletic Program, a student athlete must be actively enrolled in (and attending) at least 12 semester units.
To continue athletic participation in any sport, the student athlete shall maintain a cumulative 2.0 grade point average (GPA), in accredited post-secondary course work, computed since the start of the semester of the first participation.
In order to remain eligible after having first participated in a collegiate sport, a student athlete must pass 24 units prior to the next season of the sport with a cumulative grade point average of 2.00.
College eligibility is not affected by high school students attending classes at the community college. Participation in any scheduled contest in any institution above high school level during a sport season shall be recorded as one season’s participation in that sport.

STUDENT FINANCIAL AID
The purpose of Financial Aid is to assist eligible students in meeting educational costs while attending school. The primary responsibility for meeting college costs rests with the student and his/her family. However, we recognize that many students are not able to pay the full costs of a college education. For this reason, Hartnell College offers programs to provide assistance for students with documented financial need. Financial need is the difference between the costs of education and the resources available to the student.
You are encouraged to call or visit the Financial Aid Office for more information. It is located in the College Administration Building, Room 172, or call 755-6806. Our website is: http://www.hartnell.edu/financial_aid/

How to Apply for Financial Aid
1. Apply for admission to the College.
2. Pick up current Free Application for Financial Aid (FAFSA) from the Financial Aid Office (FAO), fill out and mail to Central Processor or you may apply electronically via the web at www.fafsa.ed.gov.
3. If required, additional documents must be completed and submitted to FAO prior to the processing of FA funds. Contact the Hartnell College Financial Aid Office regarding the FA processing procedures and applicable deadlines.
4. A new application (FAFSA) must be filed every academic year. Eligible students will be offered a financial aid package containing a combination of grants work-study, and/or loans.
5. It is important for students to have sufficient funds available to begin their first two weeks of college although they have already been offered a financial aid award.

Financial Aid Programs
Financial aid consists of programs, which are funded and regulated by the federal and state governments. The programs are of three different kinds: Gift Aid, Work and Loans.
Grants (Gift Aid)
A grant is money which students do not have to work for or repay. Students with bachelor’s degrees are not eligible for grants.
Federal Pell Grant
Grants may range from $400-$4050 per year depending on Federal allocations.
Federal Supplemental Education Opportunity Grant (FSEOG)
A grant is awarded at Hartnell College according to a formula based on student need and generally will range from $100 to $400 per academic year.

Board of Governors Fee Waiver (BOGW)
A financial assistance program to offset enrollment fees, the Financial Aid Office determines student eligibility bases on state guidelines and authorizes the Cashier’s Office to use BOGW funds to waive the fee charges. The BOGW is available to California residents only.

Cal Grants (A, B, and C)
The State of California, through the student Aid Commission, offers and administers several grant programs for undergraduates students. These include Cal Grant, A, B, and C. A student can receive only one type of Cal Grant. Cal Grant A: To be used at a four-year university. Cal Grant B: First year students attending two or four-year institutions. Cal Grant C: Students enrolled in a vocational two-year program.

Federal Stafford Loan
The purpose of the federal loan program is to make low interest loans available to students. The California Student Aid Commission guarantees most of the loans.

Satisfactory Academic Progress
Federal regulations require that all students receiving financial aid comply with the financial aid Satisfactory Academic Progress Policy established by Financial Aid. To receive financial aid, students must maintain the standards described below.

Length of eligibility- Federal regulations require colleges to establish a maximum time frame during which students are eligible to receive financial aid. The maximum time frame for financial aid is 90 units attempted. Students are no longer eligible for financial aid after attempting 90 units. Students may use the appeals process. Contact the Financial Aid Office for information.

Grade point average (GPA)- To remain satisfactory academic progress and remain eligible for financial aid, students must maintain a minimum cumulative GPA of 2.0.

Unit completion requirement- Hartnell College will review each student’s record at the end of each semester. To maintain satisfactory academic progress, students must complete a total of 67% of all units attempted and a cumulative GPA of 2.0 or better. Student may not normally receive financial aid if he/she has already completed a certificate program or the student has received an AA, AS, BA or BS degree.
SPECIAL STUDENT SERVICES

Extended Opportunity Programs and Services (EOPS)

The Extended Opportunity Program and Services (EOPS) is designed to recruit, retain, graduate, and/or transfer educationally disadvantaged, low income, and under represented students who have chosen to continue their education. Students receive assistance with their admission, registration, financial aid, book purchases, curriculum planning, academic and personal counseling, and other support services from counselors, administrative staff, and a team of well trained peer advisors.

Cooperative Agencies Resources for Education (CARE)

As a supplemental component of EOPS, CARE provides educational support services designed for the academically under-prepared, low income, single parent population. Grants and allowances for educationally-related expenses (such as meals on campus, parking permits, bus passes, textbooks and supplies) may be awarded as a means of strengthening the retention, persistence, graduation and transfer rates of these individuals. Students participating in CARE may choose certificate, license, associate degree or transfer program options. Nearly half of all CARE students seek to transfer to four-year institutions; almost 40 percent choose associate degree objectives.

A candidate for EOPS/CARE is defined as an individual who has the potential to perform satisfactorily at the college level but who has not been able to realize that potential because of economic, social, or educational reasons. The following criteria are used to determine eligibility in the EOPS/CARE program:

(A) Successfully filed a financial aid application (FAFSA -- Free Application for Federal Student Aid)
(B) Enrolled in at least 12 units
(C) Verification of family or individual yearly income
(D) Determined as educationally disadvantaged by the EOPS/CARE Program.

Students interested in being considered for EOPS/CARE services should visit the EOPS Office located in the College Center Annex, Room 104, or call 755-6860.

The Re-Entry Program

If you are enrolling as a new or returning student after an absence from school, the Re-Entry Program can help. The Re-Entry program facilitates students success through assistance in: academic and personal counseling, locating childcare, housing referrals, being a single parent, success in nontraditional roles, assistance with admission and financial aid applications, support groups orientation to the College environment and services, scholarship information, and information on and referrals to campus and community resources. We work closely with all Student Services Departments to provide comprehensive assistance. We also know that to attain educational success, each individual students personal, social, and economic needs must be addressed. To this end, we provide workshops and individualized personal support, encouraging networking, confidence building, and problem solving.

Call 755-6820 or stop by the Counseling Department (C-165) to speak with a counselor.

CalWORKS

Hartnell College’s CalWORKs Program serves CalWORKs Cash Aid (formerly AFDC) recipients who enroll at Hartnell College. The program offers five student centered services.

(1) Counseling Case Management, which includes design of an education, study, and employment plan.
- Personal and confidential counseling.
- Selection of courses for rapid employment with goal of long-term advancement in a chosen field.
- Linkage to campus and community resources.
- Placement with Hartnell College Child Development Centers (based on space availability).
- Coordination with Department of Social Services.

(2) Career and Job Programs and Services, which provide:
- Vocational assessment for career decision-making.
- Local and state labor market information for informed decision-making.
- Access to the Job Bank.
- Subsidized training through the CalWORKs work-study program, not sanctioned against CalWORKs Cash Aid benefits.
- College credit for on-the-job training through Cooperative Work Experience.
(3) **Education**, which provides general employment skills and occupational training and is designed to:
- Prepare people for jobs in the local labor market.
- Provide intensive, short-term training for higher wage jobs.
- Offer flexible entrance and exist schedules.

(4) **Financial Aid**, which includes grants and employment, and may cover the following educational expenses:
- Child care.
- Tuition and fees.
- Books and supplies.
- Living expenses.
- Transportation.
- Personal.

(5) **Coordination with EOPS/CARE Programs**, providing additional services for single parents who receive CalWORKS Cash Aid and have children up to age 14.

The CalWORKs Program is located in the Career Center, Merrill Hall, Room 3, which is open from 8:00 a.m. to 5:00 p.m., Monday through Fridays. To schedule an appointment to meet with a CalWORKs designated counselor, call 755-6925.

**Career Center**
The Career Center offers comprehensive career advising, information, and individualized assessment. Available services include individual and group career planning and assistance with career exploration, college and training information, labor market information, and vocational assessment. Students may choose to pursue career planning by taking a class or workshop, or scheduling an appointment with a career advisor.

Students interested in self-assessment may want to take one or more of the vocational assessment workshops offered by the Career Center. Assessments that measure an individual's interest, aptitudes, personality traits, and work values are available. Results from the assessments are discussed as they relate to career choices.

Staff are available to assist students with a variety of career related services and activities. The Eureka California Career Information System, available through the Career Center, provides up-to-date computerized labor market and educational information. Vocational assessment is offered to assist students with choosing a career, employment interview techniques, resume preparation, and job seeking skills.

In addition to several computer systems, the Career Center has an extensive collection of books, journals, and periodicals on career planning, occupations, schools, and job seeking skills. For more information call 755-6925.

**Job Bank**
The Job Bank, located in the Career Center, provides employment information for part-time, full-time, temporary, on-campus, federal, state, and summer work. Job boards are located in Merrill Hall as well as the College Center. The range of positions varies from unskilled part-time work to highly skilled technical positions. Other services provided by the Job Placement staff include individual assistance in resume preparation, interviewing techniques, and the job application process.

Any student interested in seeking employment is encouraged to use the Job Bank frequently.

**California Mini-Corps Program**
Hartnell College is one of 20 colleges and universities which house a California Mini-Corps Program. This program provides training, experience, and support services to college students who are interested in becoming future Bilingual Educators. The student gains teaching experience by actually working at a school site, in this county, under the guidance and supervision of a Master Teacher and a Mini-Corps Coordinator. This is a federally funded program which provides direct categorical services to Migrant Students. A class is given to train Mini-Corps students in better meeting the needs of migrant students.

Students enrolling in the program must be full time students; have a 2.0 or above GPA; have bilingual skills; and have knowledge of or come from a Migrant Family background. The California Mini-Corps Program is located in the College Center Annex, Room 110. Office hours are posted on the door. Interested students may write, drop by, or phone 755-6927 for applications or further information.

**The Tutorial Center**
The Tutorial Center provides students with qualified student tutors in various academic areas. Tutors support the student's regular instructional program through individual and small group tutoring. Tutorial assistance provides support motivation, and encouragement to students. These services are FREE to all Hartnell College students.

To sign up for tutoring services, a student must complete a brief application in the Tutorial Center and enroll in the supervised tutoring course. The Tutorial Center is open Monday - Friday. The Tutorial Center is located in the College Center Annex, Room 108.

To become a tutor a student must meet the following qualifications: current enrollment at Hartnell College in at least 6 units, completion of at least one semester at Hartnell College, a grade point average of at least 2.75, and a screening interview with the Tutorial Center Supervisor.

Those students who are interested in becoming tutors can stop by the Tutorial Center for further information and application forms or call 755-6815.

**Veterans’ Services**
Hartnell College is approved as an institution of higher learning for veterans and veterans’ dependents entitled to educational assistance.

The Veterans’ Office staff provides assistance to veterans and eligible dependents in planning educational programs and maintaining compliance with Veterans Administration regulations.

Certification to the Veterans Administration for educational benefits and admissions enrollment in the College are separate functions. It is important that VA beneficiaries notify the Admissions and Records Office and Veterans’ Office of any changes in enrollment. The Veterans’ Office is located in HCC-101.

**Disabled Student Services**
Hartnell College offers supportive services and instruction for students with physical, visual, hearing, learning, acquired brain injury, developmental, and other disabilities through the Disabled Students Programs and Services (DSP&S) Program. Services and instruction are designed for students to successfully develop and complete an educational plan. Services include: academic and vocational counseling, educational planning, special equipment, note-takers, translating/interpreting in sign language, assessment for learning disability, classroom accommodations, and job placement. Instruction includes: college survival skills, adaptive computer technology, adaptive physical education, job readiness skills, vocational assessment, and lab classes.

The Disabled Students Program is located in the fully accessible College Center, Room 102, and is open Monday 8:00 am – 6:00 pm, Tuesday - Friday 8:00 am – 5:00 pm. Students may write, drop by the office, or phone (831) 755-6760 (TDD - (831) 770-6199) for further information.

Hartnell College has many accessible facilities available for use by students with disabilities. Hartnell College is committed to removing all architectural barriers on campus to accommodate those students with wheelchairs or who are otherwise physically challenged.

Buildings are equipped with ramps for easy access and elevators are located in Merrill Hall and the CAB Building.
International Student Services
Hartnell College offers special services to students from other countries who have entered the U.S. on F-1 or other study visas. The International Student Center, jointly with the Office of Admissions and Records, assists these students with the admission process, including documentation for the visa application; registration, academic and personal counseling, immigration matters, personal adjustment to college life, transfer, and career advising. The Center also provides referrals for on-and off-campus services, and assists students with off-campus housing.

For specific information and/or an appointment, call or stop by the International Student Center, located in the College Center Annex, Room 105, (831) 755-6829. The Center e-mail address is instlstud@hartnell.edu. More information about the International Student Center is online at www.hartnell.edu/students/international.

American Indian Services
Each year, the Bureau of Indian Affairs (BIA) provides grants to help eligible Native American students meet their college costs. To be eligible for the BIA educational grant, you must meet the following criteria:

(A) Be at least one-fourth American Indian, Eskimo, or Aleut as certified by a tribal group served by the BIA.
(B) Be enrolled or plan to enroll at an accredited College. (Hartnell is Accredited)
(C) Must have completed FAFSA on file prior to requesting that the American Indian Program Office complete a BIA form.
(D) Be enrolled in 12 units or more per semester.

Students of American Indian heritage are provided with intensive student support services: information about the assistance with financial aid and scholarship applications, and transitional services to four-year institutions. The Financial Aid Office is located in the Classroom Administration Building room 172, or call 755-6806.

CAMPUS SECURITY
Campus Safety
The Campus Safety Office, located in the College Center should be contacted for assistance with reporting on-campus crimes and emergencies, and locating lost articles. On weekdays, from 8:00 a.m. to 5:00 p.m., the office may be reached by calling 755-6888. On weekends, after 5:00 p.m. weekdays, or if there is no answer at the office, Campus Safety may be reached by calling 757-4302.

Medical Emergencies on Campus
When an emergency occurs on campus, call Campus Safety at EXT 6888. An officer will respond and obtain medical assistance. The officer will call a specified college contact to the site to complete accident/injury reports and other essential insurance information. Any questions regarding student injuries or accidents on campus should be directed to the Assistant to the Vice President of Administrative Services at 755-6995 or EXT. 6995.

Student Insurance
When a student experiences an accident or injury on campus or during a college-sponsored event, an accident/injury report as well as essential insurance information is required to determine the level of assistance available. Students are to contact the Administrative Services Office at 755-6995 or come to Room 106A in the Classroom Administration Building to complete the necessary forms.

It is mandatory that international students have health and accident insurance. International student insurance applications may be obtained from the International Student Office located in the College Center Annex, Room 105.

Communications
No telephone messages for students, except those of an emergency nature, will be accepted by the College. Mail or faxes should not be addressed to students in care of the College. No delivery of any nature will be accepted for students.

Lost and Found
Found articles should be turned in to the Campus Safety office or the switchboard located next to the Cashiers Office in the CAB building, where lost articles may also be claimed.

Visitors to the College
Parents, the general public, and other interested persons are invited to visit the campus. Visitors should stop at the Office of the Vice President of Student Services, Counseling, and Admissions, located in the Classroom and Administration Building, Room C-151, for information and directions.

No one is permitted to attend classes unless s/he is a registered student. Exceptions to this rule may be made only in unusual circumstances and only when such visit will not disturb the instructional program. A special Visitor's Permit is required in such instances.

Permission to enter upon the property of the District, either stated or implied in other policies or practices, is subject to immediate revocation by the Governing Board or by the Superintendent-President of the College.

Living Accommodations
Hartnell College does not maintain residence halls. However, the Re-Entry Center, located in the College Center Annex, Room 105, maintains a listing of rooms or apartments for the off-campus housing arrangements made by students.

Student Lockers
Student lockers may be rented from the cashier located across from the Admissions Office in the Classroom and Administration Building.

STUDENT ACTIVITIES
Associated Students of Hartnell College
As a student of Hartnell College, you are also a member of the Associated Students, known as ASHC. The ASHC Senate manages the affairs of student activities and student government. The goal of the Senate is to give voice to all students at Hartnell, enabling them to become an integral part of the College community.

The responsibilities of the ASHC Senate are to provide and administer a program of activities and services for students, adopting and supervising an annual ASHC budget, granting club charters, appointing officers and students to campus-wide committees, and sharing in the development of College policies and activities. The ASHC Office is located in the College Center, Room HCC-101A.

Student Clubs
Each year student clubs (honorary, social, service, and special interest) contribute to the College activities program. All club members have a voice through the Inter-Club Council. The Inter-Club Council provides an effective, organized, and fair policy so all clubs will thrive.

To start a club, interested students must complete a Club Packet and submit it to the Inter-Club Council for approval. Information regarding clubs and their programs can be obtained from the Student Activities Coordinator located in the College Center, Room HCC-101.
MESA (Mathematics, Engineering, Science Achievement)

The MESA Program at Hartnell provides a wide range of academic support programs and activities for students enrolled, majoring or interested in earning a degree from a four-year college in mathematics, science, engineering, or nursing.

WHAT DOES MESA OFFER?

- MESA Student Center in Merrill Hall 30 where students can study in a supportive environment
- Computer equipment and space for study groups in the Student Center
- Tutoring for individuals and groups in transfer level math and science courses
- Academic Excellence Workshops that accompany some math and science classes
- Academic, career, and personal counseling
- Workshops on scholarships, internships and financial aid
- Field trips to universities, science museums, industries, and research centers
- Book check-out program

If you are interested in joining the program and would like to pick up an application, drop by Merrill Hall room 22A to pick up an application and learn more about the program.

ACADEMIC REQUIREMENTS

Student must have all these:

- MESA students must be in math, science, engineering or nursing major
- MESA students must intend to transfer to a 4-year college
- Eligible to take Math 121 (Elementary Algebra) or higher level math
- Signed enrollment application
- Prepare 3-year education plan

When applying to the Hartnell College MESA Program, you must qualify under both the Educational and Financial Criteria.

Education Criteria:

- First generation college student
- Attended federally designated high school
- Under 24 - living on you own
- Began with math assessment under Math 121

Financial Criteria:

- Eligible for EOPS
- Board of Governors Fee Waiver
- GAIN Participants
- Receiving Financial Aid
- Work-Study Eligible
- TRIO Programs Participants
ACADEMIC POLICIES

Scholastic standards of Hartnell College are established to assist students in making appropriate educational plans. The College will advise students of their educational progress in order that students may make sound self-appraisal of their college work.

The regulations in this section are consistent with State Law and District Policy. They serve to inform students of standards that they are expected to maintain.

The determination of the grading system to be used in each course shall be made by the discipline offering the course. The grading system used in each course is published in the Catalogue and Schedule of Classes.

Grades and Grade Point Averages
Grades from a grading scale shall be averaged on the basis of the point equivalencies to determine a students grade point average. The highest grade shall receive four points, and the lowest shall receive 0 points, using only the following evaluative symbols:

<table>
<thead>
<tr>
<th>GRADE</th>
<th>DEFINITION</th>
<th>GRADE POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Barely Passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
<td>0</td>
</tr>
<tr>
<td>CR</td>
<td>Credit (at least satisfactory-units awarded but not counted in GPA)</td>
<td>0</td>
</tr>
<tr>
<td>NC</td>
<td>No Credit (less than satisfactory, or failing -not counted in GPA)</td>
<td>0</td>
</tr>
</tbody>
</table>

Credit/No Credit Options
The college offers:
1. Some courses solely on the CR/NC (Credit/No Credit) grade basis.
2. Some courses solely on the standard letter grade basis.
3. Some courses in which the student may choose to complete the course on either a credit/no credit or letter grade basis.

In accordance with the California Education Code and the Administrative Code Title 5, Hartnell College has established a grading policy which adds the “CR” (credit) and “NC” (no credit) grades to the standard letter grades (A, B, C, D, F) used in college and universities. A course in which a “CR” grade is earned indicates completion with “C” or better work, and will apply towards the 60 units required for graduation, but will not affect the students grade point average. However, units attempted for which “NC” is recorded shall be considered in probation and dismissal procedures. A maximum of 12 units of “CR” may be applied towards the Associate in Arts Degree. Courses in which a student has no such option (such as Work Experience) will not apply towards 12 units maximum. Courses in which a “NC” grade is earned will not apply towards graduation and will not effect the students grade point average.

Offering courses for credit/no credit grades provides the student with the opportunity to explore areas outside his/her current interest without undue concern for his/her grade point average. This policy also recognizes that a standard letter grade may not always measure the value of a course to an individual student.

On or before the last day of the fifth week (or 25%) of the instructional term, the student shall inform the Admissions and Records Office, by petition, of his/her intention to complete a course for a grade or credit/no credit basis and the instructor shall report to the Director of Admissions a final grade of “CR” or “NC” for students who so petition. Students may repeat a course in which a grade of “NC” is earned.

Grade Point Average
Grade Point Average (GPA) is determined by dividing the total units attempted into total grade points from A, B, C, D, and F grades. (CR, I, W, IP, and NC are not included in the total course units attempted.) For example, a student who earns a “B” in a class worth four units, and “A” in a class worth three units, a “C” in a class worth two units, and “F” in a class worth three units, and a “B” in a class worth one unit would have a GPA (Grade Point Average) of 2.38, calculated as follows:

\[
\begin{align*}
4 \text{ units of B x 3 points} &= 12 \text{ grade points} \\
3 \text{ units of A x 4 points} &= 12 \text{ grade points} \\
2 \text{ units of C x 2 points} &= 4 \text{ grade points} \\
3 \text{ units of F x 0 points} &= 0 \text{ grade points} \\
1 \text{ unit of B x 3 points} &= 3 \text{ grade points} \\
\text{13 total units attempted} &= 31 \text{ total grade points} \\
31 \text{ Grade Points} &= 2.38 \text{ Average} \\
13 \text{ Total Units Attempted} &= (\text{or a 2.38 GPA})
\end{align*}
\]

President's Honor Roll and Dean's List
Full-time students earning a grade point average of 3.5 to 4.0 in a semester are included on the President's Honor Roll each semester. Those full-time students who earn a grade point average of 3.0 to 3.49 in a semester are placed on the Dean's List. This applies only to students completing 12 or more units of letter grade work per semester.
Non-Evaluative Symbols

The following non-evaluative symbols authorized are I, IP, RD, and W.

Definitions:

Incomplete (Symbol “I”)
Incomplete academic work for unforeseeable, emergency, and justifiable reasons at the end of the term may, result in an “I” symbol being entered in the students record. The condition for removal of the “I” symbol shall be stated by the instructor in written record which shall also indicate the grade to be assigned in lieu of its removal. This record must be given to the student with a copy placed on file in the Office of Admissions and Records until the “I” is made up or the time limit has passed. A final grade shall be assigned when the work stipulated has been completed and evaluated, or when the time limit for completing the work has passed. The “I” must be made up no later than the last class day of the semester following the one in which the “I” grade was assigned; otherwise, the in lieu grade will automatically be entered on the transcript. The “I” symbol shall not be used in calculating units attempted nor for grade points. The student may petition the Academic Council for time extension (one semester only) due to extenuating circumstances.

In Progress (Symbol “IP”)
The “IP” symbol shall be used only in those courses which extend beyond the normal end of an academic term. It indicates that work is “in progress”, but that assignment of a substantive grade must await its completion. The “IP” symbol shall remain on the students permanent record in order to satisfy enrollment documentation. The appropriate evaluative grade and unit credit shall be assigned and appear on the students record for the term in which the required work of the course is completed. The “IP” shall not be used in calculating grade point average. If a student enrolled in an “open entry, open exit” course is assigned an “IP” at the end of an attendance period and does not re-enroll in that course during the subsequent attendance period, the appropriate faculty will assign an evaluative symbol (grade) to be recorded on the students permanent record for the course.

Report Delayed (Symbol “RD”)
The “RD” symbol may be assigned by the Director of Admissions only. It is to be used when there is a delay in reporting the grade of a student due to circumstances beyond the control of the student. It is a temporary notation to be replaced by a permanent symbol as soon as possible. “RD” shall not be used in calculating grade point averages.

Withdrawal (Symbol “W”)
Students withdrawal from a class or classes shall be authorized through the last day of the fourteenth week (or 75%) of the instructional term. No “W” will be given after the fourteenth week. After the fourteenth week, the only grades given will be: A, B, C, D, F, NC, CR. No notation (“W” or other) shall be made on the academic record of the student who withdraws during the first four weeks or 30% of a term, whichever is less.

For semester length courses (16-18 weeks), withdrawal between the end of the fourth week and the last day of the fourteenth week of instruction shall be recorded as a “W” on the students record. For courses less than a semester in length, withdrawal between 30% and 75% of the course shall be recorded as a “W” on the students record. The “W” shall not be used in calculating grade point averages, but excessive “Ws” (see Standards of Probation and Dismissal) shall be used as factors in probation and dismissal procedures.

The Director of Admissions may, by regulation, authorize withdrawals from a class or classes in extenuating circumstances after the last day of the fourteenth week (or 75% of the term, whichever is less) upon petition of the student or his/her representative. The Director of Admissions will consult with the appropriate faculty. Extenuating circumstances are verified cases of accidents, illnesses, or other circumstances beyond the control of the student.

Military Withdrawal (Symbol “MW”)
The “MW” shall be assigned only for students who are members of an active or reserve military service, and who receive orders compelling a withdrawal from courses. Upon verification of such orders, this symbol may be assigned at any time during the semester by the Director of Admissions. The “MW” shall not be counted in progress probation and dismissal calculations. “W” grades incurred after January 1, 1990 which meet the definition of “MW” may be changed to “W” upon petition and verification of military orders.

Grade Reports

Hartnell College does not issue final grade reports each semester. Semester grades are generally available three weeks from the last date of the semester. It is the student’s responsibility to check their grades at the end of each semester. The student may access their semester grades three ways:

1. Call the ASAP! (Admissions Services Available by Phone) at (831) 755-6755 to hear their grades from 5:00pm-8:00pm.
2. Access PAWS for students at www.hartnell.edu. Students may print their own grade report.
3. Stop by the Admissions & Records Office with a picture ID to obtain a printed copy of your semester grades.

Hartnell Transcripts

Upon written request, two official transcripts of record, bearing the seal of the Hartnell College and signature of the Director of Enrollment/Services, will be mailed without charge. Additional copies are $4.00 each, payable at the time of the request. Transcripts will not be released until all financial obligations to the College are cleared.

The official transcript includes courses taken at Hartnell College, and if transcripts from other colleges have been previously evaluated and accepted for credit at Hartnell, the Advanced Standing (Transfer Coursework) will show. However, official transcripts from those other colleges must be requested directly from those institutions.

Transcript requests are usually processed within a minimum of seven working days or less and may take up to 15 working days at the end of the semester.

Rush Service: Rush Service is available for an additional $10.00 fee per transcript. Students who designate their desire for Rush Service may have their transcripts processed within one working day of receipt of the request. We do not offer an overnight mail delivery service. We use regular U.S. mail service only. Rush Service is only available from the 3rd through the 18th week of each semester. No Rush Service is available from the last day of the semester through the 2nd week of the next term.

Students may print their own unofficial transcript using the internet (www.hartnell.edu) by accessing PAWS for students.

Grade Change Policy

The determination of a student’s grade by the instructor will be final in the absence of mistake, fraud, bad faith, or incompetency. Grades cannot be changed by retaking examinations or submitting additional coursework after the semester is completed unless an incomplete grade has been issued.

Students should submit a request in writing directly to the faculty member within one year after completing the course for which the grade change is being requested. If the faculty member is not available, the request should be submitted through the appropriate Academic Dean or appropriate Vice President; however, only the faculty member that assigned the original grade may authorize a change of grade.

Grade Change Petitions must be hand delivered by the instructor, Academic Dean, or appropriate Vice President to the Admissions & Records Office for processing.
Important Note: Except in the cases of mistake, fraud, bad faith, or incompetency, a grade assigned by an instructor is not a grievable issue as described by the California Education Code (Section 76224): “… when grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor of the course and the determination of the student’s grade by the instructor, and in the absence of mistake, fraud, bad faith, or incompetency, shall be final.”

Repetition of Courses
Hartnell College recognizes that the most recent completion of a course should most accurately reflect the students academic progress. Thus, students may repeat for credit courses taken at an accredited college in which substandard grades were recorded (D, F, and NC). All repetitions of the course must be completed at the same college.

The student must petition the Director of Admissions to count for grade point calculation only the most recently earned units, grades, and grade points when the student has repeated the course with an A, B, C, D, F, or CR. Both the original and subsequent grade will remain on the Permanent Record Card (transcript). Students are advised that in transferring to other institutions they may be held responsible for all units attempted.

There are occasions when students may need to repeat a particular course in which a grade has been received. Special circumstances warranting such repeats include:

1. The student is repeating the course to alleviate substandard work which has been recorded on the student's record. The term "substandard" shall be defined as course work for which the grade symbol “D”, “F” or “NC” has been recorded. The grade and credit earned in the second enrollment shall be used exclusively in determining the grade points earned for that particular course; or,

2. The student has been a significant lapse of time – at least two years -- since the student previously took the course. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average; or,

3. The District has determined that a student should repeat a course because there has been a significant lapse of time at least two years – since the student previously took the course. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average; or,

4. The District has determined/certified that each identified course is one in which the course content differs each time it is offered, and that the student who repeats it is gaining an educational experience for one of the following reasons:

A. Skills or proficiencies are enhanced by supervised repetition and practice within class periods; or

B. Active participatory experience in individual study or group assignments is the basic means by which learning objectives are attained; or

5. Significant changes in technology, methodology, and content have occurred. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average; or,

6. A higher grade is required by a specific educational program.

Under This Regulation:

A. A student wishing to repeat a course in which s/he received a substandard grade (D, F, or NC) must file a petition with the Office of Admissions and Records at the time of the second enrollment. No additional signatures are required. The grade and credit earned in the second enrollment shall be used exclusively in determining the grade points earned for that particular course.

B. A student wishing to repeat a class in which s/he received a grade of "C" or higher must obtain the approval of a Hartnell College Counselor and the Vice President of Student Services on the petition before filing it with the Office of Admissions and Records. Grades awarded for courses repeated under this circumstance shall not be counted when calculating a student’s grade point average.

Examinations
Final examinations are mandatory in all courses except laboratory courses. The examinations will include essays, term projects and/or term papers, and/or, where appropriate, use symbol systems and/or skill demonstrations by students. In laboratory courses, final examinations are given at the discretion of the instructor. Each final examination should be comprehensive and be based upon the entire semester’s work. Mid-semester and other examinations are encouraged.

Excess Units
A student who wishes to enroll in more than eighteen (18) units per semester, must review with a counselor and complete an Excess Units Petition. Counselor approval on the Petition is required.
Auditing Classes
The Governing Board of Hartnell College has adopted a policy authorizing the auditing of courses pursuant to Education Code 72252.3. The following regulations have been developed for course audit.

General Regulations
1. Auditors must be eligible for admission to the College as regularly enrolled students.
2. Students may audit a designated course only if they have previously taken the course and received a passing grade or must have repeated a performance, skill, or activity course three times, the maximum number permitted by state regulations.
3. Students enrolling for credit will have priority in all credit classes. Auditors are required to attend the first class meeting. However, auditors will only be permitted to register for the course at the conclusion of the late registration period and on a space available basis, but no later than Friday of the second week of classes.
4. Faculty members instructing audit eligible courses have the right to refuse auditors.
5. No transcript of record will be maintained for audit classes.
6. No transfer from audit to credit status or the reverse will be permitted.
7. A non-refundable audit fee of $15 per unit will be payable at the time of registration as an auditor.
8. Students enrolled in ten or more credit units will not be charged a fee for auditing three or fewer units per semester.
9. Regular material fees and/or course costs will be charged to auditors.
10. Auditors will be allowed to purchase parking permits.
11. Auditors will not be charged the regular Enrollment Fee which is paid for credit enrollment.
12. The non-resident Tuition Fee will not apply to auditors.

Auditing Procedures
1. A prospective auditor will bring the “Petition to Audit” form to the instructor after the conclusion of the add/drop period.
2. If the instructor approves, s/he signs the form.
3. The auditor then secures the signature of the Area Dean.
4. The auditor returns the completed petition to Admission and Records.
5. The auditor pays a non-refundable audit fee of $15.00 per unit payable at the Cashier’s Office and will be charged for all instructional materials.

Credit by Examination (Challenging a Course)
As authorized by the Administrative Code, Title V, Section 55753, credit by examination may be granted based on the following:
1. Students petitioning for Credit by Examination must have completed a minimum of six semester units at Hartnell College, or must present a copy of their Certificate of Articulated Course Completion attached to this petition to have this requirement waived.
2. Students must have a cumulative grade point average of 2.0 or better.
3. A Completed Petition for Credit by Examination must be submitted to receive college credit for a course listed in the College Catalog. The petition must indicate the experience, which has prepared the student to take the examination.
4. Student must meet all course prerequisites.
5. Student must pay all fees associated with this Credit by Examination.

PROBATION AND DISMISSAL
Students who have attempted 12 or more units with a grade point average of less than 2.0 will be considered scholastically deficient. There are three conditions of deficiency:
1. Probation (Academic and Progress)
2. Subject to Dismissal
3. Dismissed

Placement on Probation
Academic Probation
1. Students with 12 or more attempted units whose grade point average (GPA) for all work attempted at Hartnell College falls below a 2.0 (“C”) will be placed on academic probation.

Progress Probation
Students who have 12 units or more attempted, but have failed to complete more than 50% of the cumulative number of units attempted, due to entries of “W”, “I”, and “NC” will be placed on progress probation.

Explanation: Student grade reports carry the designations “UA” and “UC”.

Definition of Units Attempted (“UA”): All units in which the student was enrolled after the “No Grade of Record” drop date of a semester.

Definition of Units completed (“UC”): All units in which the student received a grade of A, B, C, D, or CR.

Responsibility of Probationary Students
1. Probationary students must meet periodically with their counselors so that their academic progress may be reviewed.
2. Probationary students will be advised to take a program of studies that is designed to assist them in raising their GPA.

Removal from Probation
Academic: Students will be removed from academic probation upon earning a 2.0 (“C”) average or better in all college work attempted at Hartnell College; and when the overall Grade Point Average for all college work attempted equals a 2.0 (“C”) or better.

Progress: Students will be removed from progress probation once their cumulative units completed is 50% of the cumulative units attempted.

Probationary students’ grade reports will indicate when they have been removed from such status.
Subject to Dismissal
For “Subject to Dismissal” purposes, consecutive semesters are based upon student's enrollment. If not enrolled during the Spring semester, then Fall followed by Summer would be consecutive.

Progress: Students on progress probation will be subject to dismissal after two consecutive semesters of progress probation.

Academic: A student who is on academic probation shall be subject to dismissal when the student's earned cumulative GPA is below 2.0 in all units attempted for two (2) consecutive semesters.

Dismissed
A student shall be dismissed when the student's earned cumulative GPA is below 2.0 for three (3) consecutive semesters.

Standards for Dismissal
For purposes of this section, semesters shall be considered consecutive on the basis of the student's enrollment pattern rather than the calendar pattern. For example, the semesters of a student enrolled fall, not spring, but again fall are considered to be consecutive.

A student who is on academic probation shall be subject to dismissal if the student earned a cumulative GPA of 1.99 or below in all units attempted for each of the three consecutive semesters which were graded on the basis of the grading scale.

A student who has been placed on progress probation shall be subject to dismissal if the percentage of units in which the student has been enrolled for which entries “W,” “I,” and “NC” are recorded in at least three consecutive semesters reaches or exceeds fifty percent (50%).

Readmission
Students who have been dismissed from Hartnell College or other accredited collegiate institutions may apply at the Admissions and Records Office for readmission after one semester of nonattendance. Students so applying may be readmitted after completing a petition and an educational plan with their counselor and the approval of the Vice President of Student Services.

Students readmitted who have a grade point average of less than 2.0 (“C”) for the term immediately following readmission shall be dismissed from the College and not be eligible for readmission for a period of one academic year.

Note: Students readmitted after dismissal from Hartnell College or other accredited collegiate institutions may be restricted in the type of classes and the number of units taken. In extreme cases in which dismissal resulted from extenuating circumstances, students ineligible for admission under the above regulations may appeal via the Vice President of Student Services, for specific consideration. Such extenuating circumstances shall be those acute medical, family, or other personal problems which rendered normal academic functioning unlikely or impossible.

ATTENDANCE POLICY
Regular attendance and consistent study are student responsibilities and the two factors which contribute most to a successful college experience. A College student is expected to attend all of his/her class sessions. It is the responsibility of each student to know the attendance and absence policy of each class in which he or she is enrolled.

Failure to attend class can result in a lower grade or dismissal from class. Any student who stops attending a class without officially dropping it in the Admissions & Records Office may receive a grade of “F”.

The College's attendance policy relies on the following five basic premises:

1. Students who do not attend the first class meeting may be dropped and may be replaced by other students unless the student notifies the instructor in advance.

2. Any absence from class is detrimental to a student's progress in that class; therefore, an "excused" absence is no less serious than "unexcused." Participation in curricular and extra-curricular College activities is acknowledged to be an integral part of a student's total educational experience. Prior approval from the instructor is necessary for this participation not to be considered an absence.

3. Any lack of attendance which leads an instructor to judge that unsatisfactory progress is being made may result in the student being dropped. Absence from a full semester class in excess of two weeks (consecutive or non-consecutive) may result in the instructor dropping the student. That is, a student may be dropped after missing one more class meeting than twice the number of class meetings per week.

Absences in excess of one week (consecutive or non-consecutive) from a Summer session class, or any regular semester class from 6-17 weeks in duration, may result in the instructor dropping the student. That is, a student may be dropped after missing one more class meeting than the number of class meetings per week.

4. When a student is dropped due to the attendance policy, the assignment of a “W” will be based on the drop occurring before the fourteenth week for a full semester class. After the fourteenth week, no drops are allowed, and the only grades given will be: A, B, C, D, F, NC, CR. It is the student's responsibility to withdraw formally from classes by the last day to withdraw with a "W." Any student who stops attending a class without officially dropping it in the Admissions & Records Office may receive a grade of "F".

5. If the student has been dropped due to the attendance policy, the instructor may reinstate the student only if all of the following conditions are met:
   a. the student had been doing satisfactory work,
   b. in the judgment of the instructor, the student has a reasonable chance of passing the course, and
   c. the student verifies extenuating circumstances beyond his/her control.

The student must complete a student reinstatement form with supporting documentation. Student reinstatement forms can be obtained from the Admissions and Records Office.

If the student is denied reinstatement, the student may petition the Vice President for Instruction. Student petitions can be obtained from the Office of Instruction.
STUDENT CONDUCT and DUE PROCESS

Student Rights

The Student Rights, Responsibilities, and Grievance Procedures Handbook is currently under revision, and should be approved in the 2005-2006 year. Please check with the Vice President for Student Services Office for the most recent policy/handbook.

In joining the academic community, students enjoy the right of freedom to learn and share responsibility in exercising that freedom. Students, as well as other members of the academic community, are expected to conduct themselves in accordance with the standards of the College which are designed to preserve its educational purposes. When a student is charged with misconduct such a charge will be processed in accordance with the College’s Student Conduct and Due Process Policy in order to protect the student’s rights and the College’s interest.

Copies of the Students’ Rights, Responsibilities, and Grievance Procedures are available from the Vice President of Student Services.

Student rights and responsibilities are posted at various locations throughout the campus.

Privacy Rights of Students

Students are advised that the College maintains a policy pursuant to Federal and State law providing access to student records only upon written request of students or former students. The College does maintain directory information which is defined as:

1. Student participation in officially recognized activities and sports including weight and height and high school of graduation of members of athletic teams.
2. Degrees, awards, and scholarships received by students, including honors and President’s or Dean’s List recognition.
3. Names, addresses, phone and fax numbers of graduates and former students for publication in the College alumni directory and only with their consent.

This directory information can and will be made public unless individual students request in writing to the Vice President of Student Services that their name be removed from the directory information.

Unless authorized by the individual student or required by judicial order, the College will not provide access to student records or acknowledge student enrollment to other persons, including parents. Specific written authorization by the student is needed to release records, including the forwarding of transcripts.

Specific exceptions to this statement on accessibility of the records are spelled out in the policy. The detailed policy is not reproduced here, but is available from the Vice President of Student Services.

Students (and former students) are also advised that they have a right to challenge the content of their records if they feel that such records contain inaccurate, misleading, or otherwise inappropriate information. Contact the Admissions and Records Office.

Student Grievances

The Student Rights, Responsibilities, and Grievance Procedures Handbook is currently under revision, and should be approved in the 2005-2006 year. Please check with the Vice President for Student Services Office for the most recent policy/handbook.

Student Grievances include:

1. Charges of discrimination on the basis of race, color, religion, sex, sexual orientation, age, disability, marital status, ancestry, national origin, or veteran status.
2. Charges of arbitrary imposition of sanctions without proper regard for individual rights and due process
3. Charges of prejudicial or capricious decisions in the academic evaluation of a student’s performance
4. Other complaints as determined in the legislation policies stated above

The general procedures for a student with a grievance to follow are:

1. Discuss the problem or complaint directly with the staff or faculty member against whom the student has the grievance.
2. If unresolved, meet with the appropriate supervisor or dean.
3. If further information or pursuit of the grievance is required, as determined by the student or supervisor, the supervisor shall refer the student in order of listing to the Vice President of Student Services.

Note: Records of all complaints that are not resolved at lower levels must be kept on file with the Vice President of Student Services.

Grievances of Hartnell College students concerning Hartnell College personnel and/or procedures shall be handled in compliance with Title IX, AB 803, Section 504 of P.L. 93-112, the California Education Code, and Hartnell College policy. Students shall be granted and assured all rights and procedures inherent in the above. Hartnell College shall make a comprehensive effort to ensure that all students are informed of and, as applicable, assisted with these procedures in a timely manner.

Policy on Cheating

The Student Rights, Responsibilities, and Grievance Procedures Handbook is currently under revision, and should be approved in the 2005-2006 year. Please check with the Vice President for Student Services Office for the most recent policy/handbook.

Dishonesty includes, but is not limited to, in-class cheating, out-of-class cheating, plagiarism, knowingly assisting another student in cheating or plagiarism, or knowingly furnishing false information to College staff, faculty, administrators or other officials. Following are definitions of in-class cheating, out-of-class cheating, plagiarism, and furnishing information. These are not all-inclusive, and the list itself is not meant to limit the definition of cheating to just those mentioned.

a. In-class cheating: during an examination or on any work for which the student will receive a grade or points, unauthorized looking at or procuring information from any unauthorized sources or from any other student’s work.

b. Out-of-class cheating: unauthorized acquisition, reading or knowledge of test questions prior to the testing date and time: changing any portion of a returned graded test or report and resubmitting as original work to be regarded; or presenting the work of another as one’s own for a grade of points.

c. Plagiarism: unauthorized use of expression of ideas from either published or unpublished work(s) as a student’s own work for a grade in a class. This also includes the violation of copyright laws, including copying of software packages.

d. Furnishing false information: forgery, falsification, alteration, or misuse of College documents, records, or identification in class or in laboratory situations.
Instructor Disciplinary Action When Cheating/Plagiarism Occurs

When a student is charged with plagiarism or cheating related to a class, and the instructor has reasonable proof or documentation or the student admits the violation, the instructor may select one or more of the following options:

a. Issue an oral or written notification and warn the student that further acts of this sort will result in additional disciplinary action.

b. Issue a NC or a failing grade (F) for the assignment in question.

c. Issue a NC or a failing grade for the course. The student will not be permitted to drop the class and will receive an F or NC for the semester grade.

d. Drop the student from the class and assign a withdrawal (W) for the class up to the last day to withdraw from the course. Students dropped after the stated date will be assigned a failing grade (F) for the class, pursuant to the uniform grading policy.

The Faculty will refer the case to the Vice President of Student Services (VPSS) for record of the violation. The VPSS may consider additional sanctions as outlined in the “Penalties for Student Misconduct” in cases of continued plagiarism or cheating.

The student has a right to appeal any of these disciplinary actions and the right to have the case reviewed by the Hearing Board. If the student wishes to appeal, he/she should contact the Vice President for Student Services (VPSS).

CODE OF STUDENT CONDUCT

The Student Rights, Responsibilities, and Grievance Procedures Handbook is currently under revision, and should be approved in the 2005-2006 year. Please check with the Vice President for Student Services Office for the most recent policy/handbook.

The District has an obligation to specify those standards of behavior essential to its educational mission and campus life. The following types of misconduct for which students are subject to disciplinary sanctions apply at all times on campus, as well as to any off-campus functions sponsored or supervised by the College:

1. Continued disruptive behavior, continued willful disobedience, habitual profanity or vulgarity; or the open and persistent defiance or abuse of College personnel.

2. Assault, battery, or any threat of force or violence upon students or College personnel.

3. Theft of, or damage to, the property of the College, its officers, employees, students, or visitors. Such actions may include the imposition of fees for the loss, damage, or defacement of books and equipment; the cancellation of registration; the withholding of grades or transcript; and, in extreme cases, legal action.

4. Interference with the normal operations of the College (e.g., obstruction or disruptions of teaching, research, administration, disciplinary procedures, pedestrian, or vehicular traffic, or other College activities, including its public service functions or of other authorized activities on College premises).

5. Unauthorized entry into or use of College facilities.

6. Cheating, plagiarism, or knowingly furnishing false information in the classroom or to a College officer. (see Policy on Cheating).

7. Forgery, alteration, or other misuse of College documents, records, or identification.

8. Failure to pay just debts such as fines or loans, and failure to return borrowed property when reasonable attempts have been made to retrieve it.

9. Disorderly, lewd, indecent, or obscene conduct or expression on any College owned or controlled property or at any College sponsored or supervised function.

10. Physical or verbal abuse of any person group, or conduct which intimidates, threatens, or endangers the health or safety of any person or group.

11. Acts of physical, verbal or sexual harassment. The District is committed to creating an educational environment that does not tolerate harassment or discrimination. At the same time, the College must protect the Constitutional Rights of free expression under the First Amendment.

12. Hazing or any acts of discrimination that injures, degrades, or disgraces another person or group.

13. The use of alcohol or unlawful drugs, or the distribution, sale, or possession of such alcohol or other drugs on College property, or at events sponsored by the College. (As defined in the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226).

14. Unauthorized possession or use of firearms, explosives dangerous chemicals, or other weapons on College property or at College sponsored or supervised activities.

15. Gambling in any form.

16. Smoking in classrooms or other unauthorized campus areas. Smoking is not permitted in the interior of any building at Hartnell College.

17. Failure to comply with lawful directions of College officials, faculty, staff, or campus safety officers who are acting within the scope of their duties.

18. Violations of District policies or College regulations concerning the registration of student organizations, the use of District facilities, or the time, place, and manner of public expression.

19. Violation of other applicable Federal and State statutes and College rules and regulations.
Hartnell College, 85th Anniversary

The following information is provided in compliance with the federal Student Right-to-Know (SRTK) and Campus Security Act of 1990, which requires all institutions of higher education to disclose information about program completion. The information presented here shows the three year academic outcomes for all first-time, full-time students who were first enrolled at Hartnell College in fall 1997 with educational goals of earning a degree, a certificate, or transferring to a four-year institution of higher education.

Please note that this cohort represents only 3% of all students enrolled at Hartnell College during the fall 1997 semester. Under the SRTK criteria, program completion is defined as earning a degree, a certificate, or completing 56 transferable units with a grade-point-average of 2.0 or higher within three years (fall 1997 through spring 2000). It excludes all part-time students and those students who have educational goals of improving basic skills, upgrading job skills, maintaining licenses, or who are taking classes for personal enrichment. The table at the bottom of the page provides the completion and transfer rates for Hartnell College. The statewide community college averages are provided for comparison.

The table shows that Hartnell College’s official SRTK completion rate for the 1997 SRTK cohort is 42%. The statewide average for completion is 33%. The official SRTK transfer rate for Hartnell College is 21%, while for the state the average is 26%. However, this figure substantially under represents the success of Hartnell College in preparing its students for transfer to four-year institutions.

The SRTK methodology only allows each student to be counted once, even though a student can both complete a degree and transfer to a four-year institution. Students who both complete a degree and transfer are counted only in the completion category—they are not counted in the transfer category.

The SRTK process tracks other student outcomes besides completion and transfer. At the end of the three year tracking period, each student is uniquely placed into one of five categories: completion, transfer, still enrolled, left in good standing, or left in poor academic standing. For Hartnell College, the real transfer rate, meaning those students in the SRTK cohort who actually transferred to UC and CSU campuses is 21%. Moreover, Hartnell College’s combined completion and transfer rate of 47% for the SRTK cohort in comparison to the state average of 39%. In addition to the completion and transfer rates discussed above, which account for approximately 62% of the students in the SRTK cohort, another 15% left in good standing, and 22% are still enrolled. Less than 1% of the students left in poor academic standing. This means that 99% of the students in this cohort have achieved some degree of academic success while at Hartnell College.

This Student Right-to-Know Program Completion information is also available in the Hartnell College Schedule of Classes, and on the Hartnell College web site at the following URL: hartnell.cc.ca.us/institutional_research/srtk.html. For more information, please contact the Office of Institutional Research and Planning at (831) 755-6972.

<table>
<thead>
<tr>
<th>Group</th>
<th>SRTK Completion Rate</th>
<th>SRTK Transfer Rate (Excluding Completers)</th>
<th>UC &amp; CSU Transfer Rate (Including Completers)</th>
<th>Combined Completion and Transfer Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartnell College</td>
<td>42%</td>
<td>21%</td>
<td>21%</td>
<td>47%</td>
</tr>
<tr>
<td>California Community</td>
<td>33%</td>
<td>26%</td>
<td>N/A</td>
<td>39%</td>
</tr>
<tr>
<td>College Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. The 1997 cohort follows first-time, full-time students who first enrolled in fall 1997, for three years (through spring 2000).
2. SRTK Completion is defined as earning a degree, certificate, or completing 56 transferable units with a grade-point-average of 2.0 or higher within three years.
3. SRTK Transfer is defined as any student who transferred to another two-year or four-year institution, without completing a degree, certificate, or becoming transfer prepared within three years.
4. The transfer rate in this column reflects the percent of students in the SRTK cohort who transferred to UC and CSU campuses within three years.
5. The Combined Rate refers to the percent of students in the SRTK cohort who either completed a degree, certificate, became transfer prepared, or transferred to a UC or CSU within three years.
6. Still enrolled refers to those non-completing students in the cohort who were still enrolled at the end of the three year period.
7. Left in good standing refers to non-completing students no longer enrolled who were in “good academic standing” at the time they last enrolled.
8. Left in poor academic standing refers to the total cohort minus the students in all other categories.
INSTRUCTIONAL PROGRAMS

Educational Programs at Hartnell College are varied and designed to meet the specific needs of the District residents.

General Education

General Education is that part of education which is concerned with the common knowledge, skills, and attitudes needed by each individual to be effective as a person, a family member, a worker, and a citizen. Such courses require students to cultivate the disciplines of scholarship and to develop the attitudes necessary for academic achievement in upper-division work. Hartnell College has a full articulation agreement with the California State University System and the University of California Board of Regents, which certifies completion of lower division general education requirements.

Counseling Education Programs

In addition to providing counseling services to students, counselors at Hartnell College provide instruction in a wide range of topics. Courses are offered in which a variety of teaching methods, including mechanical and electronic devices, self-instructional materials, and similar techniques are used.

Special Occupational Programs

Nursing

Hartnell College offers students the opportunity to major in Nursing (AA Degree) leading to eligibility to write the licensure examination and become a Registered Nurse.

Primary Care Assistant

In cooperation with Foothill College and Stanford Medical School the academic prerequisites for the Stanford Physicians Assistant Program can be completed at Hartnell Community College. The clinical components are available at Stanford University in concert with the preceptor (medical doctor) assigned to sponsor the candidate.

Animal Health Technology

The Animal Health Program offers students the opportunity to complete their requirements as Registered Animal Health Technicians while pursing an associate degree in the same major.

Bilingual Teacher Grants

The California Bilingual Teacher Grant Program (A.B. 2615), replaces the Bilingual Teacher Corps Transfer Program. Student Aid Commission grants will be awarded to undergraduate and graduate students enrolled in approved bilingual teaching programs or in programs leading to bilingual certificates. Applicants for Bilingual Teacher Grants must demonstrate financial need and oral proficiency in the target language. The Commission’s Bilingual Teacher Grants may be used for tuition, fees, books, and subsistence. However, the grants are supplemental to other state and federal financial aid programs.

For additional information, students are advised to see personnel in the Child Development Center.
Apprenticeship Programs
In cooperation with the Joint Apprenticeship and Training Committees of Monterey/Santa Clara/Santa Cruz Counties, the College operates apprenticeship programs, whereby students can prepare for the skilled labor force. At the present time, the only active apprenticeship program is in the electrician discipline. Apprentices are employed full time during the day and take related classroom instruction at the IBEW Local Union 234, Castroville, California.

Cooperative Work Experience Program
Cooperative work experience provides a bridge between the classroom and on-the-job training involving the student, faculty, College, and an employer. Students work in a job related to their career interest on a part-time basis while attending classes at Hartnell College. The program provides a gradual transition from formal instruction to career, allows students to apply knowledge gained in the classroom to the practical world of work, and permits students the opportunity to test their interest in and suitability for the field of endeavor.

Center for Teacher Education
CFTE was established to assist individuals who want to pursue a career in teaching. Selected students are offered a variety of support services such as, academic college planning, information about transfer and financial support as well as counseling and guidance. Candidates participate in activities through the Future Teachers Club, conferences, educational meetings, cultural events, and career fairs. Students enrolled in the program are expected to participate in 30 hours of classroom field experience and prepare to take the CBEST exam. CFTE assists with test preparation and field placement opportunities.
Assistance is also provided to those who have attained advanced degrees in teaching or non-teaching fields outside the state or country.
CFTE works closely with other career ladder teacher training programs on campus and students may qualify for several programs to assist them in their teaching pathway.

Selected Topics
Selected Areas of study, which are intended primarily for courses offered on an experimental or trial basis, may be offered through any discipline contained in the catalogue by using the number 39 (or 139 or 239). The same content may not be offered more than three time under Selected Topics. Selected Topics may be repeated for credit if taken with different course content.

COURSE NUMBERING
All courses numbered 199 and below are Associate Degree credit courses and apply toward the 60 unit graduation requirement, either as meeting a general education requirement or as an elective.
All courses numbered 200 or above are non-degree credit courses and do not apply toward the 60-unit graduation requirement for the Associate Degree. All courses numbered in the 300 series are non-credit.
Most courses numbered 1 through 99 carry college transfer credit to the California State University system (CSUS) and the University of California system (UC). Consult a counselor or the counseling office staff for the current University of California Transfer Course Agreement (TCA) and articulation agreements with individual California State University campuses.
Courses numbered 100 through 199 may be accepted for transfer credit at some CSU campuses and some private colleges in certain majors, especially if provided for in an articulation agreement. Courses numbered 200 and above are not intended to qualify for transfer credit to four-year colleges and universities. Some of these courses are remedial in nature while others are a part of a specialized in-service program for an occupational field.
The credit value of each course in semester units is indicated by an Arabic numeral in parentheses following the course title:
History 17A (3)
DEGREE PROGRAMS

Associate Degree programs allow students the benefits of a general college education and the option of choosing occupational training, liberal arts, or concentration in the discipline in the College. Students who wish to receive an Associate Degree must submit a Petition for Associate Degree/Certificate to the Admissions and Records Office to have college work officially evaluated.

CERTIFICATE PROGRAMS

Hartnell College offers a variety of programs designed to develop and upgrade vocational proficiency and for which certificates are awarded. Students must submit a Petition for Associate Degree/Certificate of Achievement to be evaluated for eligibility to be awarded the certificate. Deadlines for filing the Petition are noted in the Schedule of Classes and are posted in the Admissions and Records Office. In all programs, it is required that at least half of the required number of units be taken at Hartnell College.
ASSOCIATE OF ARTS OR SCIENCE DEGREE

General Information - 2005/06 Graduation Requirements for the Associate Degree

Graduation Evaluation
Students who wish to receive an Associate Degree must submit a Petition for Associate Degree/ Certificate to the Admissions & Records Office to have college course work officially evaluated. Transcripts from all institutions previously attended must be submitted as part of the graduation evaluation process. The evaluation compares completed college work with the curriculum requirements for the year that the student began continuous enrollment at Hartnell.

Catalogue Rights
Provided that continuous enrollment is maintained students may elect the degree or certificate requirements in effect at 1. the time of entrance to Hartnell College, or 2. any catalogue year thereafter.
Continuous enrollment is defined as attendance at Hartnell College during both Fall and Spring semesters each year. Any academic report symbol (A through F, CR, NC, I, IP, RD, W) shall constitute enrollment.

Double Major
Although students may not receive two associate degrees simultaneously, they may concurrently complete the requirements for a second major. An Associate of Arts or Associate of Science Degree, with a double major, can be earned by completion of all General Education, Competency Requirements, and course work required for both majors: a single diploma is issued with both majors listed. The General Education and General Studies majors may not be included as part of the Double Major.

Additional Associate Degree
Having received an A.A., A.S., Bachelor’s Degree or higher, a student may qualify for an A.A. or A.S. Degree in other fields (with the exception of an A.A. Degree in General Education or General Studies) provided a minimum of 12 units in residence are completed after the previous degree was awarded.

Minimum Requirements for Associate Degree

Option A: A.A. - General Studies
I. Units/Grade Point Average
II. Residence
III. Competency Requirements
IV. General Ed (21.0 Units)
V. Major: select any additional 18.0 units of General Education course work from the Associate Degree General Education list.

Option B: A.A. - Transfer Studies
I. Units/Grade Point Average
II. Residence
III. Competency Requirements
IV. G.E. (3.0 Units in Ethnic Groups in the United States only). Major course work (V. Below) satisfies remaining G.E. Requirements.
V. Major: completion of:
A. CSU GE Breadth
B. IGETC/UC
C. IGETC/CSU

Option C: A.A. or A.S. in a Specified Major
I. Units/Grade Point Average
II. Residence
III. Competency Requirements
IV. G.E. (21.0 Units)
V. Major: completion of requirements listed by major in the appropriate catalogue.

I. Units/Grade Point Average
A minimum of 60.0 Semester Units with a 2.0 (C) grade point average in all degree-applicable units. Only courses numbered 1-199 may apply toward the Associate Degree.

II. Residence
Of the sixty units required for graduation the student must have completed one of the following residence requirements: 1. A minimum of 45 units at Hartnell if not in attendance during the semester of graduation.
2. A minimum of 12 units in residence if in attendance at Hartnell during the semester of graduation.

III. Competency Requirements.
1. Competency in Written Expression and Reading
Completion of English 1A with a grade of C or better.
The English 1A competency in written expression may also be counted to meet other minimum requirements for the Associate Degree. Students in majors requiring 60 or more units should take an English 1A focused on a special perspective thus fulfilling the Ethnic Groups in the United States Graduation Requirement.

2. Competency in Mathematics
Completion of Math 121 (5 units) or Math 151 with a grade of C or better or completion of any math course in which Math 121 is a prerequisite with a C or better or a score of 70% or greater on the Mathematics Competency Exam. No units will be granted for the Math Competency Exam. All students must meet the 6.0 unit Communication and Analytical thinking requirement.
Note: A maximum of 5 units of Math 121, Elementary Algebra, may be applied towards the AA or AS Degree Requirements.

IV. General Education
A minimum of 21 units which shall include courses in each of the following areas:
1. Natural Sciences (3 units)
2. Social & Behavioral Sciences (3 units)
3. Humanities (3 units)
4. Ethnic Groups in the United States (3 units)
5. Language and Rationality (9 Units)

V. Major
Refer to requirements listed under Option A, B, or C.
## GENERAL EDUCATION REQUIREMENTS

### NATURAL SCIENCES  
(3 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT1</td>
<td>Intro. to Anthropology: Physical Concepts</td>
</tr>
<tr>
<td>AST1</td>
<td>Introduction to Astronomy</td>
</tr>
<tr>
<td>AST1L</td>
<td>Astronomy Laboratory</td>
</tr>
<tr>
<td>BIO1</td>
<td>Fundamental Biological Concepts</td>
</tr>
<tr>
<td>BIO2</td>
<td>General Zoology</td>
</tr>
<tr>
<td>BIO3</td>
<td>General Botany</td>
</tr>
<tr>
<td>BIO5</td>
<td>Human Anatomy</td>
</tr>
<tr>
<td>BIO6</td>
<td>Introductory Physiology</td>
</tr>
<tr>
<td>BIO6L</td>
<td>Physiology Laboratory</td>
</tr>
<tr>
<td>BIO7</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>BIO10</td>
<td>General Biology</td>
</tr>
<tr>
<td>BIO11</td>
<td>Introductory Human Anatomy and Physiology</td>
</tr>
<tr>
<td>BIO20</td>
<td>Field Biology/Natural Science</td>
</tr>
<tr>
<td>BIO27</td>
<td>Principles of Microbiology</td>
</tr>
<tr>
<td>BIO30</td>
<td>Marine Biology</td>
</tr>
<tr>
<td>BIO42</td>
<td>Human Biology</td>
</tr>
<tr>
<td>BIO47</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIO48</td>
<td>Environmental Science</td>
</tr>
<tr>
<td>CHM1A</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>CHM1B</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>CHM12A</td>
<td>Organic Chemistry</td>
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<tr>
<td>CHM12B</td>
<td>Organic Chemistry</td>
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<tr>
<td>CHM22</td>
<td>The Science of Chemistry</td>
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<tr>
<td>CHM23</td>
<td>Organic and Biological Chemistry for Health Sciences</td>
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<tr>
<td>CHM60</td>
<td>Principles of Chemistry</td>
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<tr>
<td>GEG1</td>
<td>Introduction to Geography: Physical Elements</td>
</tr>
<tr>
<td>GEL1</td>
<td>Physical Geology</td>
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<tr>
<td>GEL2</td>
<td>Introduction to Geology</td>
</tr>
<tr>
<td>GEL6</td>
<td>General Geology-Historical Geology</td>
</tr>
<tr>
<td>GEL25</td>
<td>Environmental Geology</td>
</tr>
<tr>
<td>GEL36</td>
<td>California Geology</td>
</tr>
<tr>
<td>MET1</td>
<td>Meteorology-Weather and Climate</td>
</tr>
<tr>
<td>OCN1</td>
<td>Oceanography</td>
</tr>
<tr>
<td>PHY2A</td>
<td>General Physics</td>
</tr>
<tr>
<td>PHY2B</td>
<td>General Physics</td>
</tr>
<tr>
<td>PHY4A</td>
<td>Physics-Mechanics and Properties of Matter</td>
</tr>
<tr>
<td>PHY4B</td>
<td>Physics-Electricity and Magnetism</td>
</tr>
<tr>
<td>PHY4C</td>
<td>Heat, Sound and Light</td>
</tr>
<tr>
<td>PHY10</td>
<td>Introduction to Physics</td>
</tr>
</tbody>
</table>

### SOCIAL AND BEHAVIORAL SCIENCES  
(3 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ1</td>
<td>Introduction to AJ/CP1</td>
</tr>
<tr>
<td>ADJ51</td>
<td>Criminology</td>
</tr>
<tr>
<td>ANT1</td>
<td>Intro. to Anthropology: Physical Concepts</td>
</tr>
<tr>
<td>ANT2</td>
<td>Intro. to Anthropology: Cultural Concepts</td>
</tr>
<tr>
<td>ANT3</td>
<td>Introduction to Archeology</td>
</tr>
<tr>
<td>ANT10</td>
<td>California Indians</td>
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<tr>
<td>ANT15</td>
<td>North American Indians</td>
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<tr>
<td>ANT20</td>
<td>Cultures of Mexico</td>
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<tr>
<td>BUS32</td>
<td>Introduction to Business</td>
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<tr>
<td>COU35</td>
<td>Intercultural Communication</td>
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Social and Behavioral Sciences (continued)

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(3 Units)

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**NOTE:** Spanish 1X does not satisfy this requirement.
### ETHNIC GROUPS IN THE UNITED STATES
(3 Units)

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**NOTE:** Students with majors in AHT and RN requiring sixty or more units should take English 1A with Special Perspectives to fulfill this requirement. See section on competency requirements for further explanation.

**NOTE:** A maximum of 5 units of Math 121, Elementary Algebra, may be applied towards the AA or AS Degree Requirements.
TRANSFER PROGRAM

Transfer information has been compiled to assist Hartnell College students who intend to transfer to another college or university. Students may earn their Associate in Arts as a transfer student by completing the General Education courses as prescribed by the state of California and a college major. Each of the public four-year colleges and universities in California will accept the maximum of 70 semester units of credit in transferable courses completed in the community colleges. There are many independent colleges and universities as well to which Hartnell students transfer. Each institution has its own requirements for admission and for junior standing. To prepare for continued education, students must decide which college they will attend and learn the requirements of that particular college.

Each four-year institution has its own basic pattern of lower-division requirements regarding both general education and specific majors. These requirements vary from college to college and often change from year to year. Therefore, students should take advantage of the publications and services available.

A university may be made up of a number of colleges. The college in which one will do work depends upon the field or area of major. This means that in any four year institution it will be necessary for a student to fulfill three types of requirements: first, the general university requirements for graduation; second, those determined by the college under which the major department is classified; and third, those specified by the department in which the student majors. This three-part combination of requirements may be complex and necessitates that transfer students seek strong advising to be assured the courses in which they enroll meet all their transfer college’s requirements.

Hartnell College has course transfer credit (articulation) agreements with most California State Universities and Colleges, and the University of California. In general Hartnell courses numbered 1 to 99, inclusive, or designated A, B, C or D are accredited to colleges and universities. However, many courses numbered 100 and above are transferable in certain disciplines at some colleges. The student should check carefully with his/her counselor or the institution s/he plans to attend. Articulation agreements are also made for many of the career education programs offered, such as Agriculture, Administration of Justice, Business Administration, Computer Science Systems, and Nursing Baccalaureate Programs.

Students are cautioned to seek assistance in planning programs for transfer. Not all Hartnell College courses transfer to the State Universities and Colleges and the University of California. Admission procedures of the State Universities and Colleges require students who are planning to transfer to use only transferable college credit courses for both admissions and graduation purposes. Students should consult a counselor in planning their programs. Articulation agreements for many California Colleges and Universities can be found at www.assist.org.

Program Changes

Transfer Programs and Associate Degree requirements are subject to change without notice. Information about course offerings, fees, refunds and college policies published in this Catalog is subject to change. It may be necessary to cancel courses or programs without prior notice in this publication. Students should consult a Hartnell counselor for information.

Guaranteed Admissions Program

Hartnell College has established a Guaranteed Admission Program with the following Universities: UC Davis, UC Riverside, UC Santa Cruz, CSU San Francisco, CSU Monterey Bay, San Jose State University, Chapman, Golden Gate, and Santa Clara University. The Guaranteed Admission Program works this way: upon completion of 30 transferable units at the required GPA, the student signs an agreement under the auspices of Hartnell College and one or more of the above listed universities; once the student completes specific requirements and 60 transferring units, he or she can transfer to the college or university where the agreement was written.

For further information, contact the Transfer Center at (831) 759-6007 or go to the Transfer Center, Room, HCC-119.
## CALIFORNIA ARTICULATION NUMBERING SYSTEM (CAN)

Students who intend to transfer to a California State University or a University of California campus should be aware of a special course numbering system called CAN (California Articulation Number). Articulation refers to the process in which a university accepts certain courses from a community college as equivalent to courses at the university.

The CAN System provides a cross reference number for courses which have been evaluated by faculty and determined to be acceptable “in lieu of” each other. Only lower division, transferable, introductory courses commonly taught on two and four-year college and university campuses are included in the CAN System.

The CAN System is the common numbering system in California. Each campus retains its own course numbers, prefixes, and titles. An example of the CAN numbering system is Economics 1 [CAN ECON 2]. The number 1 is only Hartnell’s number. “ECON 2” is the designation that is used to number the equivalent/articulated course in the CAN system.

The CAN designation is assurance that the course or sequence of courses will be accepted in lieu of an identically designated CAN course or sequence at all participating campuses in California.

CAN numbers are listed in parenthesis after each course description in this catalogue and class schedules.

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### Note (*)

- Newly-qualified course, or course that has requalified.
CALIFORNIA STATE UNIVERSITY SYSTEM - ADMISSION REQUIREMENTS

Transfer admission eligibility is based on transferable college units attempted, rather than all college units attempted. California Community College transfer students should consult their counselor for information on transferability of courses. Hartnell College provides the lower division general education courses required for the BA/BS Degree, however, each campus has specific requirements and regulations. See the C.S.U. Breadth List in this catalogue.

General Education-Breadth Requirements for California State University 2005/06

Students planning to graduate from one of the 21 campuses of the California State University (CSU) system must complete 48 semester units of general education breadth courses. Hartnell may certify 39 semester units of lower division (freshman & sophomore) level courses. Nine (9) semester units of general education coursework must be completed at the upper division level after transfer. Do not use this as a guide for the University of California (UC) campuses or for private colleges and universities; please consult the catalogue of the school of your choice and see a counselor for assistance.

The following guidelines will be observed:

1. Lower division General Education-Breadth Requirements Certification should be formally requested from the Hartnell Admissions Office by the student at the beginning of the last term of attendance prior to graduation or transfer.
2. A single course may not meet more than one general education requirement even though some courses may be listed in two areas.
3. General Education units in excess of area maximums will transfer as either elective or pre-major units to the California State University system.
4. If the 39 units are not certified by Hartnell, the completion of lower division General Education program will be determined by the CSU campus.
5. The General Education-Breadth Requirements apply to and are accepted at the following state universities: Bakersfield, Channel Islands, Chico, Dominguez Hills, Fresno, Fullerton, Hayward, Humboldt, Long Beach, Los Angeles, Monterey Bay, Northridge, Pomona, Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo, San Marcos, Sonoma, and Stanislaus.
6. A grade of "C" or better must be earned in Areas A1, A2, A3, and B4.

C.S.U. General Education Distribution Requirements

Area A: Communication & Critical Thinking
(9 Units Required)

Choose one course from each sub-group A1, A2 and A3

A1 ORAL COMMUNICATION
(3 units required)

SPE1A Essentials of Public Speaking
SPE1B Advanced Speech
SPE3 Intro. to Communications
SPE5 Intro. to Organizational Communication
SPE45 Special Projects

A2 WRITTEN COMMUNICATION
(3 units required)

ENG1A College Composition and Reading
ENG1B College Reading and Composition

A3 CRITICAL THINKING
(3 units required)

ENG2 Critical Thinking and Writing
PHL1S Critical Thinking

Area B: Physical Universe and Its Life Forms
(9 Units Required)

Choose one course from each sub-group B1, B2, & B4

Note: Laboratory Activity—At least one of the courses from B1 through B2 must have a laboratory. Courses with a laboratory are **bold face type**.

B1 PHYSICAL UNIVERSE
(3 units required)

AST1 Introduction to Astronomy
AST1L Astronomy Laboratory
CHM1A General Chemistry
CHM1B General Chemistry
CHM12A Organic Chemistry
CHM12B Organic Chemistry
CHM22 The Science of Chemistry
CHM23 Organic and Biological Chemistry for Health Sciences
CHM60 Principles of Chemistry
GEG1 Introduction to Geography: Physical Elements

B2 LIFE FORMS
(3 units required)

ANT1 Intro. to Anthropology: Physical
BIOL Fundamental Biological Concepts
BIOL General Zoology
BIOL General Botany
BIOL Human Anatomy
BIOL Introductory Physiology
BIOL Physiology Laboratory
BIOL General Microbiology
BIOL General Biology
BIOL Introductory Human Anatomy and Physiology
BIOL Field Biology/Natural Science
BIOL Principles of Microbiology
BIOL Marine Biology
BIOL Human Biology
BIOL Special Projects
BIOL Ecology
BIOL Environmental Science

MET1 Meteorology-Weather and Climate
OCN1 Oceanography
PHY2A General Physics
PHY2B General Physics
PHY4A Physics-Mechanics and Properties of Matter
PHY4B Physics-Electricity & Magnetism
PHY4C Heat, Sound and Light
PHY10 Introduction to Physics

Area B: Physical Universe (continued)
Area B: Physical Universe (continued)

B3 LABORATORY ACTIVITY

BIO1 Fund. Biological Concepts
BIO2 General Zoology
BIO3 General Botany
BIO5 Human Anatomy
BIO6L Physiology Laboratory
BIO7 General Microbiology
BIO10 General Biology
BIO11 Introductory Human Anatomy and Physiology
BIO20 Field Biology/Natural Science
BIO27 Principles of Microbiology
BIO30 Marine Biology
BIO47 Ecology

CHM1A General Chemistry
CHM1B General Chemistry
CHM12A Organic Chemistry
CHM12B Organic Chemistry
CHM22 The Science of Chemistry
CHM23 Organic and Biological Chem. for Health Sciences
CHM60 Principles of Chemistry

GEL1 Physical Geology
GEL6 General Geology-Historical

PHY2A General Physics
PHY2B General Physics
PHY4A Physics-Mechanics and Properties of Matter
PHY4B Physics-Electricity and Magnetism
PHY10 Heat, Sound and Light

B4 MATHEMATICAL CONCEPTS, QUANTITATIVE REASONING & APPLICATIONS (3 units required)

MAT2 Calculus for Managerial, Life, and Social Sciences
MAT3A Analytic Geometry and Calculus
MAT3B Analytic Geometry and Calculus
MAT4 Linear Algebra
MAT5 Differential Equations
MAT10 Math For Liberal Arts
MAT12 Number Systems
MAT13 Elementary Statistics
MAT16 Finite Mathematics
MAT24 Trigonometry
MAT25 Pre-Calculus Mathematics

Area C: Arts, Literature, Philosophy & Foreign Language (9 Units Required)

Choose at least one course in the arts and one in humanities.

C1 ARTS (ART, DANCE, THEATRE, MUSIC PHOTOGRAPHY)

ART1A History of Art
ART1B History of Art
ART1C Twentieth Century Art
ART1D Asian Art
ART10 Art Appreciation
ART26 Art Methods
ART46 Art Practicum
ART76 Intern 3D Modeling & Digital Animation.

ENG50 Film Appreciation To 1960
ENG51 Film Appreciation from 1960

MUS1A Music Appreciation-Historical Perspective
MUS1B Music Appreciation-Genre Perspective
MUS2 Music Fundamentals I
MUS3 Music Fundamentals II
MUS5 Ethnic Musics in the U.S.

MUS23.1 Hartnell Chorale – Renaissance/Baroque Emphasis
MUS23.2 Hartnell Chorale – Classic/Romantic Emphasis
MUS23.3 Hartnell Chorale – 20th Century Emphasis
MUS23.4 Hartnell Chorale – 20th Century “Pops” Emphasis

MUS29.1 Symphonic Band – 18th Century Emphasis
MUS29.2 Symphonic Band – 19th Century Emphasis
MUS29.3 Symphonic Band – 20th Century Emphasis
MUS29.4 Symphonic Band – 20th Century “Pops” Emphasis

MUS34.1 Symphony Orchestra – 18th Century Emphasis
MUS34.2 Symphony Orchestra – 19th Century Emphasis
MUS34.3 Symphony Orchestra – 20th Century Emphasis
MUS34.4 Symphony Orchestra – 20th Century “Pops” Emphasis

MUS51A Musicianship I
MUS51B Musicianship II
MUS52A Music Fundamentals II
MUS53A Harmony I
MUS53B Harmony II
MUS54A Harmony III
MUS55A Harmony IV
MUS55B Intro. to Music Literature

PHO1 Introduction to Photography

THA1 Introduction to Theatre
THA3 History of the Theatre

Area C: Arts, Literature (continued)

C2 HUMANITIES (LITERATURE, PHILOSOPHY, FOREIGN LANGUAGE)

CHN1 Elementary Chinese
CHN2 Elementary Chinese
CHN3 Intermediate Chinese
CHN4 Intermediate Chinese
COU81 American Sign Language II
COU83 American Sign Language III

ENG1B College Reading & Comp.
ENG9 Technical Writing
ENG17 The Contemporary Shakespeare
ENG20 Modern Dramatic Literature
ENG22 Introduction to Poetry
ENG24 The Short Story
ENG25 American Indian Literature
ENG26 Chicano Literature
ENG27 African-American Literature
ENG31 Creative Arts: It’s Written Expression

ENG40 Contemp. Popular Fiction
ENG41 Art of Steinbeck
ENG43 American Short Story in Film
ENG44A World Literature
ENG44B World Literature
ENG45 Special Projects
ENG46A Survey of English Literature
ENG46B Survey of English Literature
ENG47A Survey of American Literature to 1865
ENG47B Survey of American Literature from 1865

ENG49 The Novel
FRN2 Elementary French
FRN3 Intermediate French
FRN4 Intermediate French
FRN45 Special Projects
GER1 Elementary German
GER2 Elementary German
GER3 Intermediate German
GER4 Intermediate German
GER45 Special Projects

HIS25 British Life and Culture
HIS26 Spanish Life and Culture
HIS40 Women in American History
HIS45 Special Projects
HIS47 Religions of the World

ITA2 Elementary Italian
ITA3 Intermediate Italian

JPN2 Elementary Japanese
JPN3 Intermediate Japanese
JPN4 Intermediate Japanese
JPN10 Japanese Language & Culture
JPN11 Japanese Language & Culture

Hartnell College Catalogue – 2005/06
Area D: Social, Political & Economic Institutions (9 Units Required)

No more than two courses may be counted from any single classification

D1 ANTHROPOLOGY AND ARCHEOLOGY

ANT1 Intro. to Anthropology: Physical
ANT2 Intro. to Anthropology: Cultural
ANT3 Introduction to Archeology
ANT10 California Indians
ANT15 North American Indians
ANT20 Cultures of Mexico

D2 ECONOMICS

BUS26 Contracts
BUS27 Introduction to Business
BUS48 Computer & Information Literacy
BUS49 Introduction to Agricultural Business
BUS52 Sales and Service in Agribusiness
BUS53 AgriBusiness Economics

ECO1 Principles of Economics-Macro
ECO5 Principles of Economics-Micro

D3 ETHNIC STUDIES

EDU1 Multiculture Perspectives in Education
ETH1 Introduction to Ethnic Studies
ETH2 Chicano Leadership
ETH3 Chicanos in American Society
ETH4 Chicano Culture
ETH25 American Indian Literature
HIS40 Women in American History

D4 GENDER STUDIES

No courses currently approved.

D5 GEOGRAPHY

GEG1 Introduction to Geography: Physical Elements
GEG2 Introduction to Geography: Cultural Elements

D6 HISTORY

HIS4A History of Western Civilization
HIS4B History of Western Civilization
HIS10 History of California
HIS17A History of the United States
HIS17B History of the United States
HIS18 The United States 1945
HIS25 British Life and Culture
HIS26 Spanish Life and Culture
HIS40 Women in American History
HIS46 The History of Ethnic Groups in the United States
HIS47 Religions of the World
HIS48 History of Afro-American Culture
HIS49A Chicano History
HIS49B Chicano History
HIS51 Women in History

Area D: Social, Political (continued)

D7 INTERDISCIPLINARY SOCIAL OR BEHAVIORAL SCIENCE

COU35 Intercultural Communication
SPE35 Intercultural Communication

D8 POLITICAL SCIENCE, GOVERNMENT, AND LEGAL INSTITUTIONS

BUS22
POL1 American Political Institutions
POL2 Contemporary Governments Abroad

D9 PSYCHOLOGY

PSY1A General Psychology
PSY14 Child Psychology
PSY33 Personal and Social Adjustment
PSY41 Psychology of Human Relations
PSY22 Abnormal Psychology
PSY45 Special Projects

D10 SOCI OCY AND CRIMINOLOGY

ADJ1 Intro. To Administration of Justice/CP1
ADJ4 Criminal Evidence
ADJ51 Criminology

SOC1 Introduction to Sociology
SOC41 Marriage and Family Relations
SOC42 The Sociology of Minority Relations

Area E: Lifelong Understanding and Self Development (3 Units Required)

E1 INTEGRATED ORGANISM

BI042 Human Biology
COU23 Student Skills for Success: Career Development
COU27 Life Planning
CSS43 Introduction to Computers
FCS14 Child Development
FCS23 Nutrition
GEL25 Environmental Geology
HED2 Health Education

PE16 Concepts of Fitness & Wellness
PSY14 Child Psychology
PSY15 Human Sexuality
PSY33 Personal and Social Adjustment
PSY41 Psychology of Human Relations

SOC5 Introduction to Social Problems
SOC 41 Marriage and Family Relationships
UNIVERSITY OF CALIFORNIA ADMISSION REQUIREMENTS

Students interested in transferring to the University of California should consult with a Hartnell College counselor and the appropriate university catalogue. Hartnell College has an articulation agreement with the University of California System, however, each campus has specific requirements for transfer. See the Intersegmental General Education Transfer curriculum (IGETC) in this catalogue.

Intersegmental General Education Transfer Curriculum (IGETC) for the University of California 2005/06

The following Intersegmental General Education Transfer curriculum (IGETC) must be completed by all students who enrolled at Hartnell College for the first time beginning Fall of 1991 and who plan to transfer to the University of California.

Please consult with a counselor to see if IGETC is appropriate for your course of study.

Area 1 - English Communication
(3 courses, 9 semester units minimum)

<table>
<thead>
<tr>
<th>Group A: Reading and Composition (3 units required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1A Composition and Reading</td>
</tr>
<tr>
<td>Group B: Critical Thinking-English Composition</td>
</tr>
<tr>
<td>English 1B College Reading &amp; Comp.</td>
</tr>
<tr>
<td>English 2 Critical Thinking &amp; Writing</td>
</tr>
<tr>
<td>Group C: Oral Communication (3 units required) (CSU Only)</td>
</tr>
<tr>
<td>Speech 1A Essentials of Public Speaking</td>
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<tr>
<td>Speech 1B Advanced Speech</td>
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<tr>
<td>Speech 3 Intro. to Communication</td>
</tr>
</tbody>
</table>

Area 2 - Mathematical Concepts and Quantitative Reasoning
(1 course, 3 semester units required)

| **Math 2 Calculus for Managerial, Life, & Social Science |
| **Math 3A Analytic Geometry and Calculus               |
| Math 3B Analytic Geometry and Calculus                 |
| Math 3C Analytic Geometry and Calculus                 |
| Math 4 Linear Algebra                                  |
| Math 5 Differential Equations                          |
| Math 12 Number Systems                                 |
| Math 13 Elementary Statistics                         |
| Math 16 Finite Mathematics                             |
| Math 25 Pre-Calculus Mathematics                       |

Area 3 - Arts and Humanities
Choose 3 courses (9.0 semester units or 12-15 quarter units), with at least one course from the Arts and one course from the Humanities.

<table>
<thead>
<tr>
<th>Area 3 - Arts and Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Courses</td>
</tr>
<tr>
<td>Art 1A History of Art</td>
</tr>
<tr>
<td>Art 1B History of Art</td>
</tr>
<tr>
<td>Art 1C Twentieth Century Art</td>
</tr>
<tr>
<td>Art 1D Asian Art</td>
</tr>
<tr>
<td>Art 10 Art Appreciation</td>
</tr>
<tr>
<td>Art 25 Intro. to Ethnic Traditions</td>
</tr>
<tr>
<td>Music 1A Music Appreciation-Historical Perspective</td>
</tr>
<tr>
<td>Music 1B Music Appreciation-Genre Perspective</td>
</tr>
<tr>
<td>Music 1C Music Appreciation-Women in Music</td>
</tr>
<tr>
<td>Music 2 Music Fundamentals I</td>
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<tr>
<td>Music 3 Music Fundamentals II</td>
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<tr>
<td>Music 5 Ethnic Musics in the United States</td>
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<tr>
<td>Music 6 Hawaiian Music</td>
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<tr>
<td>Music 50A Harmony I</td>
</tr>
<tr>
<td>Music 50B Harmony II</td>
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<tr>
<td>Music 52A Harmony III</td>
</tr>
<tr>
<td>Music 52B Harmony IV</td>
</tr>
<tr>
<td>Music 55A Intro. to Music Literature</td>
</tr>
<tr>
<td>Music 55B Intro. to Music Literature</td>
</tr>
<tr>
<td>Photo 1 Intro. to Photography</td>
</tr>
<tr>
<td>Th Arts 1 Intro. to Theatre</td>
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<tr>
<td>Th Arts 3 History of the Theatre</td>
</tr>
</tbody>
</table>

Humanities Courses

<table>
<thead>
<tr>
<th>Humanities Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 10 Introduction to Linguistics</td>
</tr>
<tr>
<td>English 17 The Contemporary Shakespeare</td>
</tr>
<tr>
<td>English 20 Modern Dramatic Literature</td>
</tr>
<tr>
<td>English 22 Intro. to Poetry</td>
</tr>
<tr>
<td>English 24 The Short Story</td>
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<tr>
<td>English 25 American Indian Literature</td>
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<td>English 27 African-American Literature</td>
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<td>English 43 American Short Story in Film</td>
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<tr>
<td>English 44A World Literature</td>
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<tr>
<td>English 44B World Literature</td>
</tr>
</tbody>
</table>

English 46A Survey of English Literature
English 46B Survey of English Literature
English 47A Survey of American Literature to 1865
English 47B Survey of American Literature from 1865
English 49A The Novel
Eth Studies 25 American Indian Literature
History 4A History of Western Civil.
History 4B History of Western Civil.
History 10 History of California
History 17A History of the United States
History 17B History of the United States 1945
History 41 History of Russia
History 46 The History of Ethnic Groups in the U.S.
History 47 Religions of the World
History 48 History of Afro-American Culture
History 49A Mexican-American History
History 49B Mexican-American History
History 51 Women in History
Italian 3 Intermediate Italian
Philos 2 Introduction to Philosophy
Philos 6 Introduction to Philosophy: Greek to Medieval Period
Philos 8 Introduction to Philosophy: Renaissance to 20th Century
Philos 10 Ethics
**Spanish 3S Intermediate Spanish
**Spanish 4S Intermediate Spanish
Spanish 35 Contemporary Mexican American Literature

**Indicates that transfer credit may be limited by UC or CSU or both. Please consult with a counselor.
### Area 4 - Social & Behavioral Sciences

Courses from at least two disciplines (minimum 3 courses/9 semester units required).

- Anthro 2 Intro. to Anthropology: Cultural
- Anthro 3 Intro. to Archaeology
- Anthro 10 California Indians
- Anthro 20 Cultures of Mexico
- Anthro 25 Perspectives on Sexuality
- Coun 35 Intercultural Communications
- Economics 1 Principles of Economics - Macro
- Economics 5 Principles of Economics - Micro
- Eth Studies 1 Introduction to Ethnic Studies
- Eth Studies 2 Chicano Leadership
- Eth Studies 3 Chicanos in American Society
- Eth Studies 4 Chicano Culture
- FCS 14 Child Development
- Geography 2 Intro. to Geography: Cultural Elements
- Poli Sci 1 Contemporary Governments Abroad
- Poli Sci 2 American Political Institutions
- Psych 1A General Psychology
- Psych 1B General Psychology
- Psych 14 Child Psychology
- Psych 22 Abnormal Psychology
- Sociology 1 Introduction to Sociology
- Sociology 5 Intro. to Social Problems
- Sociology 41 Marriage & Family Relations
- Sociology 42 The Sociology of Minority Relations
- Speech 35 Intercultural Communications

### Area 5 - Physical & Biological Sciences

(At least 2 courses, one of which is in Physical Science and one in Biological Science, at least one of which incorporates a laboratory, 7-9 semester units required.)

#### Physical Science Courses
All courses with a lab component are **bold** face type.

- Anthro 1 Introduction to Anthropology: Physical
- Astronomy 1 Introduction to Astronomy
- Astronomy 1L Astronomy Laboratory
- Chem 1A General Chemistry
- Chem 1B General Chemistry
- **Chem 12A Organic Chemistry**
- Chem 12B Organic Chemistry
- **Chem 22 The Science of Chemistry**
- Geography 1 Intro. to Geography: Physical Elements
- Geology 1 Physical Geology
- **Geology 2 Introduction to Geology**
- Geology 6 General Geology - Historical
- Geology 25 Environmental Geology
- Geology 36 California Geology
- Meteorology 1 Meteorology - Weather and Climate
- Oceano 1 Oceanography
- **Physics 2A General Physics**
- **Physics 2B General Physics**
- **Physics 4A Physics-Mechanics and Property of Matter**
- **Physics 4B Physics-Electricity and Magnetism**
- **Physics 4C Physics-Heat, Sound, and Light**
- **Physics 10 Introduction to Physics**

#### Biological Sciences Courses
All courses with a lab component are **bold** face type.

- Biology 1 Fundamental Biological Concepts
- **Biology 2 General Zoology**
- **Biology 3 General Botany**
- Biology 5 Human Anatomy
- Biology 6 Introductory Physiology
- Biology 6L Physiology Laboratory
- Biology 7 General Microbiology
- **Biology 10 General Biology**
- Biology 27 Principles of Microbiology w/lab
- Biology 30 Marine Biology
- Biology 42 Human Biology
- Biology 47 Ecology

#### Language Other Than English
Complete 2 years of the same foreign language of high school level work with a grade of “C” or better OR earn a score of 3 or higher on the Foreign Language Advanced Placement Test OR 550 on the College Board Achievement Test in Foreign Languages OR complete 4-5 units from the courses below:

- Chinese 1 Elementary Chinese
- Chinese 2 Elementary Chinese
- Chinese 3 Intermediate Chinese
- Chinese 4 Intermediate Chinese
- Coun 80 American Sign Language I
- French 1 Elementary French
- French 2 Elementary French
- French 3 Intermediate French
- French 4 Intermediate French
- German 1 Elementary German
- German 2 Elementary German
- German 3 Intermediate German
- German 4 Intermediate German
- Italian 1 Elementary Italian
- Japanese 1 Elementary Japanese
- Spanish 1 Elementary Spanish
- Spanish 1A Elementary Spanish
- Spanish 1B Elementary Spanish
- **Spanish 1S Elementary Spanish Speakers**
- **Spanish 1X Spanich for Chicano Students**
- Spanish 2 Elementary Spanish
- **Spanish 2S Elementary Spanish Speakers**
- Spanish 3 Intermediate Spanish
- Spanish 4 Intermediate Spanish

**Indicates that transfer credit may be limited by UC or CSU or both. Please consult with a counselor.
ADMINISTRATION OF JUSTICE

ADMINISTRATION OF JUSTICE
CORRECTIONAL SCIENCE

ASSOCIATE OF ARTS DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

REMAINING G.E. REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

CERTIFICATE PROGRAM

REQUISITE COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ 1</td>
<td>Intro. to Admin. of Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 3</td>
<td>Concepts of Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 11</td>
<td>Correctional Writing</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 12</td>
<td>Legal Aspects of Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 22</td>
<td>Correctional Interviewing and Counseling</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 50</td>
<td>Intro. to Correctional Science</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 61</td>
<td>Control and Supervision in Corrections</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1A</td>
<td>College Comp. and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201*</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ELECTIVES
Select 6 units from the following:

- ADJ 7: Internship in Criminal Justice
- ADJ 10: Juvenile Procedures
- ADJ 21A: Narcotics and Drugs I
- ADJ 45: Special Projects
- ADJ 51: Criminology

ADDITIONAL INFORMATION
*Eligibility for completion of Math 121 (5 units) or higher may be substituted for the Math 201 (3 units) requirement.
A grade of "C" or better must be maintained in each required course of the Certificate Program.

SOUTH BAY REGIONAL PUBLIC SAFETY TRAINING CONSORTIUM
The Hartnell Community College District is a participant and sponsor of the South Bay Regional Public Safety Training Consortium. This Consortium is a Joint Powers Agency created by several local Community Colleges for the purpose of presenting certified courses associated with public safety. This would include Law Enforcement, Corrections, Probation, Fire Technology, Emergency Medical Services, Hazardous Materials and Dispatch. The intent is to enhance the campus based degree and certificate programs with the option of going directly into Academy type skill development training presented through the Central Consortium. For more information call (408) 270-6458.

ADMINISTRATION OF JUSTICE
CRIMINAL JUSTICE

ASSOCIATE OF ARTS DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

REMAINING G.E. REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ADJ 1</td>
<td>Intro. to Admin. of Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 2</td>
<td>Comm. Relations: Multicultural Diversity/Discrimination/CP7</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 3</td>
<td>Concepts of Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 4</td>
<td>Criminal Evidence/CP6</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ 5</td>
<td>Criminal Procedures /CP4</td>
<td>3.0</td>
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<tr>
<td>CSS 43</td>
<td>Intro. to Computer Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>ENG 1A</td>
<td>College Composition &amp; Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201*</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ELECTIVES
Select 9 units from the following:

- ADJ 7: Internship in Criminal Justice
- ADJ 8: Criminal Investigation
- ADJ 10: Juvenile Procedures
- ADJ 21A: Narcotics and Dangerous Drugs I
- ADJ 29: Police Photography
- ADJ 30: Sexual Assault Investigation
- ADJ 45: Special Projects
- ADJ 51: Criminology
- ADJ 102: PC 502 Arrest and Firearms
- ADJ 106: Level II Reserve Officer A

ADDITIONAL INFORMATION
*Eligibility for completion of Math 121 (5 units) or higher may be substituted for the Math 201 (3 units) requirement.
A grade of "C" or better must be maintained in each required course of the Certificate Program.
ADJ1. Intro. to Admin. of Justice CP1 (3)
Lec 3 Hrs
Semesters Offered: Variable
This course covers the history and philosophy of administration of justice as it evolved throughout the world. It involves the in-depth study of the American system and the various sub-systems; study of the roles and role expectations of criminal justice agents in their interrelationships in society; study of the concepts of crime causation, punishment and rehabilitation; and study of ethics, education and training for professionalism in the social system. This course is required for the major and may be offered in the web-based format. [CSU; UC; CAN ADJ 2]

ADJ2. Community Relations: Multicultural Diversity/ Discrimination (3)
Lec 3 Hrs
Semesters Offered: Variable
Advisory: Students taking the on-line version of the course are advised that they must have basic computer skills for operating word for windows and email including sending attachments and files. Students also need access to the internet and have adequate hardware and software such as Windows 95/98/2000/XP or the equivalent.
A theoretical and conceptual overview of multicultural issues, including those relating to ethnicity, race relations, gender, age and sexual preference. The course focuses on cultural/ethnic minority groups in California including Black/African-American, Hispanic/Latino and Asian American groups. The course also identifies problems related to our increasing diverse population; and examinations strategies to overcome these problems, particularly in relation to the maintenance of social order and law enforcement. [CSU; UC]

ADJ3. Concepts of Criminal Law (3)
Lec 3 Hrs
Semesters Offered: Variable
Advisory: Students taking the on-line version of the course are advised that to be successful in completing the course over the internet, they must have basic computer skills including skill in using a word processor, such as word for windows and email including sending attachments and files. Students also need access to the internet and have adequate hardware and software such as Windows 95/98/2000/XP or their equivalent.
An introduction to the sources of law, the legal system, and the criminal court system. An in-depth analysis of the constitution and its relationship to criminal procedure. Explores the laws of search, arrest, interrogation, arraignment, preliminary hearing, motion practice, trial procedure, sentencing and post-conviction remedies. This course may be offered in the web-based format. [CSU; UC; CAN AJ 4]

ADJ4. Criminal Evidence (3)
Credit/No Credit Option
Advisory: Students taking the on-line version of the course are advised that they must have basic computer skills for operating Word for Windows and email including sending attachments and files. Students also need access to the internet and have adequate hardware and software such as Windows 95/98/2000/XP or the equivalent.
Lec 3 Hrs
The course focuses in particular on the trial process and classifications of evidence. A complete overview is offered of legal issues in criminal evidence such as admissibility, competency, constitutional protections and the burden of proof. Also covered are general considerations in evidence such as the trial record, impeachment, privilege, judicial notice and expert testimony. [CSU; CAN ADJ6]

ADJ5. Criminal Procedures (3)
Credit/No Credit Option
Advisory: Students taking the on-line version of the course are advised that they must have basic computer skills for operating word for windows and email including sending attachments and files. Students also need access to the internet and have adequate hardware and software such as Windows 95/98/2000/XP or the equivalent.
Lec 3 Hrs
Semesters Offered: Variable
An introduction to the sources of law, the legal system, and the criminal court system. An in-depth analysis of the constitution and its relationship to criminal procedure. Explores the laws of search, arrest, interrogation, arraignment, preliminary hearing, motion practice, trial procedure, sentencing and post-conviction remedies. This course may be offered in the web-based format. [CSU; UC; CAN AJ 4]

ADJ6. Internship in Criminal Justice (3)
Lec 1 Hr; Lab 6 Hrs
Credit/No Credit Only
Prerequisite: Administration of Justice 1, and three other units in Administration of Justice completed or in progress or appropriate experience in the field and current acceptance in a local criminal justice agency.
Lec 1 Hr; Lab 6 Hrs
Semesters Offered: Variable
This course provides students with experience in one or more local administration of justice agencies along with periodic class meetings. Classroom discussions relate students experience to selected readings from criminal justice literature. Continuous evaluations will be conducted by field supervisors in each agency in coordination with the instructor. A written term project relating the experience to the literature of the discipline will be required. [CSU; UC; CAN AJ 4]

ADJ7. Juvenile Procedures (3)
Lec 1 Hr; Lab 6 Hrs
Credit/No Credit Only
Prerequisite: Administration of Justice 1, and three other units in Administration of Justice completed or in progress or appropriate experience in the field and current acceptance in a local criminal justice agency.
Lec 1 Hr; Lab 6 Hrs
Semesters Offered: Variable
This course is required for the major and may be offered in the web-based format. [CSU; UC; CAN AJ 4]

ADJ8. Criminal Investigation (3)
Lec 3 Hrs
Semesters Offered: Variable
A course designed to teach the fundamentals of investigation; crime scene search and recording, collection and reservation of evidence; scientific aids; modus operandi; sources of information, interviews and interrogation; follow-up and case preparation. [CSU; CAN ADJ 4]

ADJ10. Juvenile Procedures (3)
Lec 3 Hrs
Semesters Offered: Variable
Advisory: Students taking the on-line version of the course are advised that they must have basic computer skills for operating Word for Windows and e-mail including sending attachments and files. Students also need access to the internet and must have adequate hardware capabilities and software such as Windows 95/98/2000/XP or their equivalent.
Discussion of the theories of juvenile delinquency and juvenile justice. Introduction to the functions, organization and jurisdiction of juvenile agencies. Procedural steps in processing and detention of juveniles, from arrest and booking through trial and post-trial. [CSU]

ADJ11. Correctional Writing (3)
Advisory: Completion of ENG 101, is strongly recommended prior to enrollment in this course.
Lec 3 Hrs
Semesters Offered: Variable
This is an introductory course emphasizing the practical aspects of gathering, organizing, and preparing written reports. It will cover the techniques of communicating facts, information, and ideas effectively in a simple, clear and logical manner for various types of criminal justice system reports, letters, memoranda, directives, and administrative reports. Students will gain practical experience in note taking, report writing and presenting testimony in court or other types of hearings. This course may be offered in the web-based format. [CSU; UC; CAN AJ 4]

ADJ12. Legal Aspects of Corrections (3)
Lec 3 Hrs
Semesters Offered: Variable
This course provides students with an awareness of the historical framework, concepts and precedents that guide correctional practice. Course material will broaden the individuals perspective of the corrections environment, the civil rights of prisoners and responsibilities and liabilities of correction officials. Completion of ADJ 50, Introduction to Correctional Science is strongly recommended prior to enrollment in this course, unless the student is currently employed in the field of corrections. [CSU]
ADJ21A. Narcotics and Dangerous Drugs I (3)
Lec 3 Hrs
Semesters Offered: Variable
A survey and analysis of the history, identification and characteristics of drugs of abuse. A basic study of the effects and concepts of drug abuse and legal aspects of drug control. This course may be offered in the web-based format. [CSU]

ADJ22. Correctional Interviewing and Counseling (3)
Lec 3 Hrs
Semesters Offered: Variable
An overview of the techniques available to practitioners in corrections, in counseling and interviewing. The student will learn the use of appropriate techniques and theories in confidence building which may be used by the correctional employee in client interviews and counseling. A basic course for students planning to enter or already employed within the correctional science field. Completion of ENG 101, is strongly recommended prior to enrollment in this course. [CSU]

ADJ25. Introduction to Legal Assistantship (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course is intended to provide an overview of the legal assistant profession, a general introduction to the legal environment and foundational skills necessary to succeed in legal specialty courses. Students will be given a perspective of the role of the legal assistant in the modern law office, and will learn beginning legal research and analysis, issues related to our legal system and the courts, law office administration, and ethical considerations. [CSU]

ADJ26. Contracts (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course will provide students with an in-depth analysis of the law pertaining to contract formation, contract performance, discharge, and breach. Beginning with an overview of our legal system and an introduction to case analysis and briefing, students will learn to apply substantive concepts to practical applications such as the negotiation process, interpretation of contract provisions, and the drafting of simple agreements. Not open to students who have completed BUS 26, Contracts. [CSU]

ADJ30. Sexual Assault Investigation (3)
Lec 3 Hrs
Semesters Offered: Variable
An in-depth study of the institutional response to the victims of sexual assault and how the victims view the system. How the criminal justice and legal system respond to the victim of sexual assault. An extensive study of present and recommended investigative methods, how other community institutions respond to the sexual assault victim. Emphasis is placed on the needs of the victim, and improving the individual response to those needs with recognition of institutional limitations. Learning will be facilitated by the use of community resource persons - panel discussions - and the practice of role playing situations. [CSU]

ADJ32. Security: Business and Industry (3)
Lec 3 Hrs
Semesters Offered: Variable
A course designed to familiarize the student with the internal and external control of physical security for Business and Industry to include making access difficult and apprehension of the intruder as nearly certain as possible. [CSU]

ADJ33. Constitutional Law for Criminal Justice Professionals (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course focuses on the United States Constitution and its relevance to criminal justice issues. Beginning with an overview of our legal system and some instruction in basic legal research, the course examines constitutional amendments influencing the criminal justice system such as freedom of speech and the press, gun control, constitutional search and seizure, the exclusionary rule, due process of law and confessions, the right to counsel and a fair trial, bail, fines and punishment. [CSU]

ADJ34. Civil Litigation (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course will provide students with a fundamental understanding of preparing a civil case for trial. Topics include: California procedural statutes and rules governing civil litigation, the attorney-client relationship, court organization, purposes of the steps in case preparation, and post-litigation concerns. Students will practice client interviewing, drafting of pleadings and motions, deposition summaries, evidence gathering and discover procedures. [CSU]

ADJ35. Torts/Personal Injury Law
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course will teach students the skills necessary for working as a Legal Assistant in the area of torts and personal injury law. Topics covered include a thorough overview of tort law, civil procedure, and their relationship to the personal injury lawsuit. Students will also be trained in client interviewing, evidence gathering, and discovery techniques. [CSU]

ADJ36. Legal Research and Writing (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Students will be instructed in the fundamentals of legal research. Research topics include law library references such as Shepard’s Citations, West Digest system and key numbers, American Law Reports, legal periodicals, state revised statutes, annotated codes, and on-line research. The course also focuses on the development of written communication skills essential to any law related career. Students will also learn to draft documents such as legal correspondence, memoranda, pleadings, motions, and discovery. [CSU]

ADJ38. Family Law (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course will teach students the skills necessary for working as a Legal Assistant in the area of family law. Topics covered include dissolution of marriage, adoptions, guardianship, child/spousal/family pleadings, drafting of declarations, preparation of income and expense forms, drafting of marital settlement agreements and the use of interviewing checklists. [CSU]

ADJ45. Special Projects (1-3)
Semesters Offered: Variable
Individual study research projects for qualified students. Designed to develop abilities in locating and evaluating research projects in the Administration of Justice field with emphasis upon the use of research and theoretical writings resulting in an acceptable written report. [CSU]
ADJ50. Intro. to Correctional Science (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
This course is designed to provide the student with an overview of the history and trends of corrections. It will focus on the legal issues, specific laws and general operation of correctional institutions. The relationship between corrections and other components of the judicial system will also be examined. Completion of ENG 101, English Grammar and Composition, is strongly recommended prior to enrollment in this course. This course may be offered in web-based format.  
[CSU]

ADJ51. Criminology (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
An examination of theories of the psychological and social factors underlying crime and criminal behavior, crime statistics; patterns of antisocial behavior; treatment and preventive measure  
[CSU]

ADJ61. Control and Supervision in Corrections (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
This course offers an overview of supervision of inmates in the local, state and federal correctional institutions. The issues of control in a continuum from institutional daily living through crisis situations will be introduced and discussed. The course will emphasize the role played by the offender and the correctional worker. Introduces inmate subculture, violence and effects of crowding on inmates and staff, address coping techniques for correctional officer in a hostile prison environment while discussing causes and effects of abusive tactics. Completion of ENG 101, English Grammar and Composition, is strongly recommended prior to enrollment in this course.  
[CSU]

ADJ102. PC832 Arrest and Firearms (3.5)  
Credit/No Credit Option  
Advisory: Department of Justice written certification, stating that a student has no criminal history that would disqualify him/her from using a firearm is required prior to the start of the fire arms practicum portion of the class according to the California Commission for Peace Officers Standards and Training (POST) and the California Penal Code 13511.5.  
Lec 2.75; Lab 2.25  
Semesters Offered: Variable  
Designed to satisfy the curriculum standards of the Commission on Peace Officer Standards and Training as required by Penal Code 832 for peace officers. Topics include: professional orientation; introduction to criminal law with particular attention paid to Laws of Arrest, evidence, search and seizure; investigation; community relations; verbal and written communication; arrest and control techniques; firearms/chemical agents; and Cultural Diversity/Discrimination, the use of firearms, situational use of deadly force, and arrest techniques. There will be a fee associated with the fingerprint clearance from the Department of Justice that is required prior to starting the firearms portion of the class.

ADJ106. Level II Reserve Officer A (3)  
Prerequisite: ADJ102  
Lec 3 Hrs  
Semesters Offered: Variable  
Successful completion of ADJ106 and 107 satisfies the curriculum requirements of the Commission on Peace Officer Standards and Training and Penal Code 832.6 for Module B, Level II, Reserve Officer. Topics include an orientation to the law enforcement profession, the custody process, first aid and cardiopulmonary resuscitation (21 hours) and a survey of patrol concepts and procedures.

ADJ107. Level II Reserve Officer B (2.5)  
Prerequisite: ADJ102  
Lec 2.3 Hrs; Lab .7 Hrs  
Semesters Offered: Variable  
Successful completion of ADJ106 and 107 satisfies the curriculum requirements of the Commission on Peace Officer Standards and Training and Penal Code 832.6 for Module B, Level II Reserve Officer. Topics include: survey of appropriate legal concepts, report writing, use of telephone, driver awareness, use of force and weaponry in both day and night settings, traffic procedures, weaponless defense and baton techniques.

ADJ108. Introduction to Private Security (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A course providing instruction in general patrol concepts and procedures. It will focus on the legal issues, the skills pertaining to law enforcement, the skills required to instruct other Law Enforcement Officers in its use and the proper maintenance requirements of the weapon.

ADJ108A. Security Guard Training: Powers to Arrest (.75)  
Credit/No Credit Only  
Lec 12 Hrs  
Semesters Offered: Variable  
The legal and investigative aspects of private security shall be explored and students will receive the California mandatory legal training “Powers to Arrest” to fulfill the requirement for a guard license.

ADJ109. Security Management (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A course providing instruction in general management principles and skills specifically applied in the management of the security, safety and loss prevention function in diverse organizations. Includes the basic elements of supervision, personnel, operational and program management. In addition students will understand risk analysis, public relations, coordination with law enforcement agencies and methods of determining security needs by the use of security surveys.

ADJ110. Tactical Rifle Instructor Training (1.5)  
Credit/No Credit Option  
Lec 1 Hr; Lab 1.5 Hrs  
Semesters Offered: Variable  
Advisory: This course is intended for students who possess instructional skills or aptitude, and a willingness to serve as a Firearms Instructor with a Law Enforcement Agency within the State of California.  
This is a train-the-trainer course which consists of instruction and practical exercises focused on the specific needs of the tactical rifle instructor. It includes the use and application of the patrol rifle as it pertains to law enforcement, the skills required to instruct other Law Enforcement Officers in its use and the proper maintenance requirements of the weapon.

ADJ112. Interviewing and Report Writing CPS (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
General course using various methods to develop student abilities in note taking, interviewing, information gathering, report writing mechanics and organization and critical evaluation. Attention will be given to planning a proper investigation and note taking system and recording facts in chronological order. Students will interview individuals and write and analyze police reports to meet the standards of the Criminal Justice System.
The Agriculture Discipline offers courses in Agricultural Business, Sales & Service, Agribusiness Economics which prepare students for a wide variety of positions available in the local area. Students should consult a Hartnell counselor and the college or university catalogue of the school to which they intend to transfer for more specific information.

### AGRICULTURE

**ASSOCIATE OF SCIENCE DEGREE**

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

#### REMAINING G.E. REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0 – 5.0</td>
</tr>
<tr>
<td>(BIO 1 or 10, or CHM 1A or 22 recommended)</td>
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</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>(ECO 1 recommended)</td>
<td></td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>English 1A</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>3.0 – 6.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18.0 - 23.0</strong></td>
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</table>

**CERTIFICATE PROGRAM**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 160</td>
<td>Introduction to Agriculture</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 55</td>
<td>Agriculture Accounting Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 56</td>
<td>Intro. to Mechanized Agriculture</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 90</td>
<td>Soil Science</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 91</td>
<td>Agriculture Regulation and Safety</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 92</td>
<td>Plant Science</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS/CSS 109</td>
<td>Introduction to PC Applications or</td>
<td>3.0</td>
</tr>
<tr>
<td>AGR 57</td>
<td>Agric. Computer Applications</td>
<td>(3.0)</td>
</tr>
<tr>
<td>AGR 99I</td>
<td>Occupational Work Experience Internship</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Composition</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 121**</td>
<td>Elementary Algebra</td>
<td>(5.0)</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>24.0 – 32.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

### CHOOSE ONE AREA OF EMPHASIS

#### 1. AGRICULTURE BUSINESS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 49</td>
<td>Intro. to Agricultural Business</td>
</tr>
<tr>
<td>AGR 51</td>
<td>Elements of Agribusiness</td>
</tr>
<tr>
<td>AGR 52</td>
<td>Sales and Service in Agribusiness</td>
</tr>
<tr>
<td>AGR 53</td>
<td>Agribusiness Economics</td>
</tr>
<tr>
<td>AGR 54</td>
<td>Agriculture Marketing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.0</strong></td>
</tr>
</tbody>
</table>

#### 2. AGRICULTURE PRODUCTION

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 93</td>
<td>Product Processing and Cooling</td>
</tr>
<tr>
<td>AGR 94</td>
<td>Agriculture Machinery Mgt.</td>
</tr>
<tr>
<td>AGR 95</td>
<td>Intro. to Horticulture Mgt.</td>
</tr>
<tr>
<td>AGR 96</td>
<td>Vegetable Crop Production</td>
</tr>
<tr>
<td>AGR 97</td>
<td>Vineyard Production and Mgt.</td>
</tr>
<tr>
<td>AGR 98</td>
<td>Irrigation and Fertilizer</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15.0</strong></td>
</tr>
</tbody>
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#### ADDITIONAL RECOMMENDED COURSES (non required)

**For Agriculture Business Emphasis:**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 18</td>
<td>Introduction to Business Law</td>
</tr>
</tbody>
</table>

**For Agriculture Production Emphasis:**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET 175</td>
<td>HAZWOPER 40-Hour Training</td>
</tr>
<tr>
<td>MEC 52</td>
<td>Hazardous Materials and Industrial Safety</td>
</tr>
<tr>
<td>MEC 54</td>
<td>Mechanical Skills</td>
</tr>
</tbody>
</table>

### ADDITIONAL INFORMATION

* Eligibility for English 1A may be substituted for the English 101 requirement.
** Eligibility for Math 123 may be substituted for the Math 121 requirement.

A grade of “C” or better must be maintained in each required course of the Certificate Program.

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* Eligibility for Math 123 may be substituted for the Math 121 requirement.

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**Hartnell College Catalogue – 2005/06**
AGR55. Agriculture Accounting Principles (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Principles of agricultural accounting systems and types of records, their use and how to compute and use measures of earnings and cost of production to improve agribusiness efficiency. Also included are farm income tax, Social Security, and employee payroll needs. [CSU]

AGR56. Introduction to Mechanized Agriculture (3)
Lec 2 Hrs; Lab 3 Hr
Semesters Offered: Variable
Course designed for agribusiness and Agriculture Production majors. Basic mechanical skills using woodworking, welding, cold metal, electricity, plumbing, concrete, and project construction skills as related to farm maintenance and repair. Hand and power tool use skills will be developed. Safety practices for all mechanical areas will be covered. [CSU; CAN AG 4]

AGR57. Agriculture Computer Applications (3)
Advisory: Previous computer skills recommended.
Lec 2 Hrs; Lab 2 Hr
Semesters Offered: Variable
Computer use in the workplace with emphasis on agribusiness situations. Computer applications including word-processing, spreadsheets, databases, and presentation managers will be covered. Also included will be accessing information through the Internet and World Wide Web, telecommunications, an introduction to web page design and other software appropriate to agribusiness. Course designed for students interested in Agriculture Business and Agriculture Production. [CSU; UC; CAN AG 2]

AGR90. Soil Science (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course provides a basic knowledge of the genetic, physical, chemical, and biological properties of soils. The course covers fundamental characteristics of soils including soil genesis, soil taxonomy, classification, soil mineralogy and parent materials, soil architecture and physical properties, basic chemical properties (soil reaction, salinity, CEC), the characteristics and behavior of soil organic matter and soil biota, principles of soil fertility, soil testing and fertilizers, soil survey reports and legal land descriptions. The course explores principles involved in the interpretation of soils information for land use management, (including agricultural production and non-agricultural uses), and conversation. Includes a weekly laboratory activity. [CSU; UC; CAN AG 14]

AGR91. Agriculture Laws and Regulations (3)
Lec 3 Hrs
Semesters Offered: Variable
The course will provide students with a basic knowledge of regulations and safety as they pertain to the agriculture industry. Topics to include: OSHA, EPA regulations, and related regulations, personal safety, pesticides safety, ergonomics, sexual harassment, hand and power tools safety, power equipment safety, food safety, labor management, topics (discipline, violence, ADA, discrimination, hazardous material safety.) [CSU]

AGR92. Plant Science (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course is designed to provide the students with a working knowledge of the fundamental structures and processes of plants. Principles to be applied cover plant structures, physiology, heredity, environmental relationship to growth, adaptation, and management of crops. Techniques of research, exploration of plant growth, and identification of economical crops will be included. [CSU; UC; CAN AG 8]

AGR93. Product Processing and Cooling (3)
Lec 3 Hrs
Semesters Offered: Variable
Course designed for Agricultural Business and Agricultural Production majors. This course of study is concerned with product processing and cooling. Topics to include: Post harvest Biology and Technology. Harvesting systems, preparation for the fresh market, packaging and processing of agricultural products, cooling and storage methods, quality and safety factors standardization and inspection, transportation guidelines. Field trip will be required. Course designed for students interested in Agriculture Business and Agriculture Production major. [CSU]

AGR94. Agriculture Machinery Mgt. (3)
Lec 3 Hrs
Semesters Offered: Variable
Use, maintenance, adjustment, calibration, and repair of the equipment commonly used in California agriculture. Emphasis on primary and secondary tillage, planting, chemical application, and harvesting equipment. The selection and operation of both machinery and tractors will be practiced. Safety will be stressed throughout. [CSU; UC; CAN AG 16]

AGR95. Introduction to Horticulture Management (3)
Lec 2 Hrs; Lab 3 Hr
Semesters Offered: Variable
A general course in environmental horticulture with emphasis on nursery operations, landscaping, turf management, and floral industries. Topics include basic botany, cultural practices, propagation, structures and layout. Course designed for students interested in Agriculture Business and Agriculture Production major. [CSU; UC]

AGR96. Vegetable Crop Production (3)
Lec 2 Hrs; Lab 3 Hr
Semesters Offered: Variable
This course is a study of vegetable production covering the botany, cultural production, harvesting, processing, growth characteristics, fertility, pests, and marketing of the major warm season and cool season vegetable crops in California. A field trip into a major vegetable production region is required. Course designed for students interested in Agriculture Business and Agriculture Production. [CSU]

AGR97. Vineyard Production and Management (3)
Lec 2 Hrs; Lab 3 Hr
Semesters Offered: Variable
The production and management decisions for grapes, berries and kiwi fruit will be presented. Topics will include climate zones, soil selection, financing, farm organization, irrigation systems, field layout, varietal selection, nutritional needs, harvesting, labor management, marketing and budgeting. Students will be required to prepare a budget and calendar of operations. Course designed for students interested in Agriculture Business and Agriculture Production. [CSU; UC]

AGR98. Irrigation and Fertilizer (3)
Lec 2 Hrs; Lab 3 Hr
Semesters Offered: Variable
This course covers the composition, value, selection, and use of fertilizer materials and soil amendment. Soil, plant, and fertilizer relationships will be covered. Application practices currently being used in California will be discussed. Course designed for students interested in Agriculture Business and Agriculture Production major. [CSU]
AGR101. Organic Vegetable Production (1.5)
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Intended for Agricultural Production majors and continuing education adults with interest in improving organic farming operations or making a transition to organic production methods. This course will cover the practical aspects of developing a crop plan that meets USDA certification requirements and ensures sustainable production for long-term farm viability. Students will develop an overall farm plan that includes the following areas of detail: diversifying market options, choosing appropriate crops, managing soil fertility in relation to total plant nutrition.

AGR102. Organic Field Production Methods (1.5)
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Intended for Agricultural Production majors and continuing education adults with interest in improving organic farming operations or making a transition to organic production methods. This course will cover the practical field methods involved in soil preparation, plan disease management, irrigation set-up and management, weed control, and integrated pest management that insures sustainable production for long-term farm viability. Students will complete field designs for a model 0.5-acre organic farm with descriptions of all inputs, potential control methods, and monitoring methods for crop health.

AGR103. Agriculture Whole Farm Planning and Recordkeeping for Small Farmers (1.5)
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Intended for Agricultural Production majors and continuing education adults with interest in improving organic farming operations or making a transition to organic production methods. This course will cover the practical aspects of daily farm management. Students will summarize these 5 aspects into an integrated document for presentation at the final course of PEPA, Programa Educativo para Pequenos Agricultores (Education Program for Young People in Agriculture.)

AGR104. Agriculture Business Development for New Organic Farmers
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Intended for Agricultural Production majors and continuing education adults with interest in starting up their own farming operation and beginning the process of business planning. This course will cover the legal obligations, state regulations, and federal laws governing agricultural operations with a focus on developing a business and marketing plan. Students will incorporate business-planning concepts into a presentation at the end of the PEPA, Programa Educativo para Pequenos Agricultores (Education Program for Young People in Agriculture.)

AGR105. Agriculture Marketing Opportunities and Growth for Organic Farming (1.5)
Lec 1 Hr; Lab 1.5 hrs
Semesters Offered: Variable
Intended for Agricultural Production majors and continuing education adults with interest in improving organic farming operations or making a transition to organic production methods. This course will cover the practical aspects of developing a crop plan that meets USDA certification requirements and insures sustainable production for long-term farm viability. Students will develop an overall farm plan that includes the following areas of detail: diversifying market options, choosing appropriate crops, managing soil fertility in relation to total plant nutrition.

AGR106. Introduction to Agriculture (3)
Lec 3 Hrs
Semesters Offered: Variable
In this course each student will be provided with a survey of and introduction to the fields of study in agriculture. In the context of a study of the inter-relationship between the elements of agriculture and: the world food system, the global consumer, and the agriculture products producer, each student will develop an education plan to prepare for a career in agriculture. The principles of management and their application to the operation of an agriculture enterprise will be applied to a study of the business decision making process.

AGR165. Hazardous Materials and Industrial Safety (1)
Lec 1 Hr
Semesters Offered: Variable
A basic course in all aspects of safety as it relates to industry. The course will cover the following topics: Hazardous Materials as it pertains to the specific trades. Examples are construction, welding, auto repair, electronics, auto collision repair, health care services, personal protective equipment, materials handling and storage, industrial hygiene, safety inspections, and general industrial safety of proper use of tools and machines. Not open to students who have taken MEC 169.

AGR258. Agriculture Ambassadors (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Agriculture leadership training through application of individual and group leadership techniques. Requires participation as an Agriculture Ambassador team member in college recruitment activities, including giving recruitment presentations at off campus sites, hosting prospective student groups for on-campus visitations, and sponsoring recruitment activities for the local Agriculture industry.

AGR267. Hazwoper-8 Hour Refresher Course (.5)
Credit/No Credit Only
Lec .5 Hr
Semesters Offered: Variable
Basic course covering toxicology, chemical hazards, types of protection, safe work practices, site control, decontamination contingency plan, and data collection and interpretation. Not open to students who have completed ET 277.
ANIMAL HEALTH TECHNOLOGY

ASSOCIATE OF SCIENCE DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHT 101</td>
<td>Intro. to Animal Health</td>
<td>2.0*</td>
</tr>
<tr>
<td>BIO 10</td>
<td>General Biology</td>
<td>(or approved equivalent) 4.0*</td>
</tr>
<tr>
<td>CHM 60</td>
<td>Principles of Chemistry</td>
<td>(or approved equivalent) 4.0*</td>
</tr>
<tr>
<td>AHT 102</td>
<td>Animal Care and Management I</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 103</td>
<td>Comparative Anatomy &amp; Physiology</td>
<td>6.0</td>
</tr>
<tr>
<td>BUS 180</td>
<td>Medical Terminology I</td>
<td>2.0</td>
</tr>
<tr>
<td>AHT 145</td>
<td>Applied Animal Health Care</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 147</td>
<td>Animal Health Enrichment</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 104</td>
<td>Comparative Pathology and Pharmacology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHT 105</td>
<td>Animal Care and Mgt. II</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 106</td>
<td>Clinical Procedures I</td>
<td>2.0</td>
</tr>
<tr>
<td>BIO 27</td>
<td>Principles of Microbiology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHT 145</td>
<td>Applied Animal Health Care</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 147</td>
<td>Animal Health Enrichment</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 45</td>
<td>Special Projects</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 99</td>
<td>Clinical Externship in AHT</td>
<td>4.0</td>
</tr>
<tr>
<td>AHT 107</td>
<td>Clinical Procedures II</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 108</td>
<td>Veterinary Office Practice and Interpersonal Skills</td>
<td>2.0</td>
</tr>
<tr>
<td>AHT 109</td>
<td>Veterinary Clinical Pathology</td>
<td>4.0</td>
</tr>
<tr>
<td>AHT 110</td>
<td>Diagnostic Radiography</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 145</td>
<td>Applied Animal Health Care</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 147</td>
<td>Animal Health Enrichment</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 99</td>
<td>Clinical Externship in AHT</td>
<td>4.0</td>
</tr>
<tr>
<td>AHT 111</td>
<td>Surgical Assist. &amp; Anesthesiology</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 112</td>
<td>Clinical Seminar</td>
<td>3.0</td>
</tr>
<tr>
<td>AHT 113</td>
<td>Current Veterinary Therapy in Small Animal Practice</td>
<td>2.0</td>
</tr>
<tr>
<td>AHT 145</td>
<td>Applied Animal Health Care</td>
<td>1.0</td>
</tr>
<tr>
<td>AHT 147</td>
<td>Animal Health Enrichment</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Remainning general education requirements in addition to the courses listed above: (see Hartnell College Graduation Requirements for the Associate Degree)

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 57</td>
<td>College Level Reading with a grade of &quot;C&quot; or better: OR a minimum score of 15 on the STARR® Reading Exam</td>
</tr>
<tr>
<td>ENG 1A*</td>
<td>College Composition &amp; Reading</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Elementary Algebra</td>
</tr>
<tr>
<td>Humanities</td>
<td>5.0</td>
</tr>
<tr>
<td>Social &amp; Analytical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States**</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Science</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

* Must be completed prior to the beginning of the second-year curriculum.
** English 1A with a Special Perspective can be used to fulfill both the English 1A requirement and also the Ethnic Groups in the U.S. requirement. A grade of "C" or better must be achieved in each required course of the program.

AHT45. Special Projects (1)  Lab 3 Hrs  Semesters Offered: Variable
A directed program of individual study or experience within an area of animal health technology that is beyond the scope of the regular curriculum. Completion of AHT 101, 102, 103, 104, 105, and 106 recommended. [CSU]

AHT99. Clinical Externship in AHT (4) Credit/No Credit Only
Prerequisite: Completion of at least 12 units of the Animal Health Technology curriculum, INCLUDING AHT 101, 102, 105, and 106.
240 Total Hours of Volunteer Work OR 300 Total Hours of Paid Work  Semesters Offered: Variable
This course serves to introduce the Animal Health Technician student to various veterinary practice experiences. Each student will participate in hands-on laboratory exercises related to a particular veterinary practice. Hours by arrangement. (Concurrent enrollment in AHT 45 or 145 recommended.) Student shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours. [CSU]

AHT101. Intro. to Animal Health (2)  Lec 2 Hrs  Offered: Fall, Spring
This course, open to all students, is designed to introduce them to basic animal health care concepts especially those relating to the dog and cat. The course will also discuss the veterinary medical profession and animal health technology as a career field.

AHT102. Animal Care and Mgt. I (3)  Lec 2 Hrs; Lab 3 Hrs  Offered: Fall
A foundation course designed to introduce the student to basic concepts of animal health care. Topics include breed identification, nutrition, principles of sanitation and disinfection, social and reproductive patterns, and common disease problems of selected species. Laboratory sessions provide the opportunity to develop skills in physical examination, restraint, and basic nursing care. (Concurrent enrollment in AHT 145 and AHT 147 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours.

AHT103. Comparative Anatomy and Physiology (6)  Lec 4 Hrs; Lab 6 Hrs  Offered: Fall
This course is designed to emphasize animal structures and functions that apply to procedures commonly employed in the practice of veterinary medicine. Each student will have the opportunity to perform dissections on a variety of animal preparations. Completion of Biology 10, General Biology or high school biology recommended.

General Information
The Animal Health Technology program is designed to prepare students for careers assisting veterinarians and other professionals in the delivery of animal health care services. Completion of the curriculum prepares students for the California State Board Examination administered by the Board of Examiners in Veterinary Medicine. Students become Registered Veterinary Technicians.

The curriculum includes general education requirements for the Associate in Science Degree as well as course requirements in the scientific and clinical subject areas. Most of the instruction takes place in a special teaching facility designed to simulate veterinary practice. The clinical subjects involve "hands-on" training with a variety of animal species. Hartnell's Alisal off-campus site provides specialized facilities for livestock and equine species. In addition, opportunities are presented to train with practicing veterinarians in their facilities during clinical externships.

Admission Requirements
Selection of candidates for entry into the AHT program begins during each spring semester. An admission application which outlines the selection process may be obtained from the Animal Health Technology discipline. Completed application forms are accepted by May 1 of each year.

Suggested Pre-Entry Courses
The following courses should be completed with a grade of "C" or better:

- BIO 10  General Biology (or approved equivalent)
- CHM 60  Principles of Chemistry (or approved equivalent)
- AHT 10  Intro. to Animal Health
- CIS 203  Intro. to IBM/PC Compatible Micro Computers

Partial fulfillment of these course requirements may be granted in some cases to permit earlier entry into the program. However, students must complete all required courses prior to graduation.

A grade of "C" or better must be achieved in each required course of the program.

 consumed successfully.
AHT104. Comparative Pathology and Pharmacology (4)
Lec 4 Hrs
Offered: Spring
This course consists of lectures and demonstrations emphasizing the basic mechanisms of disease and veterinary therapeutics. The broader principles of pathology are applied toward a study of the more common animal diseases and the pharmacologic agent to treat them. Completion of AHT 103, Biology 10, and Chemistry 60 are recommended.

AHT105. Animal Care and Mgt. II (3)
Lec 2 Hrs; Lab 3 Hrs
Offered: Spring
A continuation of Animal Care and Management I with emphasis on the proper care and management of the horse, cow, sheep, goat and pig. Topics include breed identification, nutrition, husbandry, breeding, equipment identification, and treatment techniques. Laboratory session provides the opportunity for students to develop skills in physical examination, handling and restraint, administration of medications, collection techniques and hoof care. Zoonoses infectious diseases, vaccination and health programs of large animals and small animals will be discussed. Drug dosage calculations will also be emphasized. (Concurrent enrollment in AHT 145 & AHT 147 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours.

AHT106. Clinical Procedures I (2)
Semesters Offered: Spring
A course designed to build upon the skills developed in Clinical Procedures I and other prior courses. Lecture and laboratory sessions provide opportunities to develop more advanced skills in animal nursing. Small animal topics include electrocardiography, application of coaptation casts and splints and veterinary emergency medicine. Advanced procedures in avian and equine care will also be presented. (Concurrent enrollment in AHT 145 and 147 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours.

AHT108. Veterinary Office Practice and Interpersonal Skills (2)
Lec 2 Hrs
Offered: Fall
A practice-oriented course devoted to basic office procedures and client relations in veterinary hospitals. Job-hunting techniques, resume preparation and interviewing skills will be discussed. Ethical and legal considerations for the animal health technician and his/her employer will be reviewed. Basic computer skills related to veterinary practice will be practiced. Completion of CIS 203 (Introduction to IBM Compatible Microcomputers) recommended.

AHT109. Veterinary Clinical Pathology (4)
Prerequisite: Completion of AHT 102, 103, 104, and 106.
Lec 2 Hrs; Lab 6 Hrs
Offered: Fall
A study of laboratory techniques commonly utilized in the diagnosis of animal disease. Lecture and laboratory topics include parasitology, hematology, serum chemistries, urinalysis, cytology and necropsy procedures. (Concurrent enrollment in AHT 145 and AHT 147 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of class hours.

AHT110. Diagnostic Radiography (3)
Prerequisite: Completion of AHT 102, 103, 104, and 106.
Lec 2 Hrs; Lab 3 Hrs
Offered: Fall
A practice-oriented course designed to cover basic concepts of x-ray generation, positioning, and processing techniques. Radiation safety will be emphasized throughout the course. All laboratory exercises will utilize live animal patients to demonstrate specific anatomic regions for diagnostic evaluation. (Concurrent enrollment in AHT 145 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours.

AHT111. Surgical Assisting and Anesthesiology (3)
Prerequisite: Completion of AHT 102, 103, 104, 106, 107, and 109.
Lec 2 Hrs; Lab 3 Hrs
Offered: Spring
This course will provide instruction and practice in patient preparation, surgical assistance, post-operative care, administration and monitoring of various anesthetic agents and the maintenance of a sterile environment. (Concurrent enrollment in AHT 145 and 147 recommended.) Students shall participate in care of colony animals and special assignments at scheduled times outside of normal class hours.
ANTHROPOLOGY

ASSOCIATE OF ARTS DEGREE
Students may major in Behavioral Sciences by completing the program listed under Behavioral Sciences in the Catalogue.

ANT1. Introduction to Anthropology: Physical (3)
Lec 3 Hrs
Semesters Offered: Variable
The study of the evolution of human biology and behavior; includes principles of evolution and genetics, race, prehistoric humans and primate behavior. Special emphasis on the biological bases of our socio-cultural behavior.
[CSU; UC; CAN ANTH 2]

ANT2. Introduction to Anthropology: Cultural (3)
Lec 3 Hrs
Semesters Offered: Variable
A survey of the range of cultural phenomena including language, patterns of subsistence, economic organization, marriage and the family, kinship, political organization, religion, the arts, and culture change. Methodology, concepts, and theories will be presented in the development of an anthropological perspective.
[CSU; UC; CAN ANTH 4]

ANT3. Introduction to Archeology (3)
Lec 3 Hrs
Semesters Offered: Variable
An examination of pre-history and the methods and theory of modern archeology; the contributions of archeology toward an understanding of the development of human culture from man's emergence as a culture-bearing animal to the beginnings of written history.
[CSU; UC; CAN ANTH 6]

ANT10. California Indians (3)
Lec 3 Hrs
Semesters Offered: Variable
A survey of the American Indian tribes and cultures of California. The course is designed to provide an introduction to the cultural evolution of indigenous American Indian tribes in California.
[CSU; UC]
Apprentices working in the electrical trade may complete a related training program at Hartnell College. To become an apprentice, it is necessary to apply to the Joint Apprentice Committee (JAC) of the trade and be approved for training, subject to the regulations and standards for that trade. Apprentice training leading to the trade certificate for a journeyman usually requires five years; however, you should consult the appropriate JAC for specific length of time required to complete the training. Previous trade experience may help shorten the period of time. Training consists of full-time work on the job supplemented by instruction offered at night. Interested persons should contact the IBEW Local Union 234 at 10300 Merritt, Castroville, CA. Phone number – 633-2311.

Because of the uniqueness of the relationship between on-the-job experiences and apprenticeship classroom instruction, admission to the following apprenticeship classes is limited to apprentices registered with the California State Division of Apprenticeship Standards. This limitation is authorized by Section 3074.3 of the State Labor Code.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Option</th>
<th>Semesters Offered</th>
<th>Credit/No Credit Option</th>
<th>Prerequisite</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP220</td>
<td>1st Year Electrical Appr. I</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 220.</td>
<td>First course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP221</td>
<td>1st Year Electrical Appr. II</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 221.</td>
<td>Second course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP222</td>
<td>2nd Year Electrical Appr. I</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 222.</td>
<td>Third course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP223</td>
<td>2nd Year Electrical Appr. II</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 223.</td>
<td>Fourth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP224</td>
<td>3rd Year Electrical Appr. I</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 224.</td>
<td>Fifth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in electrical construction industry.</td>
</tr>
<tr>
<td>APP225</td>
<td>3rd Year Electrical Appr. II</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 225.</td>
<td>Sixth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in electrical construction industry.</td>
</tr>
<tr>
<td>APP226</td>
<td>4th Year Electrical Appr. I</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 226.</td>
<td>Seventh course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP227</td>
<td>4th Year Electrical Appr. II</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 227.</td>
<td>Eighth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP228</td>
<td>5th Year Electrical Appr. 1</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 228.</td>
<td>Ninth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in electrical construction industry.</td>
</tr>
<tr>
<td>APP229</td>
<td>5th Year Electrical Appr. 2</td>
<td>5</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td>Passing grade of 75% in Apprenticeship 229.</td>
<td>Tenth course in the five-year Electrical Apprenticeship Program leading to Journeyman certification in the electrical construction industry.</td>
</tr>
<tr>
<td>APP245</td>
<td>Special Projects</td>
<td>variable</td>
<td></td>
<td>Variable</td>
<td>Credit/No Credit Option</td>
<td></td>
<td>Supervised study and individualized instruction for apprentices entering a trade or transferring to a Hartnell College apprenticeship program at a time when regularly scheduled classes are not available.</td>
</tr>
</tbody>
</table>
The study of art involves two major directions: first, understanding and appreciation of the cultural heritage of art; second, development of skills in the studio art of drawing, painting, design, sculpture, and ceramics. The faculty of the Art discipline is committed to the objective of making the arts of the past and present available to the students through historical surveys and the studio experience. It is believed that this heritage of thought and skill, going beyond our immediate time and culture, will enrich the students’ lives, their personal view of their world, and their communication of ideas, through added knowledge and inter-cultural understanding.

Positions for which graduates in art are qualified are as follows:

- Arts Administrator
- Art Critic
- Art Dealer
- Ceramist
- Commercial Ceramist
- Display Designer
- Painter
- Art Therapist
- Gallery Director
- Merchant
- Sculptor
- Visual Information Spec.
- Muralist
- Community Artist
- Design Consultant
- Historian
- Figure Sculpture
- Sculpture (Metal Cast)
- Ceramics (Glaze Technology)
- Jewelry
- Gallery Management
- Pre-Algebra
- English Grammar & Comp
- College Comp. & Reading
- A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.

ART ASSOCIATE OF ARTS DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 3</td>
<td>Drawing and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 8</td>
<td>Introduction to Three Dimensional . Form OR</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 15A</td>
<td>Ceramics</td>
<td>(3.0)</td>
</tr>
<tr>
<td>ART 12A</td>
<td>Design</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 1</td>
<td>Intro to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 1A</td>
<td>History of Art</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 1B</td>
<td>History of Art</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ELECTIVES
Select an additional three (3) units in Art or Photography

18.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

AREA

<table>
<thead>
<tr>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
</tr>
<tr>
<td>Language and Rationality</td>
</tr>
</tbody>
</table>

COMPETENCY REQUIREMENT
See College Catalogue

ADDITIONAL INFORMATION
Additional units to reach a minimum of 60 semester units in degree applicable courses.

10-18.0

ART CERTIFICATE PROGRAM
The Art Certificate is awarded upon the completion of the required courses and the courses in an area of emphasis.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 3</td>
<td>Drawing and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 11A</td>
<td>Foundation in Sculpture</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 15A</td>
<td>Ceramics</td>
<td>(3.0)</td>
</tr>
<tr>
<td>ART 12A</td>
<td>Design</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 1</td>
<td>Introduction to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101</td>
<td>English Grammar &amp; Comp</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1A</td>
<td>College Comp. &amp; Reading</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 201</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Plus two courses from the following:

ART 1A History of Art | 3.0
ART 1B History of Art | 3.0
ART 1D Asian Art | 3.0
ART 10 Art Appreciation | 3.0

21-24.0

AREA OF EMPHASIS - Select one of the following areas of Emphasis: A, B, or C

A. Two Dimensional Art - Choose two courses

ART 4 Perspective Drawing | 3.0
ART 5 Color, Drawing, and Painting | 3.0
ART 6A Painting | 3.0
ART 6C Painting | 3.0
ART 14A Figure Drawing | 3.0
ART 14B Figure Drawing | 3.0
ART 20A Printmaking | 3.0
ART 20B Printmaking | 3.0
ART 50 Gallery Management | 3.0

B. Three Dimensional Art - Choose two courses

The certificate in three-dimensional art is designed to prepare students for careers in sculpture, ceramics, jewelry and related fields.

ART 11A Foundation in Sculpture | 3.0
ART 11B Figure Sculpture | 3.0
ART 11C Sculpture (Metal Cast) | 3.0
ART 15B Ceramics | 3.0
ART 15C Ceramics (Glaze Technology) | 3.0
ART 41A Jewelry | 3.0
ART 41B Jewelry | 3.0
ART 50 Gallery Management | 3.0

C. Graphics - Choose two courses

ART 5 Color, Drawing, and Painting | 3.0
ART 70 Graphic Design/Computer Graphics | 3.0
ART 75 3D Modeling & Digital Animation | 3.0

Required Courses 21-24.0
Area of Emphasis 6.0
TOTAL 27-30.0

A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.
ART1A. History of Art (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of the art of ancient Egypt, Greece, Rome and medieval civilizations.  
[CSU; UC; CAN ART 2, CAN ART SEQ A with ART 1A & 1B]

ART1B. History of Art (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A history of Renaissance and Modern Art.  
Emphasis on painting and sculpture.  
[CSU; UC; CAN 4, CAN ART SEQ A with ART 1A & 1B]

ART1C. Twentieth Century Art (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of major artists and their work in painting, sculpture, architecture and allied arts from approximately 1800 to the present.  
Consideration of basic concepts, technical developments, and relationship between artist and society.  
Consideration of social and technological changes within society as they relate to art.  
[CSU; UC]

ART1D. Asian Art (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of the major ancient Asian civilizations including Indian, Chinese and Japanese cultures.  
[CSU; UC]

ART2. Foundations In The Visual Arts (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The basics of the visual arts: the study and application in two and three dimensional design.  
This course is the first course in the visual arts.  It presumes that students have no earlier courses or training in this area.  
[CSU; UC]

ART3. Drawing And Composition (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The foundations of observation, drawing, and composition.  
A study of contour, shape, line, and value.  
Problems in composition and aerial perspective.  
[CSU; UC; CAN ART 8]

ART4. Perspective Drawing (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
A course in the theory and application of linear perspective.  
[CSU; UC]

ART5. Color, Drawing and Painting (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The study and application of rendering and illustration techniques.  
An introduction to a wide range of graphic media visual communication approaches.  
Completion of Art 3 or Art 4, or Art 12A recommended.  
[CSU; UC]

ART6A. Beginning Painting (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The development of ideas and techniques of design as they apply to painting.  
Emphasis on color and value composition as well as spatial and linear composition.  
The investigation of various painting media.  
Completion of Art 3 and Art 12A recommended.  
[CSU; UC; CAN ART 10]

ART6B. Painting (3)  
Prerequisite: Art 6A  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The study of painting in transparent and opaque media.  
[CSU; UC]

ART6C. Painting (3)  
Prerequisite: Art 6B  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The continued study of painting in transparent and opaque media as begun in Art 27A.  
[CSU; UC]

ART8. Introduction to Three-Dimensional Form (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
An introductory study and investigation of three-dimensional volumes and structures.  
The purposes of three-dimensional communication and design.  
[CSU; UC; CAN ART 16]

ART10. Art Appreciation (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
Introduction to art for the general student.  
Illustrated lectures on painting, sculpture, and architecture from various historical periods and cultures: study of style, form, and art techniques.  
Emphasis on visual communication.  
[CSU; UC]

ART11A. Foundation in Sculpture (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
An investigation of light, space, form, time and scale as they apply to sculpture.  
The use of various materials, tools and techniques needed for the realization of the design concept.  
[CSU; UC; CAN ART 12]

ART11B. Figure Sculpture (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The development of sculpture as inspired by the human figure.  
Study of structural anatomy.  
Figure studies and concepts to be developed in various materials - clay, wood, plaster and metal.  
[CSU; UC]

ART11C. Sculpture (Metal Cast) (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The development of sculptural form, particularly applicable to metal casting and mold making techniques.  
Emphasis on individual exploration and development.  
[CSU]

ART12A. Design (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
Exploration of two dimensional composition of color, value, line, and form.  
Work to be done in a variety of materials.  
[CSU; UC; CAN ART 14]

ART12B. Design (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
Further development of concepts of two dimensional design concepts.  
Emphasis on the evolvement of the aesthetic idea and its execution.  
The use of painting, printing, drawing, and collage techniques.  
[CSU; UC]

ART14A. Figure Drawing (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
The study and application of drawing as it relates to the human figures.  
[CSU; UC; CAN ART 24]

ART14B. Figure Drawing (3)  
Prerequisite: ART14A  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
Continued study and application of drawing as it relates to the human figure.  
Emphasis on composition and creative origination.  
[CSU; UC]

ART15A. Ceramics (3)  
Lec 2 Hrs; Lab 4 Hrs  
Semesters Offered: Variable  
An introductory study of materials and their manipulation in the creation of art objects.  
Methods of forming by slabs, simple molds and coils.  
Wheel throwing is introduced.  
Beginning firing and glazing.  
Decorative techniques.  
[CSU; UC; CAN ART 6]
ART15B. Ceramics (3)
**Prerequisite:** Art 15A
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Continued work with slabs, coils and molds. More emphasis on the wheel and "free form". Study of glaze formulas, and continued study of firing. Study of engobe decoration and surface enrichment with texture.

[CSU; UC]

ART15C. Ceramics (Glaze Tech.) (3)
**Prerequisite:** Art 15A
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
The study of glaze materials and glaze calculation using the molecular system. Extensive laboratory work is done.

[CSU; UC]

ART16. Mixed Materials (3)
**Prerequisite:** Completion of Art 15A.
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Study of basic concepts of multiple media arts. Development of student's creative skills and experiences in 2 and 3 dimensional design including multiple-element construction, construction of projects emphasizing the use of two or more materials.

[CSU; UC]

ART17. Kiln Firing (3)
**Prerequisite:** Art 15A
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Work with slabs, coils, molds, and wheel thrown vessels. Study of formulas with emphasis on firing and kiln operation. Study of decoration and surface enrichment with scrafitto, inlay texture, slip, and oxides.

[CSU; UC]

ART18. Jewelry and Metalsmithing (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
An introduction to Jewelry and Metalsmithing. The study and application of metals technologies and design as they relate to jewelry and metalsmithing.

[CSU; CAN ART 26]

ART20A. Printmaking (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Introduction of the print making media; monoprint, woodcut and wood engraving, etching, aquatint and drypoint. General introduction and history of printmaking and the application of tools and materials used in these processes. Emphasis will be placed on creative use of these techniques.

[CSU; UC; CAN ART 20]

ART20B. Printmaking (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Exploration of the print making media: emphasis of lithography and serigraphy. The application of tools, materials, and processes to achieve technical and creative ends in printmaking.

[CSU; UC]

ART24. Furniture Design (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
An introduction to functional object design. The exploration of various designs criteria. Tools, materials, and methods that could be used in building a variety of original designs. The presentation of ideas through drawing, model building, and prototype construction.

[CSU]

ART25. Intro. to Ethnic Traditions (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
A study of the ideas, artistic techniques and historical background of certain ethnic groups, especially those with a rich tradition in the arts and a strong presence in the United States. Completion of Art 15A, or at least one course in the Visual Arts is recommended for reasons of safety and use of equipment.

[CSU]

ART26. Art Methods (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An art elective in multi-cultural Art methods and learning theory for those planning to work with elementary and secondary school students. Work will include two-dimensional projects in collage, painting, drawing, printing, and mixed media.

[CSU]

ART32. Calligraphy and Lettering Techniques (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Introduction to lettering and calligraphy techniques including history of writing and lettering, hand lettering techniques, and mechanical production techniques.

[CSU]

ART33. Weaving As An Art Form (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Study of basic concepts of fiber and textile arts. Development of student's creative skills and experience in two and three dimensional design, including basketry, cardweaving, overshot and pickup techniques, free-form construction, spinning of various fibers, and the warping and weaving elements of the 4-harness loom.

[CSU]

ART34. Advanced Weaving As An Art Form (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Advanced study on the four harness loom. Students will learn to develop their own pattern drafts and explore design possibilities with double weave and painted warps. The history and use of different fibers (synthetic and natural), and basic textile conservation techniques will be introduced.

[CSU]

ART41A. Jewelry (3)
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Problems of two dimensional and three dimensional creative design as applied to jewelry making in sterling silver, gold, wood, and stone. Jewelry will be made by fabricating and lost wax methods.

[CSU]

ART41B. Jewelry (3)
**Prerequisite:** Art 41A
Lec 2 Hrs; Lab 4 Hrs
Semesters Offered: Variable
Problems of three dimensional creative design applied to lost-wax casting and fabricating.

[CSU]

ART45. Special Projects (1-3)
Semesters Offered: Variable
Individual research and investigation within specialized creative art areas. Designed to fit the student's individual interests.

[CSU]

ART46. Art Practicum (1-3)
Semesters Offered: Variable
Supervised studio work in art.

[CSU]

ART50. Gallery Management (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Study of gallery operations and procedures. Development of student skills in organizing, preparing and installing exhibitions and examining the goals of a gallery in a school setting.

[CSU]

ART51. Gallery Methods and Installation Procedures (3)
**Prerequisite:** Art 50
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A study of the preparatory methods and installation procedures necessary for a small gallery. Development of skills in these two areas. An examination of the goals and purposes of galleries and museums as well as an historical survey of their development.

[CSU]
ART70.  Graphic Design/Computer Graphics (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
The study and application of the methods, tools, and materials of graphic design. This course brings together a blend of design and practical computer-based production skills. Structuring graphic design information from concept through final product, students will utilize the computer graphic applications of Adobe Illustrator, Adobe Pagemaker and Quark X Press on the Macintosh computer. Not open to those students who have successfully completed CIS 70 and CSS 70.  [CSU]

ART71.  2D Digital Illustration (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course will cover digital illustration methods through the application of two dimensional vector and pixel-oriented imagery. Students will acquire hands-on experience with vector illustration, bitmap brush techniques, digital paper textures, masking techniques, digital painting filter effects and volumetric color.  [CSU]

ART72.  Introduction to Multimedia (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A hands-on approach to learning the fundamentals of multimedia. Students will explore essential topics including: text, graphics, animation, full motion video, interface design, principles of interactivity, development process, and applications and future directions of multimedia. Previous computer experience is recommended. Not open to students who completed CIS 72 or CSS 72.  [CSU]

ART75.  3D Modeling and Digital Animation (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course will cover the techniques of 3D modeling and digital animation. Students will utilize the computer application LightWave 3D for hands-on experience with modeling, the application of lighting and surfaces on 3D models, rendering and animation. Not open to those students who have successfully completed CIS 75 and CSS 75.  [CSU]

ART76.  Intermediate 3D Modeling and Digital Animation (3)
Advisory: Completion of Art 75, CIS 75 or CSS 75, or equivalent skills.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course will cover intermediate techniques of 3D modeling and animation. Students will utilize the computer application Lightwave 3D for hands-on experience with modeling beyond basic points, polygons and primitive objects. Students will learn high-end surface techniques, the application of lighting on 3D models, the use of cameras in the 3D scene and the use of environmental effects. Students will experience the character animation skills of building a skeletal structure for keyframe animation of the 3D model and learn to render still images and animated QuickTime movies.  [CSU]

ART77.  Digital Video and Audio Editing and Production (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Digital video production and editing utilizing the software applications of Adobe Premiere and Adobe After Effects. Students will use video and audio editing software to create Quicktime movies for presentations, CD roms and DVD’s. Not open to students who have completed CIS 77 or CSS 77.  [CSU]

ART80.  Digital Photographic Imaging (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A course in digital photographic imaging. Students will utilize Adobe Photoshop to work with scanned photographs and photographs from digital camera equipment. Not open to students who have successfully completed CIS 80, CSS 80 or PHO 80.  [CSU]

ART85.  Interactive Digital Media Interface Design (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Hands-on instruction in the design of an interface for an interactive multimedia product for web development or CD, DVD distribution. Students will integrate text, audio, video, graphics and animation to create productions for art media portfolios, corporate marketing, instructional presentations or business demonstrations. Students will go through the development process of choosing a theme, determining a premise, structuring a story board and creating a multimedia production. Not open to students who have completed CIS 85 or CSS 85.  [CSU]

ART87.  Web Authoring (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course provides hands-on instruction in the tools and techniques essential to producing quality content for World Wide Web sites. Topics will include markup tags and attributes, layout tables, framesets, internal and external links, and graphic file management and presentation. Students will utilize a practical development methodology that emphasizes appropriate information structuring and visual design. Not open to students who have successfully completed CIS or CSS 87.  [CSU]

ART88.  Advanced Web Authoring (3)
Credit/No Credit Option
Prerequisite: Successful completion of Web Authoring, Art 87
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Advanced hands-on instruction in the tools and techniques essential to producing complex web site content for the World Wide Web. Complex cgi and java scripting, multimedia integration, database interaction, web design and maintenance issues. Not open to students who have successfully completed CIS 88.  [CSU]

ART130.  Desktop Publishing and Design Principles (1)
Credit/No Credit Option
Lec .5 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
This introductory course provides the student with instruction on how the Macintosh computer can be utilized for graphic design purposes. Students will work on paint and draw applications and Pagemaker.  [CSU]

ART150.  Low-Fire Ceramics (1)
Credit/No Credit Option
Lec .5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
A studio course in low-fire ceramic techniques emphasizing approach to form, decoration, and firing methods.  [CSU]

ART160.  Aldus Freehand: Illustration On the Macintosh (.5)
Lec .3 Hr; Lab .8 Hr
Semesters Offered: Variable
A three day workshop that covers the use of the Macintosh Computer for illustration and graphic design through the use of Aldus Freehand.  [CSU]

ART219.  Primitive Firing Workshop (1)
Credit/No Credit Option
Lec .5; Lab 1.5
Semesters Offered: Variable
A studio course in open pit-firing which emphasizes primitive techniques in oxidation and reduction firing. Traditional and non-traditional approaches and philosophies to pottery making and firing are examined.  [CSU]

ART220.  Raku Workshop (1)
Credit/No Credit Option
Lec .5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
A studio course devoted to the problems of forming ceramic vessels in a variety of techniques.  [CSU]
AST1. Introduction to Astronomy (3)  
**Corequisite:** AST1L (optional)  
Lec 3 Hrs  
Semesters Offered: Variable  
A comprehensive survey of modern astronomy stressing scientific method and the interpretation of NASA data in discovering the nature of our Solar System and the Universe. Planetarium demonstrations and telescope observations are included. Suitable for students from all majors and acceptable for physical science credit at any state college or university. Lab requirement can be satisfied when combined with AST1L.  
[CSU; UC]

AST1L. Astronomy Laboratory (1)  
**Corequisite:** Completion of or concurrent enrollment in AST 1 is required.  
Lab 3 Hrs  
Semesters Offered: Variable  
A laboratory course in astronomy that uses a combination of earth-based experiments and NASA information to teach the basic principles and methods of modern astronomy. Students will make their own measurements as well as use NASA information to calculate such things as the age of the universe, the age of the moon, the mass of Jupiter, orbital periods of binary stars, the chemical composition of stars and the probability of extraterrestrial life. Telescope observations and extensive use of the digital Planetarium is included.  
[CSU; UC]

AST45 Special Projects (1-3)  
Semesters Offered: Variable  
This special projects astronomy laboratory is designed to enable the student to investigate topics beyond the scope of a regular astronomy course. Students will gain hands-on experience in reducing and analyzing astronomical data. Target students would be STEM (Science, Technology, Engineering, and Math) students of exceptional promise who would like to apply their skills and knowledge in advanced topics of astronomy and astrophysics. This course may be taken three times with different content for a maximum of nine units.
The Auto Collision Repair curriculum is designed to provide up-to-date training according to ICAR qualification standards. We prepare students for entry level positions in auto collision repair occupations and to upgrade skills of those already in the field. Hartnell is certified for ICAR welding qualification testing. Students may earn an Associate of Science Degree or Certificate in Auto Collision Repair.

## ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

### CERTIFICATE PROGRAM

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUC 150</td>
<td>Intro. to Auto Collision Repair &amp; Refinishing</td>
<td>5.0</td>
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<tr>
<td>AUC 70</td>
<td>Spot Repair and Refinishing</td>
<td>5.0</td>
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<tr>
<td>AUC 173</td>
<td>Auto Body Repair and Replacement</td>
<td>5.0</td>
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<tr>
<td>AUC 174A</td>
<td>Frame and Unibody Repair</td>
<td>3.0</td>
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<tr>
<td>AUC 174B</td>
<td>Frame and Unibody Repair</td>
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<tr>
<td>AUC 174C</td>
<td>Frame and Unibody Repair</td>
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<td>AUC 76</td>
<td>Adv. Repair, Replacement &amp; Refinishing</td>
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<td>AUT 50</td>
<td>Intro. to Automotive Repair</td>
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<td>MEC 169</td>
<td>Haz. Materials &amp; Industrial Safety</td>
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<tr>
<td>WLD 50</td>
<td>Basic Welding</td>
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<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
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<td>MAT 201**</td>
<td>Pre-Algebra</td>
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<td>33 - 39</td>
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### ADDITIONAL INFORMATION

- *Eligibility for English 1A may be substituted for the English 101 requirement.
- **Eligibility for Math 121 or higher may be substituted for the Math 201 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.

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### AUTO COLLISION REPAIR

#### AUC70. Spot Repair and Refinishing (5)
Lec 2.5 Hrs; Lab 7.5 Hrs
Semesters Offered: Variable
This course introduces the student to the principles of automotive refinishing. The student will receive instruction in the use/care of spray equipment and spray guns, correct spray patterns, preparation of spot, and complete painting. Completion of AUC 50 is recommended, also completion of Auto Collision Repair 70A, 70B, and 70C is equivalent to 70. [CSU]

#### AUC70A. Spot Repair & Refinishing (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to the principles of automotive refinishing. The student will receive instruction in the use and care of spray equipment and spray guns, correct spray patterns, preparation of spot and complete painting. This course is a subset of AUC Repair 70. Completion of AUC 50 is recommended. [CSU]

#### AUC70B. Spot Repair & Refinishing (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to the principles of automotive refinishing. The student will receive instruction in the use and care of spray equipment, metal preparation, correct use of spray guns, and refinishing procedures. This course is a subset of AUC70. Completion of AUC 50 is recommended. [CSU]

#### AUC70C. Spot Repair & Refinishing (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to the principles of automotive refinishing. The student will receive instruction in the use of spray equipment, rubbing compounds, and proper reduction for each type of paint. The course emphasizes correct spray refinishing procedures and preparation of paint materials. This course is a subset of AUC70. Completion of AUC 50 is recommended. [CSU]

#### AUC76. Advanced Repair, Replacement and Refinishing (2)
Prerequisite: AUC 50, 70, 72, 74 & WLD 50
Lab 6 Hrs
Semesters Offered: Variable
An advanced laboratory course dealing with body repair, glass, refinishing, and decorative trim. [CSU]
AUC150A. Introduction to Auto Collision Repair & Refinishing (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to principles and basic techniques of auto body collision repair. Industrial safety and proper use of tools of the trade are stressed. Application of these principles and techniques to minor auto body collision repair are taught in both classroom and shop laboratory settings. Completion of AUC 150A, 150B, 150C is equivalent to AUC 150. This course is not open to students who have successfully completed AUC 50 or 150. [CSU]

AUC150B. Introduction to Auto Collision Repair & Refinishing (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to principles and basic techniques of auto body collision repair. Industrial safety and proper use of tools of the trade are stressed. Application of these principles and techniques to minor auto body collision repair are taught in both classroom and shop laboratory settings. Completion of AUC 150A, 150B, 150C is equivalent to AUC 150. This course is not open to students who have successfully completed AUC 50 or 150. [CSU]

AUC150C. Introduction to Auto Collision Repair & Refinishing (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course introduces the student to principles and basic techniques of auto body collision repair. Industrial safety and proper use of tools of the trade are stressed. Application of these principles and techniques to minor auto body collision repair are taught in both classroom and shop laboratory settings. Completion of AUC 150A, 150B, 150C is equivalent to AUC 150. This course is not open to students who have successfully completed AUC 50 or 150. [CSU]

AUC171. Repair and Refinishing Laboratory (1)
Lab 3 Hrs
Semesters Offered: Variable
This is a laboratory course designed for those who wish to further utilize basic skills in body repair and refinishing. Completion of AUC 50 and WLD 50 is recommended.

AUC172. Advanced Repair and Refinishing Laboratory (1)
Lab 3 Hrs
Semesters Offered: Variable
Advanced laboratory course designed for those who wish to further their skills in body repair and refinishing. Completion of AUC 50 and WLD 50 is recommended.

AUC173. Auto Body Repair & Replacement (5)
Advisory: Completion of AUC 150 (previously AUC 50) and WLD 150 (previously WLD 50).
Lec 1.5 Hrs; Lab 10.5 Hrs
Semesters Offered: Variable
This course will cover the repair of damaged auto body sheet metal, removal and replacement of doors, hoods, deck lids, plastic repair, and their alignment; how to recognize direct and indirect damage; removal and replacement of stationary and moveable auto glass. Completion of AUC 173A, 173B, and 173C is equivalent to 173. Not open to students who have successfully completed AUC 72, 72A, 72B, 72C, 173A, 173B, 173C. [CSU]

AUC173A. Auto Body Repair and Replacement (2)
Advisory: Completion of AUC 150 (previously AUC 50) and WLD 150 (previously WLD 50).
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course will cover the repair equipment for auto body sheet metal. The student will learn to recognize direct and indirect damage. This course is a subset of Auto Collision Repair 173. Not open to students who have successfully completed AUC 72 or 173. [CSU]

AUC173B. Auto Body Repair and Replacement (2)
Advisory: Completion of AUC 150 (previously AUC 50) or WLD 150 (previously WLD 50).
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course will cover the repair of damaged auto body sheet metal, removal and replacement of doors, hoods, deck lids, and alignment with a review of direct and indirect damage. This course is a subset of Auto Collision Repair 173. Not open to students who have successfully completed AUC 72 or 173. [CSU]

AUC173C. Auto Body Repair and Replacement (2)
Advisory: Completion of AUC 150 (previously AUC 50) and WLD 150 (previously WLD 50).
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
This course will cover the repair of damaged auto body sheet metal. The student will remove and replace collision damaged quarter panels and auto glass, and review proper alignment methods. This course is a subset of Auto Collision Repair 173. Not open to students who have successfully completed AUC 72 or AUC 173. [CSU]

AUC174A. Frame and Unibody Repair (3)
Prerequisite: AUC 150 (previously AUC 50) and WLD 150 (previously WLD 50).
Lec 2.25 Hrs; Lab 2.25 Hrs
Semesters Offered: Variable
This course will focus on the different types of automotive frames, unibody construction, and use of Chief Frame Straightener, computerized laser measuring, and body gauges measuring. This course meets ASE and I-CAR Certification requirements. [CSU]

AUC174B. Frame and Unibody Repair (3)
Prerequisite: AUC 174A
Lec 2.25 Hrs; Lab 2.25 Hrs
Semesters Offered: Variable
This course will focus on the different types of automotive frames, unibody construction, and use of Chief Frame Straightener, computerized laser measuring, and body gauges measuring. This course meets ASE and I-CAR Certification requirements. [CSU]

AUC174C. Frame and Unibody Repair (3)
Prerequisite: Auto Collision 174B
Lec 2.25 Hrs; Lab 2.25 Hrs
Semesters Offered: Variable
This course will focus on the different types of automotive frames, unibody construction, and use of Chief Frame Straightener, computerized laser measuring, and body gauges measuring. This course meets ASE and I-CAR Certification requirements. [CSU]
The Automotive curriculum is designed to prepare students to become competent technicians and to gain employment in the automotive field as a line mechanic or in one of the specialty areas. In addition to the Associate Degree program, there are five certificate areas of specialization:

1. Automotive Electronics, Diagnostics, Tune-up, and Smog
2. Auto Engine Machining
3. Auto Shop Management
4. General Auto Mechanics
5. Auto Fuel Systems

**AUTOMOTIVE ELECTRONICS, DIAGNOSTICS, TUNE-UP, AND SMOG CERTIFICATE PROGRAM**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<td>AUT 50</td>
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<tr>
<td>AUT 51</td>
<td>Tune-up and Diagnostics</td>
<td>4.0</td>
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<tr>
<td>AUT 72</td>
<td>Emissions Control</td>
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<tr>
<td>AUT 73</td>
<td>Electrical Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 114</td>
<td>Auto Fuel Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 86</td>
<td>Electronic Diagnosis</td>
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<tr>
<td>AUT 271</td>
<td>BAR 90 Smog</td>
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<tr>
<td>ELE 52</td>
<td>AC/DC Fundamentals</td>
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<tr>
<td>ELE 151</td>
<td>DC Circuit Analysis</td>
<td>2.5</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>Grammar and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Hazardous Materials &amp; Industrial Safety</td>
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<tr>
<td></td>
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<td>41.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Eligibility for English 1A may be substituted for the English 101 requirement.

**Completion of Math 121 or higher may be substituted for the Math 151 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.

---

**AUTO ENGINE MACHINING ASSOCIATE OF SCIENCE DEGREE**

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**AUTO ENGINE MACHINING CERTIFICATE PROGRAM**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 50</td>
<td>Intro. to Automotive Repair</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 51</td>
<td>Auto Tune-up and Diagnostics</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 103</td>
<td>Auto Engines</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 61</td>
<td>Auto Machining I</td>
<td>4.0</td>
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<tr>
<td>AUT 62</td>
<td>Auto Machining II</td>
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<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
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<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
<td>3.0</td>
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<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 50</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Eligibility for English 1A may be substituted for the English 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.
**AUTO SHOP MANAGEMENT**

**ASSOCIATE OF SCIENCE DEGREE**
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:**

<table>
<thead>
<tr>
<th>AREA</th>
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<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
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<tr>
<td>Ethnic Groups In The United States</td>
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<tr>
<td>Language and Rationality</td>
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**CERTIFICATE PROGRAM**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 50</td>
<td>Intro. to Automotive Repair</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 51</td>
<td>Auto Tune-up and Diagnostics</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 71</td>
<td>Automotive Braking Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 72</td>
<td>Emission Control</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 73</td>
<td>Automotive Electrical Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 83</td>
<td>Automotive Wheel Alignment &amp; Suspension</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 177</td>
<td>Foreign Car Repair</td>
<td>2.0</td>
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<tr>
<td>AUT 179</td>
<td>Automotive Bus. and Shop Mgt</td>
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<tr>
<td>BUS 18</td>
<td>Introduction to Business Law</td>
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<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
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<tr>
<td>MEC 59**</td>
<td>Technical Mathematics &amp; Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Eligibility for English 1A may be substituted for the English 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.

---

**DIESEL MECHANIC**

**ASSOCIATE OF SCIENCE DEGREE**
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**CERTIFICATE PROGRAM**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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</thead>
<tbody>
<tr>
<td>AUT 150</td>
<td>Intro. to Diesel Engines</td>
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</tr>
<tr>
<td>AUT 151</td>
<td>Diesel Engine Maintenance</td>
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<tr>
<td>AUT 152</td>
<td>Diesel Electrical System</td>
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<td>AUT 153</td>
<td>Diesel Brake System, Suspension</td>
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<tr>
<td>AUT 154</td>
<td>Diesel Engine Performance</td>
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<tr>
<td>AUT 76A</td>
<td>Fuel Injection System (Cold Starting System)</td>
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<tr>
<td>AUT 76B</td>
<td>Fuel Injection System</td>
<td>2.0</td>
</tr>
<tr>
<td>AUT 91A</td>
<td>Intro. to Diesel Engine Rebuild</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
<td>2.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MEC 59**</td>
<td>Technical Mathematics &amp; Processes</td>
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</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Eligibility for ENG 1A may be substituted for the ENG 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.

---

**GENERAL AUTO MECHANICS**

**ASSOCIATE OF SCIENCE DEGREE**
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**CERTIFICATE PROGRAM**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 50</td>
<td>Intro. to Automotive Repair</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 51</td>
<td>Auto Tune-up and Diagnostics</td>
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<tr>
<td>AUT 103</td>
<td>Auto Engines</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 71</td>
<td>Automotive Braking Systems</td>
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<tr>
<td>AUT 72</td>
<td>Emission Control</td>
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<tr>
<td>AUT 73</td>
<td>Auto Electrical Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>AUT 81</td>
<td>Auto Drive Train</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 82</td>
<td>Automatic Transmission</td>
<td>4.0</td>
</tr>
<tr>
<td>AUT 83</td>
<td>Automotive Wheel Alignment &amp; Suspension</td>
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</tr>
<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
<td>2.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
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<tr>
<td>MEC 59**</td>
<td>Technical Mathematics &amp; Processes</td>
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<td>MAT 151**</td>
<td>Technical Mathematics</td>
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<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Eligibility for ENG 1A may be substituted for the ENG 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade point average of 2.0 (C) or better must be maintained in the Certificate Program.
AUT50. Intro. To Automotive Repair (4)
Credit/No Credit Option
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
A basic course covering safety, the use of service publications, and the technical knowledge and skills in all areas of the vehicle to reach a minimum skill level. Completion of this course will provide terminal skills for employment as an automotive service station attendant. Completion of AUT50A, and 50B is equivalent to 50. [CSU]

AUT51. Auto Tune-Up And Diagnostics (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
The diagnosis and tight repair of auto engine featuring major tune-up procedures; servicing of manifolds, mountings, cooling and lubrication systems. Completion of AUT51A and 51B is equivalent to 51. Completion of AUT 50 is recommended. [CSU]

AUT61. Auto Machining I (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
The study of techniques and machine operations as employed by Automotive Engine Re-builders. Completion of AUT61A and 61B is equivalent to 61. Completion of AUT 50 is recommended. [CSU]

AUT62. Auto Machining II (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
Introduction to the Shop procedures of valve refacing, valve seat refacing, valve guide knurling and replacement piston knurling, valve seat replacement, magnafluxing, and brake lathe operations. Completion of AUT62A and 62B is equivalent to 62. [CSU]

AUT71. Auto. Braking Systems (3)
Lec 1 Hr; Lab 6 Hrs
Semsesters Offered: Variable
Automotive braking and wheel bearing systems principles and service. Completion of AUT71A, and 71B, is equivalent to 71. Completion of AUT 50 is recommended. [CSU]

AUT72. Emission Control (3)
Lec 2 Hrs; Lab 3 Hrs
Semsesters Offered: Variable
This course will cover carburetion, ignition, and pollution control devices. The theory of their operation and adjustment and repair will be covered. The use of the scope, dyno, and infrared analyzer will be stressed. Completion of AUT72A and 72B is equivalent to 72. Completion of AUT 50 is recommended. [CSU]

AUT73. Auto Electrical System (3)
Lec 2 Hrs; Lab 3 Hrs
Semsesters Offered: Variable
This course will introduce the student to fundamental electrical theory, diagnosis, and repair of electrical systems. Survey of recent developments in auto electronics. Completion of AUT73A and 73B is equivalent to 73. Completion of AUT 50 is recommended. [CSU]

AUT76A. Fuel Injection System (Cold Starting System) (2)
Prerequisite: AUT55
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
This course will introduce the different types of fuel qualities and the various applications of fuel. [CSU]

AUT76B. Fuel Injection System (2)
Prerequisite: AUT76A
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
This course will introduce the Detroit diesel and Cummins fuel injection systems. [CSU]

AUT76C. Diesel Fuel Test Stand (2)
Prerequisite: AUT76A and 76B
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
This course is a further study of fuel injection systems used on diesel engines. Included is the operation of the injection pump test stand used for testing and calibration of Bosch PSB test system. [CSU]

AUT76D. Diesel Fuel Injection System Calibration (2)
Prerequisite: AUT76C
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
Advanced studies of procedures required to properly test, rebuild and calibrate fuel injection systems used on diesel engines. Students will become familiar with the testing and calibration of Cummins PT and Detroit fuel systems. [CSU]

AUT81. Auto Drive Train (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
This course will introduce the student to inspection and repair procedure of the clutch, manual transmission, drive shaft, constant velocity joints, universal joints, and hypoid differentials. Completion of AUT81A and 82B is equivalent to 81. Completion of AUT 50 is recommended. [CSU]

AUT82. Automatic Transmissions (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
This course will introduce the student to inspection, repair and adjustment procedures of automatic transmission, torque converters, and automatic transaxle assemblies. Completion of AUT82A and 82B is equivalent to 82. Completion of AUT 50 is recommended. [CSU]

AUT83. Automotive Wheel Alignment & Suspension (3)
Lec 1 Hr; Lab 6 Hrs
Semsesters Offered: Variable
Automotive suspension and steering alignment system principles and service. Completion of AUT83A and 83B is equivalent to AUT 83. Completion of AUT 50 is recommended. [CSU]

AUT85. Transmission Troubleshooting Diagnosis & Repair (2)
Prerequisite: AUT81A or 81B
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
Transmission troubleshooting; remove, replace, and rebuild full standard and automatic transmissions. [CSU]

AUT86. Electronic Diagnosis of Automobiles (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
Automotive electricity and electronics including computer input systems, control systems, system diagnosis, and automotive test computers. Completion of AUT86A and 86B is equivalent to 86. Completion of AUT 50 is recommended. [CSU]

AUT91B. Diesel Engine Rebuild (2)
Prerequisite: AUT91A
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
This course will offer processes for conducting an out-of-frame maintenance service on diesel engine, tune-up, and systems components adjustments.

AUT103. Auto Engines (4)
Lec 2 Hrs; Lab 6 Hrs
Semsesters Offered: Variable
Techniques of performing a three angle valve job, camshaft and followers, replacement engine condition test, lubrication system inspection, cooling system inspection and service.

AUT110. Auto Air Conditioning and Heating Systems (2)
Lec 1 Hr; Lab 3 Hrs
Semsesters Offered: Variable
Fundamentals of automotive air conditioning and heating systems, the basic parts, their location and function, recovery, evacuating, servicing, cleaning, inspection, and care of the heating and air conditioning systems.

AUT114. Auto Fuel Systems (3)
Lec 2 Hrs; 3 Lab Hrs
Semsesters Offered: Variable
Automotive fuel systems as used in today's and yesterday's vehicles; including the fuel and air induction systems, carburetors, fuel injection systems. Exhaust systems and fuel delivery systems; including evaporative emission controls and diagnosis and repair of these systems.
AUT120. Intro. to Alternative Fuels (2)
   Lec 2 Hrs
   Semesters Offered: Variable
   Theory and principles of electricity, testing, service and maintenance of electrical circuits for diesel engines and vehicle. Troubleshooting procedures and repair, of the cranking, charging and battery system. Learn to read and understand electrical diagrams, follow wiring repair procedures and circuit protection devices, wiring sizes and current load capacity, terminals and connectors repair and service. Lighting, relays, solenoids and switches maintenance, repair and replacement of defective components. The training in the proper use of safety equipment used in the diesel driving procedures and rules and procedures to securing cargo and passengers according to State and Federal regulations.

AUT152. Diesel Electrical System (2)
   Credit/No Credit Option
   Lec 1 Hr; Lab 3 Hrs
   Semesters Offered: Variable
   Theory and principles of electricity, testing, service and maintenance of electrical circuits for diesel engines and vehicle. Troubleshooting procedures and repair, of the cranking, charging and battery system. Learn to read and understand electrical diagrams, follow wiring repair procedures and circuit protection devices, wiring sizes and current load capacity, terminals and connectors repair and service. Lighting, relays, solenoids and switches maintenance, repair and replacement of defective components. The training in the proper use of safety equipment used in the diesel driving procedures and rules and procedures to securing cargo and passengers according to State and Federal regulations.

AUT154. Diesel Engine Performance (2)
   Lec 1 Hr; Lab 3 Hrs
   Semesters Offered: Variable
   This course will introduce the different types of diesel engines, components and supporting systems. This course will cover the safe use of hand and power tools, and the proper use of the safety equipment used in the diesel trucks and buses including safe driving procedures and the securing of cargo and passengers according to State and Federal regulations.

AUT156. Diesel Engine Rebuild (2)
   Lec 1 Hr; Lab 3 Hrs
   Semesters Offered: Variable
   This course will introduce the different types of Diesel Engines; understand the principles of the Diesel Engine, the construction and operation of the major engine components such as the: cylinder block, crankshaft, piston, piston rings, cylinder heads, valve train and connecting rods, combustion chamber design, fuel system and injectors. Read and understand complex service manuals as well as information from the manufacturer on how to service the many components of the engine. Tool safety and its use in the shop; understand the many different types of fasteners, seals and gaskets used in the rebuild of a diesel engine and components.

AUT158. Diesel Heavy Duty Power Drive Train (2)
   Credit/No Credit Option
   Lec 1 Hr; Lab 3 Hrs
   Semesters Offered: Variable
   This course focuses on the inspection and repair procedures of the clutch, manual transmission, drive shafts, and differentials on heavy duty diesel applications and diesel trucks.

AUT179. Auto. Business and Shop Management (2)
   Lec 1 Hr; Lab 3 Hrs
   Semesters Offered: Variable
   This course is designed for students interested in owning the management of, or other involvement in automotive business.

AUT251. Auto. Preventive Maint. (2)
   Credit/No Credit Option
   Lec 1.5 Hrs; Lab 1.5 Hrs
   Semesters Offered: Variable
   A basic understanding of the mechanical operation of the automobile; preventive maintenance and minor repairs which must car owners can perform. Enrollment of women encouraged.

AUT271. BAR 90 Smog (5)
   Lec 3 Hrs; Lab 6 Hrs
   Semesters Offered: Variable
   This course is designed for individuals to familiarize themselves with the maintenance and repair procedures for foreign cars (import automobiles). Electrical and carburetion tuning and preventive maintenance schedules will be emphasized.
BEHAVIORAL SCIENCES

AREA: Fine Arts/Language Arts/Social Sciences

DEAN: Dr. Kathleen Rose

DIVISION ADMIN. ASSISTANT: Wini Chambliss

OFFICE: Performing Arts Facility PAF 122

COUNSELOR: Dr. Ignacio Pando Office – Merrill Hall 21 759-6057 lpando@hartnell.edu

Dr. Stelvio Locci Office – CAB 157 755-6926 slocci@hartnell.edu

ASSOCIATE OF ARTS DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>ANT 1</td>
<td>Intro. to Anthro: Physical</td>
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</tr>
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<td></td>
<td>OR</td>
<td></td>
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<tr>
<td>ANT 2</td>
<td>Intro. to Anthro: Cultural</td>
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<tr>
<td>PSY 1A</td>
<td>General Psychology</td>
<td>3.0</td>
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<tr>
<td>SOC 1</td>
<td>Introduction to Sociology</td>
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9.0

ELECTIVES
Selected nine (9) units from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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</thead>
<tbody>
<tr>
<td>ANT 1</td>
<td>Intro. to Anthropology: Physical</td>
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</tr>
<tr>
<td>ANT 2</td>
<td>Intro. to Anthropology: Cultural</td>
<td>3.0</td>
</tr>
<tr>
<td>ANT 3</td>
<td>Introduction to Archaeology</td>
<td>3.0</td>
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<tr>
<td>ANT 10</td>
<td>California Indians</td>
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<tr>
<td>ANT 15</td>
<td>North American Indians</td>
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<tr>
<td>PSY 1B</td>
<td>General Psychology</td>
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<tr>
<td>PSY 14</td>
<td>Child Development</td>
<td>3.0</td>
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<tr>
<td>PSY 15</td>
<td>Human Sexuality</td>
<td>3.0</td>
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<tr>
<td>PSY 41</td>
<td>Psychology of Human Relations</td>
<td>3.0</td>
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<tr>
<td>SOC 5</td>
<td>Introduction to Social Problems</td>
<td>3.0</td>
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<tr>
<td>SOC 41</td>
<td>Marriage and Family Relations</td>
<td>3.0</td>
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<tr>
<td>SOC 42</td>
<td>The Sociology of Minority Relations</td>
<td>3.0</td>
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18.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
</tbody>
</table>

21.0

COMPETENCY REQUIREMENT
See College Catalogue

ADDITIONAL INFORMATION
Additional units to reach a minimum of 60 semester units in degree applicable courses. 13-21.0

60.0
The Bilingual Education Program at Hartnell College has been designed as a career ladder program. A Certificate, Associate Degree, and transfer sequence are the three components of the career ladder. The Certificate and Associate Degree prepare persons for the role of bilingual instructional aide while the transfer sequence provides the lower division requirements for persons pursuing a teaching career in bilingual education.

**ASSOCIATE OF ARTS DEGREE**
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**CERTIFICATE PROGRAM**
Instructional Aide/Bilingual Cross Cultural Option

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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</thead>
<tbody>
<tr>
<td>ECE 10</td>
<td>Child Study</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 2</td>
<td>Home, School, and Community Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>FCS 14</td>
<td>Child Development</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 18</td>
<td>Communication Skills in ECE</td>
<td>2.0</td>
</tr>
<tr>
<td>INS 52/ECE 52</td>
<td>Intro. to Bilingual Programs</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT*</td>
<td>Any Math course offered by the Math discipline</td>
<td>3.0</td>
</tr>
<tr>
<td>SPA</td>
<td>Any Spanish course offered at Hartnell College</td>
<td>4.0</td>
</tr>
<tr>
<td>Electives</td>
<td>See recommended electives below</td>
<td>6.0</td>
</tr>
</tbody>
</table>

*Waived with ACT test score of 17 or above or SAT test score of 400 or above.

**RECOMMENDED ELECTIVES**
Select a minimum of one course from each group.

**Group A**
- ART 10  Art Appreciation  3.0
- MUS 1A  Music Appreciation  3.0
- MUS 1B  Music Appreciation  3.0
- MUS 3   Music Fundamentals II  3.0

**Group B**
- ANT 2  Intro. to Anthro: Cultural  3.0
- ANT 20  Cultures of Mexico  3.0
- PSY 41  Psychology of Human Relations  3.0

**ADDITIONAL INFORMATION**
A grade of "C" or better must be maintained in each course of the Certificate Program.
The courses offered in biology are designed to meet the demands of science and non-science majors. The non-major courses are designed to create interest and enrichment through the study of living organisms and the broad biological principles of life. The major courses provide a strong background in the biological sciences for students transferring to four-year institutions who are interested in careers such as teaching, biological research, work with various governmental agencies, or with private companies and all the health sciences.

### BIOLOGY

**ASSOCIATE OF SCIENCE DEGREE**

Completion of the major requirements plus graduation requirements for the Associate Degree.

#### REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1</td>
<td>Fundamental Biological Concepts</td>
<td>5.0</td>
</tr>
<tr>
<td>BIO 2</td>
<td>General Zoology</td>
<td>5.0</td>
</tr>
<tr>
<td>BIO 3</td>
<td>General Botany</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Select an additional three (3) units in any Natural Science

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 7</td>
<td>General Microbiology</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Additional Recommended Courses

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 1A</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 1B</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 12A</td>
<td>Organic Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 12B</td>
<td>Organic Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>PHY 2A</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 2B</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
</tbody>
</table>

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**BIO1. Fundamental Biological Concepts (5)**

**Prerequisite:** Chemistry 22 (or high school chemistry) or Chemistry 60 with a grade of "C" or better.

Lec 3 Hrs; Lab 6 Hrs

Semesters Offered: Variable

An introduction to the study of the structure and function of living systems with an emphasis on the molecular and cellular levels of organization and the roles of DNA, genetics and evolution as unifying concepts of biology. Recommended for biology, pre-med, pre-dental and pre-veterinary majors.

[CSU; UC; CAN BIOL 2, CAN BIOL SEQ A with BIOL 1, 2, 3]

**BIO2. General Zoology (5)**

**Prerequisite:** Biology 1 with a grade of "C" or better.

Lec 3 Hrs; Lab 6 Hrs

Semesters Offered: Variable

An introduction to the study of the Animal Kingdom with an emphasis on the morphology, physiology, evolution and ecology of animals. Includes extensive laboratory observation, dissection and experimentation. Recommended for biology, pre-med, pre-dental and pre-veterinary majors.

[CSU; UC; CAN BIOL 4, CAN BIOL SEQ A with BIOL 1, 2, 3]

**BIO3. General Botany (5)**

Lec 3 Hrs; Lab 6 Hrs

Semesters Offered: Variable

A survey of plants and their relatives with emphasis on their functional anatomy and morphology, physiology, evolution, ecology, uses and importance.

[CSU; UC; CAN BIOL 6, CAN BIOL SEQ A with BIOL 1, 2, 3]

**BIO5. Human Anatomy (4)**

Lec 3 Hrs; Lab 3 Hrs

Semesters Offered: Variable

A survey of the structure of the human body including skeleton, muscles, digestive system, nervous system, reproductive system. The course is designed to appeal primarily to physical education and nursing majors but may be profitably taken by any student.

[CSU; UC; CAN BIO 10, CAN BIO SEQ B with BIOL 5, 6, & 6L]

**BIO6. Introductory Physiology (3)**

**Prerequisite:** Chemistry 22 (or high school chemistry) or Chemistry 1A.

Lec 3 Hrs

Semesters Offered: Variable

An introduction to the study of the structure and function of human systems with an emphasis on the relationship of cellular and tissue structure and function as they relate to the concept of homeostasis. Recommended for health-related certificate programs, physical education, biology, pre-med, pre-dental and pre-veterinary majors.

[CSU; UC; CAN BIOL 12, CAN BIOL SEQ B with BIOL 5, 6, & 6L]
BIO6L. Physiology Laboratory (2)  
**Prerequisite:** Biology 6 (may be taken concurrently)  
Lec 6 Hrs  
Seminars Offered: Variable  
An introduction to the laboratory study of the structure and function of human systems with an emphasis on the collection and analysis of chemical and physical data which relate to the concept of homeostasis in the human body. Recommended for health-related certificate programs, physical education, biology, pre-med, pre-dental and pre-veterinary majors.  
[CSU; UC; CAN BIO 12, CAN BIOL SEQ B with BIO 5 & 6 & 6L]

BIO7. General Microbiology (5)  
**Prerequisite:** Chemistry 1A  
Lec 3 Hrs; Lab 6 Hrs  
Seminars Offered: Variable  
A general introduction to the study of the structure, physiology and ecology of viruses, bacteria, algae, protozoa and fungi with the major emphasis on the study of bacteria. This course is designed for transfer credit for students majoring in the biological sciences, medicine, veterinary medicine, optometry, nursing, public health, etc. Additionally, completion of a college general biology recommended.  
[CSU; UC]

BIO10. General Biology (4)  
Lec 3 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
An introduction to the facts and principles of general biology with emphasis on the diversity, morphology, heredity, evolution, and ecology of living organisms.  
[CSU; UC]

BIO 11. Introductory Human Anatomy and Physiology (4)  
Lec 3 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
An introduction to the biology of the human being. The structure and function of the organ systems of the human body, and their contributions to homeostasis, will be emphasized in lecture and laboratory. Designed for pre-vocational nursing students and anyone interested in human anatomy and physiology.  
[CSU; UC]

BIO20. Field Biology/Natural Science (4)  
Lec 3 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
An introduction to the natural history of plants, animals, and microorganisms. Identification, classification, life histories, and environmental relationships will be studied. Recommended for elementary and preschool teachers.  
[CSU]

BIO27. Principles of Microbiology (4)  
**Prerequisite:** Chemistry 22 or Chemistry 60.  
Lec 2 Hrs; Lab 6 Hrs  
Seminars Offered: Variable  
The course will cover the principle concepts of microbiology. Viruses, bacteria, algae, protozoa and fungi are studied with major emphasis on bacteria. Aspects of microbiology important in health, sanitation, food processing and industry are covered. Laboratory procedures include pure culture methods, development of sterile techniques and techniques to identify microorganisms. Some emphasis is placed on medical and health applications of laboratory skills. Completion of high school biology recommended.  
[CSU, UC]

BIO30. Marine Biology (4)  
Lec 3 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
An introduction to the study of marine organisms and the environments in which they occur with an emphasis on the marine biology of the Monterey Bay. Recommended for non-science majors who desire a general knowledge and appreciation of life in the sea.  
[CSU; UC]

BIO42. Human Biology (3)  
Lec 3 Hrs  
Seminars Offered: Variable  
Topics in the life sciences that pertain directly to humans and are important to an understanding of one's self and one's world as well as being interesting and relevant to the present day human condition.  
[CSU; UC]

BIO45. Special Projects (1-3)  
Seminars Offered: Variable  
Advanced laboratory work in special fields. Given only when permission is obtained from biologist whose field is involved. Individual and group investigations in the biological sciences for those students wishing practical experience or additional training beyond the scope of regular science courses.  
[CSU]

BIO47. Ecology (4)  
Lec 3 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
An introduction to the study of the ecology of terrestrial, freshwater and marine ecosystems. Energy flow, nutrient cycles, natural populations and communities as they relate to ecosystem structure and function will be emphasized along with human interactions with natural ecosystems. Recommended for non-science majors who desire a general knowledge and appreciation of the ecosystems of the world.  
[CSU; UC]

BIO48. Environmental Science (3)  
Lec 3 Hrs  
Seminars Offered: Variable  
An introduction to the impact of the human population on the environment. Stress will be placed on ecological concepts related to solving land, air and water pollution problems. Natural resources and the impact of pollution on agriculture and wildlife communities will be covered.  
[CSU; UC]

BIO140. Health Science Foundations (2)  
Lec 2 Hrs  
Seminars Offered: Variable  
A course specifically designed to prepare students for human anatomy, human physiology, and microbiology by providing a basic foundation of biological and chemical concepts. Strongly recommended for those students pursuing nursing, dental hygiene, radiation technology and other health science careers. Especially useful for students who have not had a course in general biology or chemistry within the past five years.
The Business Discipline offers training in Business Administration, General Business, and Business Office Technology. 

A Business Administration/Transfer associate degree is available for those students interested in transferring to a four-year college or university. There is also a General Business certificate program to prepare students for job entry upon completing the certificate. The Business Office Technology program offers a certificate in Office Technology with an emphasis in either Information Processing or Accounting. Both certificates prepare students for job entry upon completion. Students may earn a Business Office Technology associate degree by completing the Information Processing Certificate along with additional courses. All programs use microcomputer equipment and software application programs to prepare students for a wide variety of positions available in the local area.

Students should consult the college or university catalog of the school to which they intend to transfer for more specific requirements. A grade of 2.0 (C) or better must be maintained in each required course of the certificate program.

### BUSINESS ADMINISTRATION/TRANSFER

#### ASSOCIATE OF ARTS DEGREE

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1A</td>
<td>Accounting Principles (Financial)</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 1B</td>
<td>Accounting Principles (Financial/Management)</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 18</td>
<td>Introduction to Business Law</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 32</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS 43</td>
<td>Intro. to Computer Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 1</td>
<td>Principles of Economics-Macro</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 5</td>
<td>Principles of Economics-Micro</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 13</td>
<td>Elementary Statistics</td>
<td>3.0</td>
</tr>
<tr>
<td>SPE 5</td>
<td>Introduction to Organizational Communication</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31.0</td>
</tr>
</tbody>
</table>

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td></td>
</tr>
<tr>
<td>- Choose one science course from either Area B1 or B2 of the G.E.</td>
<td>3-4.0</td>
</tr>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>- ENG 1B recommended</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language &amp; Rationality</td>
<td></td>
</tr>
<tr>
<td>- ENG 1A</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>12-13.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL RECOMMENDED ELECTIVES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 30</td>
<td>Students in Free Enterprise (SIFE)</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 16</td>
<td>Finite Math</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 2</td>
<td>Calculus for Managerial, Life, and Social Sciences</td>
<td>4.0</td>
</tr>
<tr>
<td>SOC 5</td>
<td>Introduction to Social Problems</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 17A</td>
<td>History of the United States OR</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 17B</td>
<td>History of the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>POL 1</td>
<td>American Political Institutions</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 2</td>
<td>Critical Thinking and Writing</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**GENERAL BUSINESS

#### CERTIFICATE PROGRAM

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 30</td>
<td>Students in Free Enterprise (SIFE)</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 32</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS/CSS 109</td>
<td>Introduction to PC Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110A</td>
<td>Beginning Keyboarding</td>
<td>1.0</td>
</tr>
<tr>
<td>BUS 129</td>
<td>Practical Customer Service Skills</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS 130</td>
<td>Fundamentals of Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS/CSS 150.25</td>
<td>Electronic Spreadsheets</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 151**</td>
<td>Business Arithmetic</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 152***</td>
<td>Introduction to Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 190</td>
<td>Professional Development and Career Management</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS 194</td>
<td>Human Relations in Business</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101****</td>
<td>Intermediate Composition and Reading</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

*Demonstration of keyboarding skill on three timed writings of at least 25 words peer minute for five minutes with five or fewer errors. Arrange for testing in the Computer Center.

**Completion of MAT 121 or higher may be substituted for BUS 151; however, it is highly recommended that students take BUS 151.

***Business 1A may be substituted for Business 152.

A grade of “C” or better must be maintained in each required major course of the Certificate Program.
BUSINESS OFFICE TECHNOLOGY/ACCOUNTING

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 71</td>
<td>Office Procedures</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS/CSS 109</td>
<td>Intro. to P.C. Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110***</td>
<td>Beginning Keyboarding and Document Formatting</td>
<td>(3.0)</td>
</tr>
<tr>
<td>BUS 110A***</td>
<td>Beginning Keyboarding</td>
<td>(1.0)</td>
</tr>
<tr>
<td>BUS 110B***</td>
<td>Beginning Formatting and Document Processing</td>
<td>(2.0)</td>
</tr>
<tr>
<td>BUS/CSS 150.25</td>
<td>Electronic Spreadsheets</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 151**</td>
<td>Business Arithmetic</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 152</td>
<td>Introduction to Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 153</td>
<td>Adv. Accounting Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 154</td>
<td>Computerized Accounting</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 172</td>
<td>Machine Calculations on the Microcomputer</td>
<td>1.0</td>
</tr>
<tr>
<td>BUS 173</td>
<td>Filing Procedures and Records Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 190</td>
<td>Professional Development and Career Management</td>
<td>2.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>Intermediate Composition and Reading</td>
<td>(3.0)</td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

*Eligibility for English 1A may be substituted for the English 101 Requirement.

**Although completion of Math 121 or higher may be substituted for BUS 151, it is highly recommended that students take BUS 151.

***Demonstration of keyboarding skill on three timed writings of at least 25 words per minute for five minutes with five or fewer errors plus basic formatting skills may result in the waiver of this/these courses. Arrange for testing in the Computer Center.

A grade of "C" or better must be maintained in each required major course of the Certificate Program.

BUSINESS OFFICE TECHNOLOGY

ASSOCIATE OF ARTS DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 111</td>
<td>Intermediate Office Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 112</td>
<td>Advanced Office Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 71</td>
<td>Office Procedures</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 131</td>
<td>Business English</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS/CSS 109</td>
<td>Intro. to P.C. Applications</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 140A</td>
<td>Keyboarding Speed and Accuracy</td>
<td>.5</td>
</tr>
<tr>
<td>BUS 140B</td>
<td>Keyboarding Speed and Accuracy</td>
<td>.5</td>
</tr>
<tr>
<td>BUS/CSS150.15</td>
<td>Beginning Word Processing</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 151*</td>
<td>Business Arithmetic</td>
<td>(3.0)</td>
</tr>
<tr>
<td>BUS 172</td>
<td>Machine Calculations on the Microcomputer</td>
<td>.5</td>
</tr>
<tr>
<td>BUS 173</td>
<td>Filing Procedures and Records Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 175</td>
<td>Business Communications</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 177</td>
<td>Proofreading and Editing Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 190</td>
<td>Professional Development and Career Management</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS 194</td>
<td>Human Relations in Business</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Comp.</td>
<td>(3.0)</td>
</tr>
<tr>
<td>SPE 5</td>
<td>Introduction to Organizational Communication</td>
<td>3.0</td>
</tr>
</tbody>
</table>

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>English 1A</td>
<td>3.0</td>
</tr>
<tr>
<td>Math 121</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**Eligibility for English 1A may be substituted for the English 101 requirement.

**Although completion of Math 121 or higher may be substituted for BUS 151, it is highly recommended that students take BUS 151.

A grade of "C" or better must be maintained in each required course of the Certificate Program.

BUSINESS OFFICE TECHNOLOGY/INFORMATION PROCESSING

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
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<td>3.0</td>
</tr>
<tr>
<td>BUS 140A</td>
<td>Keyboarding Speed and Accuracy</td>
<td>.5</td>
</tr>
<tr>
<td>BUS 150</td>
<td>Introduction to Business</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 173</td>
<td>Filing Procedures and Records Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 177</td>
<td>Proofreading and Editing Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 190</td>
<td>Professional Development and Career Management</td>
<td>2.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Comp.</td>
<td>(3.0)</td>
</tr>
<tr>
<td>SPE 5</td>
<td>Introduction to Organizational Communication</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Eligibility for English 1A may be substituted for the English 101 requirement.

**Although completion of Math 121 or higher may be substituted for BUS 151, it is highly recommended that students take BUS 151.

A grade of "C" or better must be maintained in each required course of the Certificate Program.
BUS1A. Financial Accounting (4)
Credit/No Credit Option

Advisory: Recommend concurrent enrollment in BUS 104, Financial Accounting Computer Applications; recommend successful completion of 30 units of Business Administration major and/or General Education courses.

Lec 3.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
Transfer class required for all business students. Principles and theories of financial accounting for business majors. Emphasizes analysis of periodic financial transactions, statements, and reports used and generated by profit-motivated businesses.

[CSU; UC; CAN BUS 2, CAN BUS SEQ A with CAN BUS 1A & 1B]

BUS1B. Managerial Accounting (4)
Credit/No Credit Option
Prerequisite: BUS1A

Advisory: Recommend concurrent enrollment in BUS 105, Managerial Accounting Computer Applications.

Lec 3.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
Continuation of Business 1A. Emphasizes how internal accounting information is provided to management within the organization rather than users outside the organization. Includes cost accounting, cost-volume-profit analysis, budgeting, variance investigation, and information for decision alternatives.

[CSU; UC; CAN BUS 4, CAN BUS SEQ A with CAN BUS 1A & 1B]

BUS18. The Legal Environment of Business (3)
Credit/No Credit Option

Advisory: Students taking the on-line version of the course are advised that to be successful in completing the course over the internet, they must have basic computer skills including skill in using a word processor, such as word for windows and email including sending attachments and files. Students also need access to the internet and have adequate hardware and software such as Windows 95/98/2000/XP or their equivalent.

Lec 3 Hrs
Semesters Offered: Variable
An introduction to the sources of law, the legal system, the court system, administrative law and basic constitutional law. The course focus will be law and its relationship to business. Explores business crimes, business torts, contracts, agency, employment discrimination law and the legal aspects of various business organizations like partnerships and corporations. This course may be offered in the web-based format.

[CSU; UC; CAN BUS 12]

BUS26. Contracts (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable

This course will provide students with an in-depth analysis of the law pertaining to contract formation, contract performance, discharge, and breach. Beginning with an overview of our legal system and an introduction to case analysis and briefing students will learn to apply substantive concepts to practical applications such as the negotiation process, interpretation of contract provisions, and the drafting of simple agreements. Not open to students who have completed ADJ 26, Contacts.

[CSU]

BUS30. Students in Free Enterprise (2-3)
Credit/No Credit Option

Semesters Offered: Variable

Business leadership training and experience using the student leadership organization, Students in Free Enterprise (SIFE). Participation on college-sponsored teams to compete against students from other colleges while acquiring knowledge and skills regarding teaching, service, leadership, organization, networking, and communication as it relates to the community.

[CSU]

BUS30L. Students in Free Enterprise - Lab (1)
Credit/No Credit Option

Semesters Offered: Variable

Business leadership training and experience using the student leadership organization, Students in Free Enterprise (SIFE). Participation on college-sponsored teams to compete against students from other colleges while acquiring knowledge and skills regarding teaching, service, leadership, organization, networking, and communication as it relates to the Business community.

[CSU]

BUS32. Introduction to Business (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable

This course presents fundamentals of business terms and an understanding of the structure, organization and operating procedures of business enterprises. This course may be offered in the web-based format.

[CSU; UC]

BUS34. Small Bus. Management (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable

This course introduces the risks and rewards of small business ownership/management by surveying the fundamentals of organizing, planning, financing, staffing, marketing and operating a small business. The goal is to build practical knowledge and skills to help ensure success in owning and/or managing a small business.

[CSU]

BUS45. Special Projects (.5-3)
Credit/No Credit Option

Prerequisite: Permission of instructor and review approval of the Area Dean.

Semesters Offered: Variable

Individual and group investigation of business problems for those students wishing additional college level-experience beyond the scope of regular business courses.

[CSU]

BUS48. Computer & Information Literacy (4)
Credit/No Credit Option

Advisory: Recommend 25 wpm keying speed.

Lec 3 Hrs, Lab 3 Hrs
Semesters Offered: Variable

An introduction to the computer and software tools necessary to successfully use a personal computer in courses. Topics include computer terminology, application programs, email, network servers, word processing, spreadsheets, presentation software, the Internet, using and evaluating information from electronic sources and conducting library research online. Not open to students with credit for CIS 48, BUS 39.009 or CIS 39.009. This course may be offered in a web-based format.

[CSU]

BUS49. Introduction to Agricultural Business (3)
Lec 3 Hrs
Offered Variable

This course is designed to help students become more aware of the dynamic economic activities and considerations facing the agriculture industry. It will present a survey of economic and marketing activities of agriculture stressing their important factors in today's production of food and fiber. Not open to students who have successfully completed AGR 49.
BUS51. Elements of Agribusiness (2)  
Credit/No Credit Option  
Semesters Offered: Variable  
This course is designed to help students complete AGR 51.  

BUS52. Sales and Service in Agribusiness (3)  
Credit/No Credit Option  
Semesters Offered: Variable  
This course is designed to help students become more aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 52.  

BUS53. Agribusiness Economics (3)  
Prerequisite: BUS 49  
Credit/No Credit Option  
Semesters Offered: Variable  
This course is designed to help students become aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 53.  

BUS71. Office Procedures (4)  
Credit/No Credit Option  
Semesters Offered: Variable  
This course is designed to help students become aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 52.  

BUS98. General Work Experience (1-3)  
Credit/No Credit Option  
Semesters Offered: Variable  
The course is designed to help students complete AGR 51.  

BUS104. Microcomputer Applications for Financial Accounting (1)  
Credit/No Credit Only  
Advisory: Concurrent enrollment in or completion of BUS 1A, Financial Accounting.  
Lec .5 Hr; Lab 1.5 Hrs  
Semesters Offered: Variable  
This course is designed to help students become aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 52.  

BUS105. Microcomputer Applications for Managerial Accounting (1)  
Credit/No Credit Only  
Advisory: Concurrent enrollment in or completion of BUS 1B, Managerial Accounting.  
Lec .5 Hr; Lab 1.5 Hrs  
Semesters Offered: Variable  
This course is designed to help students become aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 52.  

BUS109. Intro. to PC Applications (4)  
Credit/No Credit Option  
Advisory: Keyboarding speed of 25 words a minute recommended.  
Lec 3.5 Hrs; Lab 1.5 Hrs  
Semesters Offered: Variable  
This course is designed to help students become aware of the selling and servicing techniques practiced in the agriculture industry today. Activities in training, evaluation, communication, marketing, and promotion will be presented. Methods of sales and payments will be discussed. Not open to students who have successfully completed AGR 52.  

BUS110. Beg. Keyboarding and
BUS128. Professionalism in the Workplace (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
Designed to assist potential employees develop the personal qualifications, interpersonal skills, and values that are in demand in the workplace.

BUS129. Practical Customer Service Skills (2)
Credit/No Credit Only
Lec 2 Hrs
Semesters Offered: Variable
Introduction to customer service skills and their applications as required in the workplace.

BUS130. Fundamentals of Management (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
A process-based introduction to the functions of business managers. The course emphasizes practical techniques for business management involving planning, organizing, leading and controlling.

BUS131. Business English (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Study of Standard Business English grammar and application of word usage, proofreading/editing, and punctuation skills as they are used in business writing.

BUS140A. Keyboarding Speed and Accuracy (.5)
Credit/No Credit Option
Lab 27 Hrs
Semesters Offered: Variable
Emphasizes speed and accuracy improvement on straight-copy material. Students may enroll at any time during the first half of the semester. Student will progress at an individual pace. The course may be repeated three times for credit.

BUS140B. Keyboarding Speed and Accuracy (.5)
Credit/No Credit Option
Prerequisite: Completion of BUS 140A
Lab 27 Hrs
Semesters Offered: Variable
Continuation in the development of keyboarding skills focusing on speed and accuracy improvement on straight-copy material. Students may enroll at any time during the first half of the semester. Student will progress at an individual pace. The course may be repeated three times for credit.

BUS148. Adaptive Computer Keyboarding (1)
Credit/No Credit Only
Advisory: Students must complete an application in the Enabler Program office for verification of their need for this course.
Lec .5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
Designed to fit the needs of the visually impaired, learning, communicative, and physically disabled students. Introduction to computer keyboarding for the disabled using the touch system on the microcomputer. No previous typewriting experience is necessary. Recommended for students enrolled or planning to enroll in computer and information science, business, or word processing courses. Credit for Business 148 will not be given to students who have completed Business 63, 64, 149, or 240 with a grade of "C" or better. Not open to students who have completed CSS 148.

BUS150.15A. Word Processing Level I (1.5)
Credit/No Credit Option
Advisory: Keyboarding speed of 25 words a minute recommended.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
The use of word processing features/commands to create and edit business documents using a computer. Not open to students who have completed BUS/CSS 150.13, BUS/CSS 150.14, BUS/CSS 150A or BUS/CSS 150B.

BUS150.15B. Word Processing Level II (1.5)
Advisory: Recommended minimum keyboarding skill of 30 wpm for 5 minutes with 5 or fewer errors.
Credit/No Credit Option
Prerequisite: BUS 150.15A
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Use of word processing features/commands to create and edit business documents using a computer. Not open to students who have completed BUS/CSS 150.15B or BUS/CSS 150.15.

BUS152A. Introduction to Accounting (2)
Credit/No Credit Option
Lec 3.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
This course introduces the basic accounting cycle for a service concern. This is a slow-paced introduction to basic bookkeeping transactions. These transactions are introduced, first in a manual format, and then a review of the basics is accomplished on the computer. This course does not meet the accounting requirement for business transfers.

BUS152A. Introduction to Accounting (2)
Credit/No Credit Option
Lec 1.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
Analysis and preparation of records for small business and service operation, both manual and on the computer. Emphasizes recording portion of the bookkeepers/accountant's task with special consideration given to accounts receivable and accounts payable. For office personnel desiring a practical approach to the study of accounting. Recommended for ESL students beginning their Accounting Program. Also suggested: To be taken concurrently with Business 1A (Financial Accounting) for students who are unsure of their accounting abilities.
BUS153. Advanced Accounting Applications (4)
Credit/No Credit Option
Prerequisite: Business 152
Lec 3.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
A continuation of Business 152, with an emphasis on computerization. Provides the student with hands-on experience using an accounting software package. Emphasis on processing accounts receivable, accounts payable, payroll, financial statements, as well as internal controls, bad debt expense, inventory methods, and depreciation methods.

BUS154. Computerized Accounting (3)
Credit/No Credit Option
Prerequisite: BUS 1A or BUS 152
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course provides instruction in computer assisted accounting, including the simulation of the accounting cycle. Topics include general ledger, accountings receivable, accounts payable, transactions and reports, financial statements analysis, depreciation, payroll, and program setup.

BUS156. Federal Income Tax (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
A study of the theory and procedures for computing the federal income tax liabilities of individuals. Includes the preparation of sample tax returns.

BUS157. California Income Tax (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
A study of the theory and procedures for computing the California income tax liabilities of individuals. Emphasis on differences between state and federal rules. Includes the preparation of sample tax returns.

BUS159.15A. Word Processing – Module I (.5)
Credit/No Credit Only
Advisory: Keyboarding skill of 25 words per minute is recommended for successful completion of this course.
Lec 1.5 Hrs
Semesters Offered: Variable
Develop basic skills to use word processing software on the microcomputer. Emphasis is placed on creating, editing, saving, printing and basic formatting of documents. This course may be offered in a self-paced or web-based format. Not open to students who have completed CSS 159.15A.

BUS159.15B. Word Processing – Module II (.5)
Credit/No Credit Only
Prerequisite: BUS 159.15A
Advisory: Keyboarding skill of 25 words per minute is recommended for successful completion of this course.
Lec 1.5 Hrs
Semesters Offered: Variable
Continuation in the development of basic skills needed to use word processing software. This course may be offered in a self-paced or web-based format. Not open to students who have completed CSS 159.15B.

BUS161. Fundamentals of Marketing (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Introduces the essential aspects of marketing to build and execute an effective marketing plan. The course covers product management, pricing, distribution/placement, promotion/communications, including the latest marketing trends and technologies, all with a strong customer focus.

BUS164. How to Start Your Own Business (1.5)
Credit/No Credit Option
Lec 1.5 Hrs
Semesters Offered: Variable
Designed to provide an alternative career choice to employment by someone else. A presentation of the business life cycle: start up, survival, growth and termination. A realistic presentation of the hazards of self-employment, along with methods to reduce, share, prevent and insure against those hazards. This course is co-sponsored by the U.S. Small Business Administration (S.B.A.) as part of a series entitled "How to Start a Small Business". Students completing all three courses (Bus.164, 165, and 166) qualify for a certificate jointly issued by Hartnell College and the S.B.A.

BUS165. Marketing a Small Business (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
To provide the student with understanding of the importance of marketing in the success of a small business. Provides a close examination of elements in a Marketing Plan and how to develop the plan. Reviews the components of the Marketing Mix: product, price, place, people and promotion as these relate to marketing and to overall business strategy. This class is co-sponsored by the U.S. Small Business Administration (S.B.A.) as part of a series entitled "How to Start a Small Business". Students completing all three courses (Bus. 164, 165, and 166) qualify for a certificate jointly issued by Hartnell College and the S.B.A.

BUS168. Community Leadership Skills (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
A course designed to develop community leadership and management skills in potential community leaders. Students will have an opportunity to interact with community leaders and become knowledgeable about current and future problems and issues facing the community. Course is intended for those students participating in Leadership Salinas Valley.

BUS172. Machine Calculations on the Microcomputer (1)
Credit/No Credit Option
Lec 1.5 Hrs
Semesters Offered: Variable
Advisory: Completion of BUS 151 (Business Arithmetic) is strongly recommended.
Use of the 10-key pad on the microcomputer to develop speed and accuracy by touch and proficiency in solving practical business problems.

BUS172.2. Machine Calculations Skill Building (.5)
Credit/No Credit Option
Lec 1.5 Hrs
Semesters Offered: Variable
Advisory: Completion of BUS 151 (Business Arithmetic) is strongly recommended.
Use of the 10-key pad on the microcomputer to develop speed and accuracy by touch.

BUS172.2. Machine Calculations Applications (.5)
Credit/No Credit Option
Prerequisite: BUS 172.1
Advisory: Completion of BUS 151 (Business Arithmetic) is strongly recommended.
Lec 1.5 Hrs
Semesters Offered: Variable
Use of the 10-key pad on the microcomputer to solve practical business problems.
BUS173. Filing Procedures & Records Management (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Introduction to filing procedures and rules; emphasizes principles and practices of effective records management for manual and computerized records systems.

BUS173A. Introduction to Filing (1)
Credit/No Credit Option
Lec 1 Hrs
Semesters Offered: Variable
Introduction to filing rules and procedures. Not open to students who have completed BUS 173.

BUS174. Filing Procedures (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
Principles of information management and organization as they apply to manual and automated records systems. Emphasis on records storage, transfer, and retrieval procedures. Familiarization with computerized indexing procedures. Introduction to data base management software and principles. Not open to students who have completed BUS 173.

BUS175. Business Communications (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Development and adaptation of communication skills in business. Emphasizes listening, speaking and the public relations aspect of business communication. Preparation of business documents, introduction to dictation of business letters, as well as written and oral business presentation.

BUS177. Proofreading & Editing Skills (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Proofreading and text editing skill development; with emphasis on proficient use of a reference manual and the development of Standard Business English vocabulary usage.

BUS177A. Basic Proofreading & Editing Skills (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
Basic proofreading skills and text editing development of all comma rules.

BUS177B. Proofreading & Editing Skills (2)
Credit/No Credit Option
Prerequisite: BUS 177A
Lec 1 Hr
Semesters Offered: Variable
Proofreading and text editing development and emphasis on proficient use of a reference manual.

BUS178. Medical Terminology I (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
Study of medical vocabulary. Of particular value to those pursuing a career as medical office personnel.

BUS181. Medical Terminology II (2)
Credit/No Credit Option
Prerequisite: Business 180.
Lec 2 Hrs
Semesters Offered: Variable
Continuation of the study of medical vocabulary with emphasis on anatomical, diagnostic, symptomatic and operative terms relating to individual body systems. It assumes a knowledge of the principles of work construction, i.e., combining forms, word roots, prefixes and suffixes, and stresses word definition, pronunciation, and spelling.

BUS190. Professional Development and Career Management (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
Emphasis on career planning, the job application process and documents, job application skills, and career planning.

BUS191. Time Management in the Workplace (.5)
Credit/No Credit Option
Lec .5 Hrs
Semester Offered: Variable
Designed to provide students with key skills to effectively and efficiently manage time in the workplace. This course may be offered in the web-based format.

BUS194. Human Relations in Business (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
The study of the behavior of individuals and groups in organizations for the purpose of satisfying both organizational goals and personal goals.

BUS203. Intro. to IBM/PC Compatible Microcomputers (1)
Credit/No Credit Only
Lec .5; Lab 1.5
Semesters Offered: Variable
An introduction to IBM/PC compatible microcomputers and their use. Topics include operation of the microcomputer and peripheral equipment, brief introduction to keyboarding skills, introduction to the use of DOS and system commands, and a discussion of microcomputer applications. Not open to students who have completed CIS 203.

BUS205. Spreadsheets for Individual Use (1)
Credit/No Credit Only
Lec .5 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Students develop skill in the use of a spreadsheet package for the microcomputer. Students learn to design the spreadsheets, prepare the data for processing, complete entries, validate entries, use appropriate menus and commands. Keyboarding skill of 25 words per minute is recommended for successful completion of this course. This course may be taken in a lecture/lab or self-paced format. This course does not meet the Business Office Technology or CIS certificate or degree requirements. Not open to students who have completed CIS 205.

BUS206. Introduction to Windows (1)
Credit/No Credit Only
Lec .5 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
An introduction to Windows. Topics include the Windows environment and desktop, use of File Manager to manage disks and files. Windows applications and accessories, use of Print Manager, and the relationship between Windows and DOS. Not open to students who have completed CIS 206.
CHEMISTRY

ASSOCIATE OF SCIENCE DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 1A</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 1B</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 12A</td>
<td>Organic Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM 12B</td>
<td>Organic Chemistry</td>
<td>5.0</td>
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<td>20.0</td>
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</tbody>
</table>

Remaining general education requirements in addition to the courses listed above:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
</tbody>
</table>

CHM1A. General Chemistry (5)
**Prerequisite:** Two years of high school algebra or Math 123; high school chemistry with a grade of B or better; or Chemistry 22 with a grade of C or better.

Lec 3 Hrs; Lab 6 Hrs
Offered: Fall, Spring
Basic principles of chemistry: atomic structure; periodic relationships; chemical nomenclature, chemical equations, solutions, stoichiometry, chemical energetics, gas laws, acid-base theory, chemical equilibrium, colligative properties.

CHM1B. General Chemistry (5)
**Prerequisite:** Chemistry 1A with a grade of C or better.

Lec 3 Hrs; Lab 6 Hrs
Offered: Spring
A continuation of Chemistry 1A: chemical bonding, chemical equilibrium, thermodynamics, oxidation-reduction processes, coordination chemistry, nuclear chemistry, organic compounds, and the application of equilibrium principles to qualitative and quantitative analysis in the laboratory.

CHM12A. Organic Chemistry (5)
**Prerequisite:** Chemistry 1B.

Lec 3 Hrs; Lab 6 Hrs
Offered: Fall
Intended for students whose interests require a full year of organic chemistry. Contents include: a survey of the structures, nomenclature, properties, and reactivity of the various functional groups; mechanistic pathways; stereochemistry; spectroscopy; synthesis; biologically important molecules; and selected topics.

CHM12B. Organic Chemistry (5)
**Prerequisite:** Chemistry 12A

Lec 3 Hrs; Lab 6 Hrs
Offered: Spring
A continuation of Chemistry 12A. Intended for students whose interests require a full year of organic chemistry. Contents include: a survey of the structures, nomenclature, properties, and reactivity of the various functional groups; mechanistic pathways; stereochemistry; spectroscopy; synthesis; biologically important molecules; and selected topics.

The Chemistry program at Hartnell College is designed to meet the needs of the diverse community of interest served by the community college. A full program of chemistry for the professional scientist is offered through general chemistry and a two-semester course in organic chemistry. A separate track is offered for nursing students which includes general inorganic, organic and biochemistry. The Chemistry discipline also has a strong commitment to the student with no prior chemistry or one whose background is weak. The entire program is taught with a strong emphasis on the laboratory and in the more advanced classes, students receive hands-on experience with a wide variety of instruments.

Four-year graduates in chemistry are qualified for positions in research, industry, education, engineering, and the allied medical fields.
CHM22. The Science of Chemistry (4)
Lec 4 Hrs; Lab 3 Hrs
Offered: Fall, Spring, Summer
A survey of the fundamental concepts of chemistry: measurement; classification of matter, atomic structure, the periodic table, chemical bonding, nomenclature, chemical equations and stoichiometry, gas laws, solutions, reactions in aqueous solution, acid and bases, oxidation-reduction, nuclear chemistry. Completion of one year of high school algebra or Math 121 is recommended.
[CSU; UC; CAN CHEM 6, CAN CHM SEQ B with CHM 22 & 23]

CHM23. Organic and Biological Chemistry for Health Sciences (4)
Prerequisite: Chemistry 22 (with a grade of C or better) or Chemistry 1A (with a grade of C or better) or high school chemistry (with a grade of B or better.)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An in-depth study of the principles of organic and biological chemistry related to the health science field. Appropriate for most baccalaureate programs in nursing, dental hygiene, physical therapy, physical education, and health sciences generally. Does not meet chemistry requirement for premedicine or pre-dentistry majors.
[CSU; CAN CHEM 8, CAN CHM SEQ B with CHM 22 & 23]

CHM45. Special Projects (1-3)
Semesters Offered: Variable
Special projects in chemistry. The student will engage in the study of a special topic of mutual interest to both the instructor and the student. Study may consist of either library research or laboratory work or a combination of both.
[CSU]

CHM60. Principles of Chemistry (4)
Lec 3 Hrs; Lab 3 Hrs
Offered: Fall, Spring
Designed for majors in registered nursing, animal health technology, physical education, peace officer training, and general education. Atomic structure and its relationship to chemical formulas, equations and equation writing, solutions, the covalent bond and organic compounds, aspects of biochemistry, carbohydrates, proteins and fats. Eligibility for Math 121 is recommended.
[CSU]

CHM150. Water Treatment Chemistry (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An introductory survey of the fundamental concepts of chemistry with special emphasis on topics as they relate to water treatment. Completion of one year of high school algebra or Math 121 is recommended. This course is not open to students who have completed Water Technology 150 with a grade of C or better.
Chicano Studies provides organized studies in the heritage of Chicanos and fosters and expands general understanding of the cultural contributions of this group. The Chicano Studies courses give students opportunities to develop competence in and an understanding of the language, history, and culture of Chicanos, as well as current issues affecting the Chicano community. Completion of the Chicano Studies major enhances students’ qualifications for positions in schools, community groups, governmental organizations, and private enterprise.

**CHICANA/CHICANO STUDIES**

**ASSOCIATE OF ARTS DEGREE**
Completion of the major requirements plus graduation requirements for the Associate Degree.

**MAJOR:**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 49A</td>
<td>Chicano History: To 1848</td>
<td>3.0</td>
</tr>
<tr>
<td>HIS 49B</td>
<td>Chicano History: From 1848</td>
<td>3.0</td>
</tr>
<tr>
<td>ETH 3</td>
<td>Chicanos In American Society</td>
<td>3.0</td>
</tr>
<tr>
<td>ETH 4</td>
<td>Chicano Culture</td>
<td>3.0</td>
</tr>
<tr>
<td>SPA 2 or 2S</td>
<td>Elem. Spanish or a higher level</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**ELECTIVES**
Select six (6) units from the following courses, at least three units (3) of which must be from Category A.

**Category A**
- ENG 1B Chicano Perspective: College Reading and Comp. 3.0
- ENG 26 Chicano Literature 3.0
- SPA 35 Contemporary Mexican American Literature 3.0
- THA 6ABCD Chicano Theatre 3.0

**Category B**
- ETH 1 Introduction to Ethnic Studies 3.0
- ETH 2 Chicano Leadership 3.0

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Natural Sciences</td>
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<tr>
<td>Social and Behavioral Sciences</td>
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<td>Humanities</td>
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<td>Ethnic Groups in the United States</td>
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<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
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<td>21.0</td>
</tr>
</tbody>
</table>

It is recommended that students complete Sociology 1 or Anthropology 2 or Anthropology 20 to fulfill the Social and Behavioral Sciences requirement.

**COMPETENCY REQUIREMENTS**
See College Catalog 0-8

**ADDITIONAL INFORMATION**
Additional units to reach a minimum of 60 semester units in degree applicable courses 9-17.0

Hartnell College Catalogue – 2005/06
The active role the United States is taking in world affairs and trade increases the need for a knowledge of foreign languages and cultures. The acquisition of practical communication skills in a modern foreign language is the primary objective. This is accomplished by the direct oral approach, motivated by lectures, and supplemented by the language laboratory.

Positions for which four-year graduates in a foreign language are qualified are: teaching, business, foreign services, law enforcement, nursing, and secretarial services.

CHN1. Elementary Chinese (4)
Credit/No Credit Option
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
Introduction to the Chinese language, including the basic grammar with emphasis on pronunciation. Audio-lingual methods will be used in class. Chinese, as a written language, will be introduced during the middle part of the course.
[CSU; UC; CAN CHIN 2, CAN CHIN SEQ A with CAN CHIN 1 & 2]

CHN2. Elementary Chinese (4)
Credit/No Credit Option
Prerequisite: Chinese 1.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
This course is a continuation of Chinese 1. The course will cover basic grammar with emphasis on pronunciation. Chinese written language will be covered in class.
[CSU; UC; CAN CHIN 4, CAN CHIN SEQ A with CAN CHIN 1 & 2]

CHN3. Intermediate Chinese (4)
Credit/No Credit Option
Prerequisite: Chinese 2
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
This course is the first part of a second year Chinese program. Both conversational Chinese and the reading of Chinese will be offered.
[CSU; UC; CAN CHIN SEQ B with CAN CHIN 3 & 4; CAN CHIN 8]

CHN4. Intermediate Chinese (4)
Credit/No Credit Option
Prerequisite: Chinese 3.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
The second part of second year Chinese, is the follow-up course of Intermediate Chinese 3. Free conversation in class will be encouraged. Grammar and syntax will be discussed to enhance the ability of the students to better understand the written language.
[CSU; UC; CAN CHIN SEQ B with CAN CHIN 3 & 4; CAN CHIN 10]
**AREA:** Occupational Education  
**DEAN:** José L. Fernandez, MBA  
**FACULTY:** Fred Anderson  
Christine Svenden  
Carol Thole  
William (Joe) Welch  
Pamela Wiese  
**DIVISION ADMIN. ASSISTANT:** Adriana Robledo  
**OFFICE:** Technology Building  
Tech 11  
**COUNSELORS:** Alison Paul  
Office – CAB 159  
755-6827  
apaul@hartnell.edu  
Dr. Ignacio Pando  
Office – Merrill Hall 21  
759-6057  
ipando@hartnell.edu

The Computer Science and Information Systems curriculum is designed to provide students with thorough preparation for immediate entry into information science, information systems, and computer support careers. Additionally, the curriculum provides preparation for further study in four-year degree programs in computer sciences and information systems. Students working towards a BS/BA degree should work closely with counselors regarding the articulation of courses for their selected four-year institution. The Computer Science and Information Systems department offers dynamic, interactive programs featuring hands-on experience utilizing the college’s modern computer equipment. In addition to the transfer program, students may earn an Associate Degree or a certificate with a Business/Management Information Systems (MIS), Computer Science, PC Networking Support, Digital and Web Design or Digital Media option. All programs are designed to provide students with the skills necessary for employment in the information systems and computer science industry.

### Business/Management Information Systems (MIS) Option

This certificate or degree program is designed for those interested in becoming computer specialists in a business or information systems environment.

### Computer Science Option

This certificate or degree program is designed for those interested in becoming programmers in a technical or scientific systems environment, or for students desiring transfer to a four-year computer science degree program.

### PC/Networking Support Specialist Option

This certificate or degree program is designed for those interested in becoming computer technicians in a networked business or information systems environment.

### Digital and Web Design Option

This certificate or degree program is designed for those interested in designing effective and persuasive presentations, to include web page and educational products. This option emphasizes the following competencies: managing the development and delivery of comprehensive, integrated digital media presentations to a defined budget and schedule, customer liaison skills and client interaction, and integrating all facets of digital media into an effective product.

### Digital Media Option

This certificate or degree program is designed for those interested in refining the use of visual, auditory and animation presentations for web presentation, marketing and visual arts. This option emphasizes the development of then visualization and proficiency with the digital, video and sound applications.

### REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS 1</td>
<td>Programming Fundamentals</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 12</td>
<td>Systems Analysis and Design</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 14</td>
<td>Data Communications</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 15</td>
<td>E-Commerce</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 31</td>
<td>Database Management</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS/CSS48</td>
<td>Computer and Information Literacy</td>
<td>4.0</td>
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<tr>
<td>CSS/ART 87</td>
<td>Web Authoring</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 110A*</td>
<td>Beginning Keyboarding</td>
<td>(1.0)</td>
</tr>
<tr>
<td>BUS 152</td>
<td>Introduction to Accounting AND</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 153</td>
<td>Advanced Accounting Applications OR</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 1A</td>
<td>Financial Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 102</td>
<td>Microcomputer Applications for</td>
<td>(4.0)</td>
</tr>
<tr>
<td>BUS 102</td>
<td>Financial Accounting</td>
<td>(4.0)</td>
</tr>
<tr>
<td>ENG 101**</td>
<td>Intermediate Composition and Reading</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 123</td>
<td>Intermediate Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### ADDITIONAL INFORMATION

* Demonstration of keyboarding skill on three timed writings of at least 25 words per minute for five minutes with five or fewer errors. Arrange for testing in the Computer Center.

** Eligibility for English 1A may be substituted for the English 101 requirement.  

A grade of "C" or better must be maintained in each required major course of the Certificate Program.
## COMPUTER SCIENCE & INFORMATION SYSTEMS

### COMPUTER SCIENCE OPTION

#### ASSOCIATE OF ARTS DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

#### REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

<table>
<thead>
<tr>
<th>Area</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
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<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality - ENG 1A</td>
<td>3.0</td>
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### CERTIFICATE PROGRAM – COMPUTER SCIENCE OPTION

#### REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CSS 1</td>
<td>Programming Fundamentals</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 2A</td>
<td>Object Oriented Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 2B</td>
<td>Data Structures and Algorithms</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 3</td>
<td>Assembly Language Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 6</td>
<td>Visual Basic Programming</td>
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<td>CSS 12</td>
<td>Systems Analysis and Design</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 31</td>
<td>Database Management</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 41</td>
<td>Operating Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 48</td>
<td>Computer and Information Literacy</td>
<td>4.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 2</td>
<td>Calculus for Managerial, Life and Social Sciences</td>
<td>4.0</td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
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<tr>
<td>MAT 3A</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
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</table>

Electives - Select a minimum of 6 units from the following courses:

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<thead>
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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CSS/ART 87</td>
<td>Web Authoring</td>
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<tr>
<td>CSS 110</td>
<td>Data Communications</td>
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<tr>
<td>CSS 169</td>
<td>Computer Maintenance and Repair</td>
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<td>ELE 55</td>
<td>Introduction to Digital Electronics</td>
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<td>ELE 65</td>
<td>Microcomputer Systems and Interfacing</td>
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<tr>
<td>CSS 121A</td>
<td>Introduction to Networking - Hardware</td>
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<tr>
<td>CSS 121B</td>
<td>Introduction to Networking - Software</td>
<td>4.0</td>
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<td>CSS 121C</td>
<td>Networking - Wide Area Networking</td>
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</table>

### ADDITIONAL INFORMATION

- Eligibility for or completion of ENG 1A may be substituted for ENG 101.
- A grade of "C" or better must be maintained in each required course of the Certificate Program.

## COMPUTER SCIENCE & INFORMATION SYSTEMS

### DIGITAL AND WEB DESIGN OPTION

#### ASSOCIATE OF ARTS DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

#### REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

<table>
<thead>
<tr>
<th>Area</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
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<tr>
<td>Social and Behavioral Sciences</td>
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<td>Humanities</td>
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<tr>
<td>Ethnic Groups in the United States</td>
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<tr>
<td>Language and Rationality - ENG 1A</td>
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### CERTIFICATE PROGRAM – DIGITAL AND WEB DESIGN OPTION

#### REQUIRED COURSES

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<th>Course Title</th>
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<tbody>
<tr>
<td>CSS 1</td>
<td>Programming Fundamentals</td>
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<td>CSS 12</td>
<td>Systems Analysis and Design</td>
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<td>CSS 31</td>
<td>Database Management</td>
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<td>CSS 48</td>
<td>Computer and Information Literacy</td>
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<td>CSS 107</td>
<td>Internship for PCNW Supt Tech</td>
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<td>CSS 169</td>
<td>Computer Maintenance and Repair</td>
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<td>CSS 170A</td>
<td>Windows Networking Essentials</td>
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<td>CSS 170B</td>
<td>Supporting Windows Networks</td>
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<tr>
<td>BUS 129</td>
<td>Practical Customer Service Skills</td>
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<tr>
<td>SPE 5</td>
<td>Introduction to Organizational Communication</td>
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<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>3.0</td>
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<td>MAT 123</td>
<td>Intermediate Algebra or higher</td>
<td>3.0-5.0</td>
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Electives - Select a minimum of 3 units from the following courses:

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<th>Units</th>
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<tr>
<td>CSS/ART 75</td>
<td>3D Modeling &amp; Digital Animation</td>
<td>3.0</td>
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<tr>
<td>CSS/ART 77</td>
<td>Digital Video, Audio Editing and Production</td>
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<tr>
<td>CSS/ART 80</td>
<td>Digital Photographic Imaging</td>
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<tr>
<td>PHO 80</td>
<td>Digital Photographic Imaging</td>
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<tr>
<td>CSS/ART 95</td>
<td>Multimedia Authoring</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 1</td>
<td>Introduction to Photography</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### ADDITIONAL INFORMATION

- Eligibility for or completion of ENG 1A may be substituted for ENG 101.
- A grade of "C" or better must be maintained in each required course of the Certificate Program.
COMPUTER SCIENCE & INFORMATION SYSTEMS

DIGITAL MEDIA OPTION

ASSOCIATE OF ARTS DEGREE

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

<table>
<thead>
<tr>
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<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
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<td>Ethnic Groups in the United States</td>
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<tr>
<td>ENG 1A</td>
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12.0

CERTIFICATE PROGRAM – DIGITAL MEDIA OPTION

REQUIRED COURSES

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<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>CSS 1</td>
<td>Programming Fundamentals</td>
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</tr>
<tr>
<td>CSS 12</td>
<td>Systems Analysis and Design</td>
<td>4.0</td>
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<tr>
<td>CSS 31</td>
<td>Database Management</td>
<td>4.0</td>
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<tr>
<td>CSS 48</td>
<td>Computer and Information Literacy</td>
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</tr>
<tr>
<td>CSS/ART70</td>
<td>Graphic Design/Computer Graphics</td>
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<tr>
<td>CSS/ART72</td>
<td>Introduction to Multimedia</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS/ART75</td>
<td>3D Modeling &amp; Digital Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS/ART77</td>
<td>Digital Video, Audio Editing &amp; Prod.</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS/ART80</td>
<td>Digital Photographic Imaging or Processing</td>
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</tr>
<tr>
<td>CSS/ART85</td>
<td>Multimedia Authoring</td>
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<tr>
<td>CSS/ART87</td>
<td>Web Authoring</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 80</td>
<td>Digital Photographic Imaging</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS/ART85</td>
<td>Multimedia Authoring</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS/ART87</td>
<td>Web Authoring</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 1</td>
<td>Introduction to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 123</td>
<td>Elementary Algebra or higher</td>
<td>3.0-5.0</td>
</tr>
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</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

* Eligibility for or completion of ENG 1A may be substituted for the ENG 101 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.

CSS1. Intro. to Computer Science and Programming Fundamentals (4)
Credit/No Credit Option
Prerequisite: CSS-48, Math 121
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduces the fundamental concepts of procedural programming. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging. Hands-on experiences with a full range of computer science topics demonstrate practical use of computers and the scope and substance of the computer science discipline. The course also offers an introduction to the historical and social context of computing and an overview of computer science as a discipline. Appropriate for liberal arts majors and students preparing for Computer and Information Sciences courses.

CSS2A. Object Oriented Programming (4)
Credit/No Credit Option
Prerequisite: CSS 1
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduces the concepts of object-oriented programming to students with a background in the procedural paradigm. The course begins with a review of control structures and data types with emphasis on structured data types and array processing. It then moves on to introduce the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Other topics include an overview of programming language principles, simple analysis of algorithms, basic searching and sorting techniques, and an introduction to software engineering issues. Appropriate for computer science and computer engineering majors. (This course is equivalent to the Association of Computing Machinery CS101r Programming Fundamentals course. The first course in a three course programming sequence.) Formerly CIS 5.

CSS220. Data Structures & Algorithms (4)
Credit/No Credit Option
Prerequisite: CSS-2A
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Builds on the foundation provided by the CSS-1---CSS-2A sequence to introduce the fundamental concepts of data structures and the algorithms that proceed from them. Topics include recursion, the underlying philosophy of object-oriented programming, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), the basics of algorithmic analysis, and an introduction to the principles of language translation. Appropriate for computer science and computer engineering majors. (This course is equivalent to the Association of Computing Machinery CS103r Data Structures and Algorithms, the third course in a three course programming sequence.) Formerly CIS-2.

CSS3. Computer Architecture and Assembly Language Programming (4)
Prerequisite: CSS-1
Semesters Offered: Variable
Introduces students to the organization and architecture of computer systems, and assembly language programming. Includes study and application of: (a) Digital logic: Fundamental building blocks (logic gates, flip-flops, counters, registers, PLA); logic expressions (b) Data representation: Bits, bytes, and words; numeric data representation and number bases; fixed-and floating-point systems; signed and two-complement representations, (c) Assembly level organization: control unit; instruction fetch, decode, and execution; instruction sets and types (data manipulation, control, I/O); assembly language programming. Appropriate for computer science and computer engineering majors. (This course is equivalent to the Association of Computing Machinery CS220 Computer Architecture Course.) Formerly CIS-3.

CSS4. Introduction to Scientific Programming (4)
Prerequisite: Math 2 or 3A
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Essentials of programming a digital computer for science, engineering, and mathematical applications. The student has the opportunity for extensive programming experience in numerical programming, statistical programming, matrices, and numerical approximation. In general, CSS-4 is designed as the fundamental programming course for transfer students in science, mathematics, and engineering. Lab work, in addition to regularly scheduled lab hours, may be necessary. Formerly CIS-10.

CSS5. COBOL Programming (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive study of the COBOL programming language emphasizing fundamental principles of structured programming designed for business applications. Topics include: program development process, record and report design, data validation, control-break programming, array processing, table handling and file processing. Formerly CIS-12.
CSS6. Programming in Visual Basic (4)
Credit/No Credit Option
Prerequisite: CSS 48, Math 123
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive programming course that emphasizes the design, coding and debugging of programs written in Visual Basic. Topics include programming style, Windows programming, expressions and assignment statements, control constructs and file processing. Emphasis is on Windows Programming using event-driven programming requiring the use of forms, menus, scroll bars, buttons and boxes. Formerly CIS-101. [CSU]

CSS11. Programming Logic (4)
Credit/No Credit Option
Prerequisite: CSS-48
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Logic and design skills necessary for successful computer programming. Topics include design, control of flow, data validity checking, reports, tables sorting, interactive processing, and file maintenance. A variety of programming software tools will be used. Formerly CIS-16. [CSU; UC]

CSS12. Systems Analysis and Design (4)
Credit/No Credit Option
Prerequisite: CSS-48
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Analysis and design of business computer information systems, including case studies and class projects using a variety of software and research tools. Formerly CIS-14. [CSU; UC]

CSS14. Data Communications (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An introduction to data communications, networks and connectivity. This course will examine networking systems of client-server systems, local area networks and the Internet. Formerly CIS 110. [CSU]

CSS15. Introduction to E-Commerce (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduction to key issues and strategies for e-commerce planning. Includes examining the concepts and types of e-commerce, examining methods for effective e-commerce solutions, describing the e-commerce development process, creating a business case for an e-commerce solution, specifying functional requirements for an e-commerce solution, specifying technical requirements for an e-commerce solution managing online content, and key issues in designing for international audiences. [CSU]

CSS25. Multimedia Integration (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A focus will be placed on the history and influence of learning through the use of multiple-applications. Basic concepts such as text, audio, video, and user interface will be examined. Technical and design ideas will be examined for use in diverse learning situations. Students will develop the appropriate skill necessary to integrate multiple applications into learning presentations, on line design and learning through multimedia. [CSU]

CSS27. Management and Content Development (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course will give students a hands-on approach to working with clients that need instructional design projects designed and developed. Students will learn to work collaboratively with peers from beginning of a project to the final client sign-off of a project. Students will be involved in a step-by-step process that starts with defining learning styles, project planning, storyboards, and modification of existing projects, timeline creation, communication strategies, client relationships and project maintenance. [CSU]

CSS29. Programming for Multimedia (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
The course will introduce students to programming for multimedia. A brief history of programming and its uses in today’s society will be discussed. Students will learn the basic concepts and components of programming for multimedia using scripting language. Technical and design ideas will be examined for each component of multimedia design. Students will develop the appropriate skill necessary to integrate programming into multimedia projects. Technical and design ideas will be examined for each component of multimedia programming, focusing on CSS, javascripting, and databases. [CSU]

CSS31. Database Management (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduces the fundamental concepts of database management. Topics include the database environment, development, entity-relationship model, business rules, object-oriented modeling, logical database design, physical database design, client/server and middleware, SQL, database access, distributed databases, administration and warehousing. Hands-on experiences with a full range of database topics demonstrate practical use of databases. Formerly CIS 105. [CSU]

CSS32. SQL and PL/SQL Programming (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive study of SQL and PL/SQL. Topics include: selecting, restricting and sorting data, functions, subqueries, creating objects, procedures, packages and triggers. Course is taught using Oracle database software. [CSU]

CSS33A. Database Architecture and Administration (4)
Credit/No Credit Option
Prerequisite: CSS-32
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive study of the architecture and administration of database systems. Topics include startup and shutdown of a database, database creation, file and database storage, and managing users and their privileges. Course is taught using Oracle database software. [CSU]

CSS33B. Database Maintenance (4)
Credit/No Credit Option
Prerequisite: CSS-33A
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive study of the maintenance of database systems. Topics include database backup, recovery strategies and performance tuning issues and techniques. Course is taught using Oracle database software. [CSU]

CSS34. Database Forms and Reports (4)
Credit/No Credit Option
Prerequisite: CSS-32
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A comprehensive study of the use of database systems. Topics include database backup, recovery strategies and performance tuning issues and techniques. Course is taught using Oracle database software. [CSU]

CSS41. Operating Systems (4)
Prerequisite: CSS-33A
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduces the fundamentals of operating systems design and implementation. Topics include an overview of the components of an operating system, mutual exclusion and synchronization, implementation of processes, scheduling algorithms, memory management, file systems, basic concepts of operating systems and system programming, virtual memory, program loading and linking, file and I/O subsystems and utility programs. Appropriate for students preparing for Computer Science and Information Systems courses. Hands-on exercises with Windows, UNIX, Linux and Mac OS. (This course is equivalent to the Association of Computing Machinery CS230T Operating Systems course.) Formerly CIS-106. [CSU; UC]
CSS43. Introduction to Computers (4)  
Credit/No Credit Option  
Lec 3 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
An overview of the computer information systems field, explaining computer applications and the role of computers in the evolution of an information-based society. Word processing, spreadsheet, database and Internet applications are covered. Formerly CIS-11. This course may be offered in the web-based format.  
[CSU; UC]  

CSS45. Applied Projects (1-3)  
Credit/No Credit Option  
Prerequisite: Any CSS course.  
Semesters Offered: Variable  
Individual investigation of topics and problems beyond the scope of regular Computer Science and Information Systems courses.  
[CSU]  

CSS48 Computer and Information Literacy (4)  
Credit/No Credit Option  
Advisory: Recommend 25 wpm keying speed.  
Lec 3 Hrs, Lab 3 Hrs  
Semesters Offered: Variable  
An introduction to the computer and software tools necessary to successfully use a personal computer in courses. Topics include computer terminology, application programs, email, network servers, word processing, spreadsheets, presentation software, the Internet, using and evaluating information from electronic sources and conducting library research online. Not open to students with credit for CIS 48, BUS 48, BUS 39.009 or CIS 39.009. This course may be offered in a web-based format.  
[CSU]  

CSS70. Graphic Design/Computer Graphics (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
The study and application of the methods, tools, and materials of graphic design. This course brings together a blend of design and practical computer-based production skills. Structuring graphic design information from concept through final product, students will utilize the computer graphic applications of Adobe Illustrator, Adobe Pagemaker and Quark X Press on the Macintosh computer. Not open to those students who have successfully completed ART 70 or CIS 70.  
[CSU]  

CSS72. Introduction to Multimedia (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
A hands-on approach to learning the fundamentals of multimedia. Students will explore essential topics including: text, graphics, animation, full motion video, interface design, principles of interactivity, development process, and applications and future directions of multimedia. Previous computer experience is recommended. Not open to students who have completed ART 72 or CIS 72.  
[CSU]  

CSS75. 3D Modeling and Digital Animation (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
This course will cover the techniques of 3D modeling and digital animation. Students will utilize the computer application LightWave 3D for hands-on experience with modeling, the application of lighting and surfaces on 3D models, rendering and animation. Not open to those students who have successfully completed ART 75 or CIS 75.  
[CSU]  

CSS77. Digital Video and Audio Editing and Production (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
Digital video production and editing utilizing the software applications of Adobe Premiere and Adobe After Effects. Students will use video and audio editing software to create Quicktime movies for presentations, CD, and DVD. Not open to students who have completed ART 77 or CIS 77.  
[CSU]  

CSS80. Digital Photographic Imaging (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
A course in digital photographic imaging. Students will utilize Adobe Photoshop to work with scanned photographs and photographs from digital camera equipment. Not open to students who have successfully completed ART 80, CIS 80 or PHO 80.  
[CSU]  

CSS87. Web Authoring (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
This course provides hands-on instruction in the tools and techniques essential to producing quality content for World Wide Web sites. Topics will include markup tags and attributes, layout tables, framesets, internal and external links, and graphic file management and presentation. Students will utilize a practical development methodology that emphasizes appropriate informational structuring and visual design. Not open to students who have successfully completed ART 87.  
[CSU]  

CSS90. Internet Literacy (3)  
Advisory: Students taking this course are advised that they must have basic computer skills for operating a word processing program, a spreadsheet program and e-mail, including sending attachments and files. Students also need access to the Internet and have adequate hardware and software such as Windows 98/2000/X. Mac OS 8-10 or their equivalent. Student without off-campus access to technology will be able to use the Library Media Center or open Computer labs to complete their assignments.  
Lec 3 Hrs  
Semesters Offered: Variable  
Examines the organizational structure, resources and uses of the Internet. Includes exploration of visible and invisible Web resources, online research strategies, information competency, Web authoring, cyber ethics, and emerging Internet technologies. Not open to students who have completed CIS/LBT 90.  
[CSU]  

CSS107. Internship in Computer Science and Information Systems (3)  
Credit/No Credit Only  
Prerequisite: CSS 1, CSS 11, CSS 12, CSS 31, CSS 170A, 170B  
The course provides students with work experience in computer information systems with one or more local business or organization. Classroom discussions relate course vocational students' experiences to selected readings and topics in computer science and information systems. Continuous evaluations will be conducted by field supervisors in each agency in coordination with the instructor. A written term project relating to the job experience or literature research will be required.
CSS109. Intro. to PC Applications (4)
Credit/No Credit Option
Advisory: Keyboarding speed of 25 words a minute recommended.
Lec 3.5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
An introduction to computer hardware, operating systems, application software (word processing, spreadsheet, database, presentation, and e-mail), and the Internet. This course is designed for students with limited or no knowledge of microcomputers and applications. Not open to students who have completed BUS 109 with a grade of C or better.

CSS110. Computer Science and Information Systems
Topics (2-4)
Credit/No Credit Option
Prerequisite: CSS-1
Lec 2 - 4 Hrs
Semesters Offered: Variable
Explores current issues and special topics in the areas of Computer Science and Information Systems. Topics vary by semester. Examples of topics: graphics programming, internet security, geographic information systems and data warehousing.

CSS 121A. Networking Fundamentals (4)
Credit/No Credit Option
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An introduction to computer network hardware terminology and concepts. This course introduces network standards, concepts, topology and terminology including LANS, WANs, the OSI model, cabling, IP addressing, network hardware and various protocols. (This is the first course in the Cisco Networking Academy curriculum.)

CSS 121B. Networking Management – Hardware (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Overview of network router concepts and theory. Discussion of router elements, TCP/IP transport-layer protocols, and flow control. Hands-on experience with router setup, configuration, and monitoring. This course is part of a set of courses that cover materials for the CCNA and Network+ certification exams. (This is the second course in the Cisco Networking Academy curriculum.)

CSS126.02. Intermediate Dreamweaver (2)
Credit/No Credit Option
Prerequisite: CSS 126.01
Lec 1.5; Lab 1.5
An intermediate course that focuses on the creation of professional web projects using Macromedia's Dreamweaver and related components. The course will focus on the students' use of Dreamweaver and its accompanying components to construct complex web projects for the Internet. Subjects to be covered are advanced web site design, Java scripting, basic chat room, bulletin board, guest book and other complex components of Dreamweaver.

CSS126.03. Beginning Flash (2)
Credit/No Credit Option
Prerequisite: CSS 126.01
Lec 1.5; Lab 1.5
A beginning course that focuses on the creation of Flash websites, movies and instruction. The course will focus on the beginning skills necessary for the effective use of Macromedia's Flash. Subjects to be covered are vector-based graphics, interactivity design, and basic animation techniques.

CSS126.04. Intermediate Flash (2)
Credit/No Credit Option
Prerequisite: CSS 126.03
Lec 1.5; Lab 1.5
An intermediate course that will focus on the creation of Flash audio and video players, interactive media and movies. The course will focus on the intermediate skill necessary for the effective use of Macromedia's Flash. Subjects to be covered are animation, action scripting, audio, video, templates and other complex ideas using Flash.

CSS148. Adaptive Computer Keyboarding (1)
Credit/No Credit Only
Advisory: Students must complete an application in the Enabler Program office for verification of their need for this course.
Lec .7 Hrs; Lab 2.3 Hrs
Semesters Offered: Variable
Designed for students with visual, physical, learning disabilities, hearing loss or deafness, this course provides training in the use of computer access technologies which enhance a disabled student's ability to access and use microcomputers. Students develop basic academic skills in the use of word processing package for the PC microcomputer. Adapted keyboarding is recommended for successful completion of this course if a student does not have adequate touch typing skills (approximately 20 wpm). Touch typing skills are not required for a student with orthopedic disabilities, but such a student must have an established, independent means of accessing the keyboard. Students must complete an application in the Enabler Program Office to verify their need for the course. Not open to students who have completed BUS 150.18.

CSS150.15. Word Processing (3)
Credit/No Credit Option
Advisory: Recommended keyboarding skill of 30 wpm for 5 minutes with 5 or fewer errors.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
The use of word processing features/commands to create and edit business documents using a computer. Not open to students who have completed BUS 150.13, BUS 150.14, BUS 150A or BUS 150B.

CSS150.15A. Word Processing Level I (1.5)
Credit/No Credit Option
Advisory: Recommended minimum keyboarding skill of 30 wpm for 5 minutes with 5 or fewer errors.
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Introduction to the use of basic word processing features/commands to create and edit business documents using a computer. Not open to students who have completed BUS/CSS 150.15B or BUS/CSS 150.15.

CSS150.15B. Word Processing Level II (1.5)
Credit/No Credit Option
Prerequisite: BUS 150.15A
Advisory: Recommended keyboarding skill of 30 wpm for 5 minutes with 5 or fewer errors.
Lec 1 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
Use of word processing features/commands to create and edit business documents using a computer. Not open to students who have completed BUS/CSS 150.15.

CSS150.18. Adaptive Word Processing (1.5)
Credit/No Credit Only
Lec .7 Hrs; Lab 2.3 Hrs
Semesters Offered: Variable
Designed for students with visual, physical, learning disabilities, hearing loss or deafness, this course provides training in the use of computer access technologies which enhance a disabled student's ability to access and use microcomputers. Students develop basic academic skills in the use of word processing package for the PC microcomputer. Adapted keyboarding is recommended for successful completion of this course if a student does not have adequate touch typing skills (approximately 20 wpm). Touch typing skills are not required for a student with orthopedic disabilities, but such a student must have an established, independent means of accessing the keyboard. Students must complete an application in the Enabler Program Office to verify their need for the course. Not open to students who have completed BUS 150.18.
CSS150.25. Electronic Spreadsheets (3)
Credit/No Credit Option
Advisory: Keyboarding speed of 25 words a minute recommended.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Use of spreadsheet features/commands to create and edit electronic spreadsheets using a computer. Not open to students who have completed BUS 150.25.

CSS159.15A. Word Processing – Module I (.5)
Credit/No Credit Only
Advisory: Keyboarding skill of 25 words per minute is recommended for successful completion of this course.
Lab 1.5 Hrs
Semesters Offered: Variable
Develop basic skills to use word processing software on the microcomputer. Emphasis is placed on creating, editing, saving, printing and basic formatting of documents. This course may be offered in a self-paced or web-based format. Not open to students who have completed BUS 159.15A.

CSS159.15B. Word Processing – Module II (.5)
Credit/No Credit Only
Advisory: Keyboarding skill of 25 words per minute is recommended for successful completion of this course.
Prerequisite: CSS 159.15A
Lab 1.5 Hrs
Semesters Offered: Variable
Continuation in the development of basic skills needed to use word processing software. This course may be offered in a self-paced or web-based format. Not open to students who have completed BUS 159.15B.

CSS169. Computer Maintenance and Repair (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An introduction and hands-on approach to the concepts and practices of how to install, set-up and maintain a computer system. Topics covered include hardware, software, procedures, components and configuration for newly constructed and repaired computer systems.

CSS170A. Windows Networking Essentials (4)
Prerequisite: CSS-48
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An overview of networking concepts and an introduction to their implementation in the Microsoft Windows operating systems, including tasks and operations involved in the daily management and ongoing support of a network, with hands-on experience to become familiar with the Windows networking user interfaces. Particular emphasis on TCP/IP implementation and Ethernet installation.

CSS170B. Supporting Windows Networks (4)
Prerequisite: CSS-170A
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course provides the knowledge and skills needed to install and configure Microsoft Windows Network Operating Systems, including installation as a stand-alone operating system and as a network client, and installation and configuration of Windows Server as a network file server. Security, printing, performance, optimization, and disaster recovery are also covered.

CSS200. Computer Skills Acquisition Lab (.25-1)
Credit/No Credit Only
Semesters Offered: Variable
An individualized lab course designed to develop and improve student's computer skills using a variety of applications. Students will consult with an instructor regarding the scheduling of their hours and the computer skills they wish to acquire and/or improve. Areas of study may include, but are not limited to, basic computer concepts, Windows, word processing, spreadsheets, presentation software, database management, Internet, email, and working with images. This course is an open-entry course. Not open to students who have completed BUS 200.

CSS201.1. Intro. to the Computer Center (.5)
Credit/No Credit Only
Semesters Offered: Variable
Orientation to the Hartnell College Computer Center and the use of its technology. Introduction to the network environment, the Windows environment, applications, and user policies and guidelines.

CSS201.2. Intro to the Computer Center and the Internet (.5)
Credit/No Credit Only
Semesters Offered: Variable
Orientation to the Hartnell College Computer Center and the use of its technology. Introduction to the network environment, use of the Internet and advanced e-mail features, and user policies and guidelines.
The Construction Technology curriculum is designed to give students practical skills and management training in all phases of residential construction. The skills training is provided through actual hands on construction of a project each year. Students may transfer to a four year school in the area of Construction Management. In addition to the Associate Degree program there are three certificate areas of specialization:

1. Carpentry
2. Construction Trade Skills
3. Construction Management

(UNDER REVISION)

CONSTRUCTION MANAGEMENT

ASSOCIATE OF SCIENCE DEGREE
An Associate of Science Degree in Construction Management can be earned by completing the required courses plus sufficient electives to meet the 60 unit graduation requirement.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 50</td>
<td>Res. Const./Rough Frame</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 51</td>
<td>Res. Const./Finish Work</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 61</td>
<td>Construction Management</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 62</td>
<td>Construction Law and Codes</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 63</td>
<td>Construction Estimating</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 64</td>
<td>Construction Scheduling</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 74</td>
<td>Construction Print Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 101</td>
<td>Introduction to Construction</td>
<td>2.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Haz. Mat. &amp; Industrial Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>BUS 152</td>
<td>Accounting for Office Personnel</td>
<td>4.0</td>
</tr>
</tbody>
</table>

OTHER ELECTIVES

Select 3 units from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS 43</td>
<td>Intro. to Computer Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>CON 102</td>
<td>Carpentry Skills</td>
<td>4.0</td>
</tr>
<tr>
<td>DRA 50</td>
<td>Intro. to Drafting Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD 50</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
</tbody>
</table>

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences:</td>
<td></td>
</tr>
<tr>
<td>Physics 10 or Geology 1 or 2</td>
<td>3.0</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences:</td>
<td></td>
</tr>
<tr>
<td>Econ 5, Psych 1A or 41</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities:</td>
<td></td>
</tr>
<tr>
<td>Art 10 or Photo 1</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language &amp; Rationality:</td>
<td></td>
</tr>
<tr>
<td>Written Composition (English 1A)</td>
<td>3.0</td>
</tr>
<tr>
<td>Communication &amp; Analytical Thinking:</td>
<td></td>
</tr>
<tr>
<td>Speech 1A or 3</td>
<td>3.0</td>
</tr>
<tr>
<td>Math 121</td>
<td>5.0</td>
</tr>
</tbody>
</table>

*Or eligibility for Math 121 as determined by the STAAR Math Placement Examination.

A grade of "C" or better must be maintained in each course of the Certificate Program.
A certificate in Construction Technology Carpentry may be obtained by completion of the 24 units of required courses.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CON 50</td>
<td>Residential Const.: Rough Frame</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 51</td>
<td>Residential Const.: Finish Work</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 74</td>
<td>Construction Print Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 101</td>
<td>Introduction to Construction</td>
<td>2.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Haz. Materials &amp; Industrial Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>ENG 253*</td>
<td>Fundamentals of Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201**</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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</tr>
</tbody>
</table>

*Or eligibility for English 101 as determined by the English Placement Examination.

**Or eligibility for Math 121 as determined by the STAAR Math Placement Examination.

A grade of "C" or better must be maintained in each course of the Certificate Program.

A certificate in Construction Trade Skills may be obtained by completion of 36 units of required courses.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>CON 50</td>
<td>Residential Const.: Rough Frame</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 51</td>
<td>Residential Const.: Finish Work</td>
<td>6.0</td>
</tr>
<tr>
<td>CON 54</td>
<td>Concrete Construction</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 55</td>
<td>Brick &amp; Cement Block Const.</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 70</td>
<td>Residential Plumbing</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 71</td>
<td>Residential Electrical</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 74</td>
<td>Construction Print Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 101</td>
<td>Introduction to Construction</td>
<td>2.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Haz. Materials &amp; Industrial Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201**</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36.0</td>
</tr>
</tbody>
</table>

*Eligibility for English 1A may be substituted for the English 101 requirement.

**Eligibility for Math 121 may be substituted for the Math 201 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.

This course covers the first phase of the construction of a residential structure with emphasis placed on rough carpentry. Students will actually be involved in the construction of a house beginning with the layout of the building, forming for a foundation, floor, wall and roof framing, concluding with the installation of the roofing material.

**CON50A. Residential Construction: Building Layout (2)**

Credit/No Credit Option
Lec .75 Hr; Lab 4 Hrs
Semesters Offered: Variable

This course is a sub-set of CON 50 and covers the first third of the rough carpentry class. Students will actually be involved in the construction of a house beginning with the layout of the building foundation through the framing of the floor structure.

**CON50B. Residential Construction: Wall & Stair (2)**

Credit/No Credit Option
Lec .75 Hr; Lab 4 Hrs
Semesters Offered: Variable

This course is a sub-set of CON 50 and covers the second third of the rough carpentry class. Students will actually be involved in the construction of a house beginning with the layout and framing of the walls through stair construction.

**CON50C. Residential Construction: Roof Frame (2)**

Credit/No Credit Option
Lec .75 Hr; Lab 4 Hrs
Semesters Offered: Variable

This course is a sub-set of CON 50 and covers the final third of the rough carpentry class. Students will actually be involved in the construction of a house beginning with the layout and framing of the roof frame through installation of the roofing material.

**CON51. Residential Construction: Finish Work (6)**

Credit/No Credit Option
Lec 2 Hrs; Lab 12 Hrs
Semesters Offered: Variable

This course covers the finish phase for the construction of a residential structure with emphasis placed on finish carpentry. Students will actually be involved in the completion of the construction of a house from the exterior wall covering, insulation, interior wall covering and finish carpentry trades of building.

[CSU]
CON51A. Residential Construction: Exterior Work (2)  
Credit/No Credit Option  
Lec. 7 Hr; Lab 4 Hrs  
Seminesters Offered: Variable  
This course is a sub-set of CON 51 and covers the first third of the CON 51 Finish Work class. Students will actually be involved in the construction of a house primarily dealing with the exterior shell of the structure.  
[CSU]  

CON51B. Residential Construction: Interior Work (2)  
Credit/No Credit Option  
Lec. 7 Hr; Lab 4 Hrs  
Seminesters Offered: Variable  
This course is a sub-set of CON 51 and covers the second third of the CON 51 Finish Work class. Students will actually be involved in the construction of a house beginning with the interior wall finish, painting and finish carpentry work.  
[CSU]  

CON51C. Residential Construction: Project End (2)  
Credit/No Credit Option  
Lec. 7 Hr; Lab 4 Hrs  
Seminesters Offered: Variable  
This course is a sub-set of CON 51 and covers the final third of the CON 51 Finish Work class. Students will actually be involved in the construction of a house beginning with cabinet installation, counter tops, finish hardware and finish floor coverings.  
[CSU]  

CON54. Concrete Construction (3)  
Credit/No Credit Option  
Lec 1 Hr; Lab 6 Hrs  
Seminesters Offered: Variable  
This course exposes the student to fundamental elements of the concrete industry. Topics covered in the class include building layout, grading, setting and reinforcing forms, concrete reinforcing, concrete mixes, and the tools used in the concrete industry. Students are required to participate in lab work which will include setting forms, placing, finishing and curing concrete.  
[CSU]  

CON55. Masonry Construction (3)  
Credit/No Credit Option  
Lec 1 Hr; Lab 6 Hrs  
Seminesters Offered: Variable  
This course exposes the student to fundamental elements of the masonry industry. Topics covered in the class include building layout, grading, review of concrete, masonry units, mortar, masonry anchors and reinforcing, and laying various types of masonry materials. Students are required to participate in lab work which will include pouring concrete foundations, mixing mortar and laying various types of masonry units.  
[CSU]  

CON61. Construction Management (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
This course is a study of the managerial problems and policy decisions facing typical general building contractors. Numerous aspects of construction contracting will be covered including bonding, insurance, company organizational structure and business plans and project planning. Also covered in the course will be construction safety, labor relations and business methods and financing.  
[CSU]  

CON62. Construction Law and Contracts (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
This course is a study of the legal aspects of the construction industry. Students will analyze the problems relating to contract formation, administration, interpretation and enforcement. Students will also learn about California Contractor's License Law and licensing requirements, mechanics lien laws, stop notices, attachment and collection techniques, an overview of building codes and a comparison of arbitration and litigation.  
[CSU]  

CON63. Construction Estimating (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
This course is a hands on study of the basic approaches to estimating for numerous types of construction projects. Students will study bid documents, procedures and preparations required for both public and private works. Students will be required to perform material and labor take-offs from architectural prints, price the material and labor and put together a bid package. Basic analysis of plans, specifications and front end documents are part of the curriculum.  
[CSU]  

CON64. Construction Scheduling (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
This course will require students to work with and study the latest version of the Uniform Building Code. Students will also learn inspection techniques and protocol public relations and record keeping. Designed for contractors, architects, tradespersons and those seeking ICBO certification. Course may be repeated by petition as codes are updated.  
[CSU]  

CON65. Construction Scheduling (3)  
Credit/No Credit Option  
Lec 2 Hrs; Lab 3 Hrs  
Seminesters Offered: Variable  
This course is a study plumbing techniques and practices used in residential construction. This course will stress safety, use of the tools of the trade, pipes and fittings, cutting and joining of pipes, fresh water and drain waster vent systems. Students will also study plumbing system components, waste disposal systems and plumbing fixtures.  
[CSU]  

CON70. Residential Plumbing (3)  
Credit/No Credit Option  
Lec 2 Hrs; Lab 3 Hrs  
Seminesters Offered: Variable  
This course is a study of electrical techniques and practices used in residential construction. This course will stress safety, use of tools of the trade, principles of electricity and basic electrical circuits. Students will further study electrical conductors, grounding techniques, wiring practices and layout. Further included will be electrical codes and licenses, lighting systems and finish electrical techniques.  
[CSU]  

CON71. Residential Electrical (3)  
Credit/No Credit Option  
Lec 2 Hrs; Lab 3 Hrs  
Seminesters Offered: Variable  
This course is a study plumbing techniques and practices used in residential construction. This course will stress safety, use of the tools of the trade, principles of electricity and basic electrical circuits. Students will further study electrical conductors, grounding techniques, wiring practices and layout. Further included will be electrical codes and licenses, lighting systems and finish electrical techniques.  
[CSU]  

CON74. Construction Print Reading (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
This course covers the fundamentals of: the construction plan development process as well as interpreting and understanding the plans and the symbols used on plans for the building industry. The course will further cover construction specifications, construction materials and welding prints and print reading.  
[CSU]  

CON81. Introduction to the Uniform Building Code (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Seminesters Offered: Variable  
Use and application of the Uniform Building Code as it applies to the building inspector. This course will require students to work with and study the latest version of the Uniform Building Code. Students will also learn inspection techniques and protocol public relations and record keeping. Designed for contractors, architects, tradespersons and those seeking ICBO certification. Course may be repeated by petition as codes are updated.  
[CSU]
CON82. Introduction to the Uniform Mechanical Code (3)
Lec 3 Hrs
Semesters Offered: Variable
Use and application of the Uniform Mechanical Code as it applies to the building inspector. This course will require students to work with and study the latest version of the Uniform Mechanical code. Students will also learn inspection techniques and protocol, public relations and record keeping. Designed for contractors, architects, tradespersons and those seeking ICBO certification. Course may be repeated by petition as codes are updated. [CSU]

CON83. Introduction to the Uniform Plumbing Code (3)
Lec 3 Hrs
Semesters Offered: Variable
Use and application of the Uniform Plumbing Code as it applies to the building inspector. This course will require students to work with and study the latest version of the Uniform Plumbing Code. Students will also learn inspection techniques and protocol, public relations and record keeping. Designed for contractors, architects, tradespersons and those seeking ICBO certification. Course may be repeated by petition as codes are updated. [CSU]

CON84. Introduction to the National Electrical Code (3)
Lec 3 Hrs
Semesters Offered: Variable
Use and application of the National Electrical code as it applied to the building inspector. This course will require students to work with and study the latest version of the National Electrical code. Students will also learn inspection techniques and protocol, public relations and record keeping. Designed for contractors, architects, tradespersons and those seeking ICBO certification. Course may be repeated by petition as codes are updated. [CSU]

CON101. Introduction To Construction (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
This course is a study of the fundamentals of the construction industry. The students will be introduced to numerous aspects of the residential construction process including numerous construction trades and personnel, methods of construction, materials used in modern construction and the manner in which these materials are tested.

CON102. Carpentry Skills (4)
Credit/No Credit Option
Prerequisite: Const. Tech. 51
Lab 12 Hrs
Semesters Offered: Variable
Allows the second year construction student the opportunity to further improve and enhance his/her skill in rough and finish carpentry techniques. May be repeated twice for credit.

CON110. Carpentry - Floor and Wall (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course is a study of fundamental rough carpentry skills and techniques dealing specifically with residential floor and wall framing. Students will learn about construction safety, types and uses of carpentry tools, framing terminology, techniques for framing a raised foundation and the building and bracing of light wood framed walls.

CON111. Carpentry - Roof and Stairs (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course is a study of fundamental rough carpentry skills and techniques dealing specifically with residential roof and stair framing. Students will learn about construction safety, types and uses of carpentry tools, framing terminology, techniques for calculating and cutting elementary roof structures and simple sets of stairs.

CON145. Special Projects (.5-2)
Semesters Offered: Variable
This course is designed to allow students to study a specialized area of construction or to develop further knowledge in an area that they have already studied in Construction. Such areas could include computer applications, management techniques, new or special materials and new methods or construction processes. Completion of CON 50 and CON 51 is highly recommended.
The Cooperative Work Experience Education and Internship Program allows students to earn college units while learning through a paid or volunteer work experience. Cooperative Work Experience Education is an academic program in which the student, employer, and the college cooperate to turn a job or volunteer experience into an "off campus" classroom. Employers and faculty members jointly mentor students, assisting them to establish structured on-the-job learning objectives. Students are evaluated based on their performance and gain workplace competencies. The Cooperative Work Experience Education and Internship Program is designed to assist students in exploring and choosing a career, preparing for full-time employment, and advancing in careers of their choice.

Students may complete a maximum of 16 units offered through the Cooperative Work Experience and Internship Program. These units count as electives toward an A.A. degree and up to 8 units may be transferred to the California State University System. Cooperative Work Experience may be offered under two types of plans. The Parallel plan and the Alternate Plan. Students enrolled in the Parallel Plan must be enrolled in minimum of 7 units during the spring and fall sessions including the Cooperative Work Experience Education units. Students enrolled in the Parallel Plan during the summer must be enrolled in one other course of any unit value. Under the Parallel Plan, a student may earn 1-4 units per semester, not to exceed a maximum of 16 semester units. Students enrolled in the Alternate Plan may earn 1-8 units a semester, not to exceed a maximum of 16 semester units, and must limit concurrent enrollment to no more than one other course. Students enrolled in the Alternate Plan may enroll only in Cooperative Work Experience. Students are allowed to alternate between the Parallel and Alternate Plan each semester. Each 75 hours of paid work OR 60 hours of non-paid work equals one semester unit. Orientation is mandatory. See Schedule of Classes printed every semester for orientation dates.

Cooperative Work Experience Education includes Occupational, General and Internship Work Experience Courses. Occupational Work Experience and Internship Work Experience is offered across the curriculum under specific disciplines using the reserved numbers 99 and 99I respectively. General Work Experience is offered as Business 98. Enrollment in General Work Experience is limited to 6 units of the 16 possible.

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**BUS98. General Work Experience**
Credit/No Credit Option
Semesters Offered: Variable
This course is designed for students exploring careers who have a job in a field not related to their major. General Work Experience combines classroom instruction with on-the-job experience, utilizing the community's business, industry and government agencies as expanded educational sites. Supervised volunteer or paid employment is intended to assist students in acquiring desirable work habits, attitudes, and career awareness. General Work Experience is part of the Cooperative Work Experience Education Program, which assists students in exploring and choosing a career, preparing for full-time employment, and advancing in careers of their choice.

**CO-OP99. Occupational Work Experience Education**
Credit/No Credit Option
Semesters Offered: Variable
Occupational Work Experience is designed for students employed in a field related to their college major or career goals. Under the joint mentorship of their employer and college instructor, students establish learning objectives that extend classroom-based instruction to on-the-job training. Students advance in careers of their choice through structured opportunities for skill development and increased responsibilities. Occupational work Experience is part of the Cooperative Work Experience Education Program which assists students in exploring and choosing a career, preparing for full-time employment, and advancing in careers of their choice.

**CO-OP 99I. Occupational Work Experience Internship**
Credit/No Credit Option
Semesters Offered: Variable
The Internship course is designed for students who have decided on a career, have taken classes in their major, and are ready for an on-the-job experience. Through a network of employers, the Intern Program matches students with work experience in their chosen field. Students are pre-screened and referred to employers for interviews.
COU21. Student Skills for Success: Orientation/Destrezas Estudiantiles para el Exito: Orientacion (.3-1)  
Credit/No Credit Only  
Semesters Offered: Variable  
An introductory course designed for students to successfully complete their college education. Included will be topics such as: education costs, student support services, and methods for completing courses. Students will learn principles of effective classroom and college communication. Students will demonstrate knowledge of general education, college policies, university transfer requirements, and Certificate/AA requirements. Students returning after a break in enrollment may petition to repeat this course.  
[CSU]

COU24. Student Skills for Success: Group Dynamics (1)  
Credit/No Credit Option  
Lec 1 Hr  
Semesters Offered: Variable  
Course designed to assist students develop understanding of the individual in a group setting and to understand group dynamics. Students will learn how to effectively participate in groups in a variety of settings. Students will comprehend structure of groups; roles and functions; importance of cultural perspective; and reflect on individual responsibility.  
[CSU]

COU25. Assertiveness (1)  
Credit/No Credit Option  
Lec 1 Hr  
Semesters Offered: Variable  
This course presents the principles of assertive behavior and examples of skill application in personal, social, academic and work situations. Designed for students who desire to improve their personal power and interpersonal effectiveness.  
[CSU]

COU26. Student Skills for Success: Study Skills (1.5)  
Credit/No Credit Option  
Lec 1.5 Hr  
Semesters Offered: Variable  
A study of topics that ensure college success through study skills improvement. Designed to assist the student in developing study skills and learning strategies necessary to improve his or her educational aptitudes and behaviors. An in-depth exploration and application of study skill topics to include: memory development, time management strategies, approaches to effective reading, note taking, test taking strategies, effective college study habits, as well as other general study techniques.  
[CSU]

COU27. Life Planning (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
This course will provide students with assessment tools to identify their values interests, skills, learning style, procrastination profile and time management patterns. Through lectures and classes of participation, students will be better equipped to select a college major and determine employment opportunities, understand the importance of relationships, and develop an appreciation for divergent cultural views; and manage their psychological and physiological stress. By critical analysis, students will become cognizant of how their personal needs, emotions, and ambitions, effect their entire lives.  
[CSU]
COU28. Student Skills for Success: Peer Advisor Training (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
Skills, techniques and strategies for the work of Student Peer Advisors in the diverse multicultural educational environment of a community college. Peer Advising theory and practice, information dissemination methods, campus and community referrals, advising and para-professional counseling skills will be covered.
[CSU]

COU29. Student Skills for Success: Job Hunting Techniques (.3-.5)
Credit/No Credit Only
Semesters Offered: Variable
Designed to assist students develop critical job finding competencies. Students will learn how to search for a job effectively by assessing and defining their marketable skills and communicating their skills to employers through applications, resumes and oral interviews. Course content includes employment preparation & organizational activities: completing applications; creating cover letters and resumes. Students will practice networking techniques and cold calls. Other areas include labor market development and interview practice. This course may be scheduled in a regular lecture format or a self-paced format.
[CSU]

COU30. Occupational Interest and Ability Assessment (.5)
Credit/No Credit Only
Lec 1 Hr
Semesters Offered: Variable
Provides a comprehensive exploration of student vocational interests, skills and values to enhance productive and successful occupational and career choices. Not open to those who have completed Counseling 23. This course may be scheduled in a regular lecture format or a self-paced format.
[CSU]

COU35. Intercultural Communication (3)
Lec 3 Hrs
Semesters Offered: Variable
Study of intercultural communication among people in the United States such as Mexican-American, Hispanic, Native American, Asian American, and African American and in cultures throughout the world such as India, Japan, Europe, Africa, North Central and South America. Analysis of the influence of cultural patterns, language, values, norms, beliefs, and roles on world views and behavior. Special study of prejudice, ethnocentrism, nationalism, and racism in intercultural communication. Includes development of intercultural communication competence. Not open to students who have completed Speech 35.
[CSU; UC]

COU45. Special Projects (.5-3)
Credit/No Credit Option
Semesters Offered: Variable
For those students wishing additional college level experience beyond the scope of regular counseling courses.
[CSU]

COU80. American Sign Language I (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
An introductory sign language course in American Sign Language (ASL). Develops skill in expressive and receptive signing ability including the manual alphabet, fingerspelling, and signs. Introduction to the deaf culture and history in the United States. Drill and exercise in the essentials of ASL syntax, classifiers, non-manual markers, and facial expression.
[CSU; UC]

COU81. American Sign Language II (3)
Credit/No Credit Option
Prerequisite: Counseling 80 or completion of a beginning course in manual communication.
Lec 3 Hrs
Semesters Offered: Variable
Continuation of Counseling 80. Drill and exercises at the intermediate level of sign language structure, form, usages, and conversation. This course is designed to give additional practice in the use of American Sign Language (ASL). Continued exploration and understanding of Deaf history and culture.
[CSU; UC]

COU83. American Sign Language III (3)
Credit/No Credit Option
Prerequisite: Completion of Counseling 81 with a grade of C or better.
Lec 3 Hrs
Intermediate to advanced level syntax, grammar, histology, and vocabulary of American Sign Language, the language of the Deaf community. Emphasis on increasing proficiency in conversational situations. Increasing understanding of Deaf culture and its influence on language structures, conversation, context and usage. Special emphasis on oral presentation.
[CSU; UC]

COU90. Building Memory Skills (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
Introduction to the basic principles of memory. Short and long-term memory. Mnemonic devices. Introduction to superlearning method. Improvement in ability to remember names. Development of memory assurance. Application to college course-work, study skills and language learning.
[CSU]

COU105. Emotional Management Skills: Introductory (1.5)
Credit/No Credit Only
Lec 1.5 Hrs
Semesters Offered: Variable
This course will introduce students to specific behavioral approaches to identify and manage negatively applied feelings such as anxiety, depression, fear, anger, jealousy, aggression, suspicion, etc.

COU106. Emotional Management Skills: Intermediate (1.5)
Prerequisite: Counseling 105
Credit/No Credit Only
Lec 1.5 Hrs
Semesters Offered: Variable
This course will enhance and expand students' application of Emotional Management Skills (EMS). It will involve students in more advanced research and extend their application of EMS to home, work or into the community. Skills in mentoring will be an integral part of this course.

COU201. Speech/Language Therapy (.3-2)
Credit/No Credit Only
Lec .3 Hrs
Semesters Offered: Variable
Course provides diagnostic evaluation and rehabilitative instruction to students with speech and language impairments. Instruction is provided on an individual and group basis depending on the nature of the speech/language impairment. May be repeated for a maximum of 2 units. Students must complete Enabler Services Application before enrolling in this course.

COU207. Student Skills for Success: Financial Aid (.5)
Credit/No Credit Only
Lec .5
Semesters Offered: Variable
Course is designed to provide information and skills to successfully navigate the financial aid process. This course will cover issues related to federal, state, and college policies and procedures for students currently receiving Financial Aid or who may receive Financial Aid.

COU210. Educational Skills Assessment (.3-.5)
Credit/No Credit Only
Semesters Offered: Variable
An assessment course for students with learning disabilities including dyslexia. Students will gain understanding of their learning skills and potentials through self assessment and diagnostic evaluation. Strengths and weaknesses in basic skills as well as learning modalities will be assessed.
COU211. Educational Skills Lab (.5-2)
   Credit/No Credit Only
   Semesters Offered: Variable
   This course is designed to provide learning disabled students individualized, computer assisted and small group instruction to help remediate basic skills, so these students can succeed in their mainstream classes. Other Enabler Program students may also enroll for individualized assistance or be instructed on the uses of the computer as a learning tool. Completion of Enabler Program assessment is required before a student can enroll.

COU212. Educational Skills Development/ Reading (2)
   Credit/No Credit Only
   Lec 2 Hrs
   Semesters Offered: Variable
   Instruction in basic reading skills for students with learning disabilities. This course emphasizes the development of word attack, word recognition, vocabulary building, reading comprehension, as well as cognitive and perceptual skills. Designed for individual and small group instruction. This course is designed to prepare learning disabled students to enter Learning Skills, remedial or associate degree courses. Completion of a minimum of .3 units of Counseling 210.
The dance program is designed to provide a foundation in basic elements of ballet, jazz and choreography to prepare students for a major in dance, choreography or theatre. The curriculum is designed to provide students with a level of proficiency that allows them to perform in solo and group work, to understand dance in relation to specific cultural context and to develop student creativity. An emphasis on performance encourages students to participate in a variety of activities as well as the pursuit of lifetime self-development.

**DAN100. Beginning Ballet (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Techniques of classical ballet dance. Course will begin with a health screening and baseline or functional capacity fitness assessment.

**DAN101. Intermediate Ballet (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Techniques of classical ballet dance. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should have knowledge of jazz dance terminology, and jazz movements and positions such as jazz walks, turns, leaps, and jumps as well as floor patterns and composition.

**DAN102. Advanced Ballet (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Advanced ballet techniques and toe-shoes. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should have advanced knowledge of vocabulary, body positions, barre work, and mechanics of added body movements as it relates to ballet.

**DAN110. Intro. to Choreography/Jazz Emphasis**  
Credit/No Credit Option  
Semesters Offered: Variable  
Introductory techniques of movements of the now world-wide folk dance of jazz which was developed in early America by the Blacks. Course will begin with a health screening and baseline or functional capacity fitness assessment.

**DAN120. Modern Dance (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Focus on beginning techniques of exploration of movement patterns and development of technique utilizing physical discipline and interpretation. Course will begin with a health screening and baseline or functional capacity fitness assessment.

**DAN130. Beginning Jazz Dance (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Introduction to the basic fundamentals of body movements taught for improvisation and composition to prepare for performance in jazz style. Course will begin with a health screening and baseline or functional capacity fitness assessment.

**DAN131. Intermediate Jazz Dance (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
A dance course designed to develop intermediate jazz dance skills. It will consist of a technique - warm-up emphasizing coordination, rhythm, flexibility, style and isolation of body parts, locomotion across the floor and a series of dance phrases developed into short dance combinations. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should have knowledge of jazz dance terminology, and jazz movements and positions such as jazz walks, turns, leaps and jumps as well as floor patterns and composition.

**DAN132. Advanced Jazz Dance (1)**  
Lab 3 Hrs  
Semesters Offered: Variable  
Continued study of Jazz Dance techniques. Emphasis on developing performance technique and style. Course to provide jazz dance improvisation and choreography. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should have knowledge of locomotor movement phrases, and have the ability to use jazz dance combinations.

**DAN133. Lyrical Jazz Dance (1.5)**  
Lec .5 Hrs; Lab 2.5 Hrs  
Semesters Offered: Variable  
Introductory techniques of lyrical jazz combined with a strong emphasis of classical ballet. Course will begin with a health screening and baseline or functional capacity fitness assessment.
DIGITAL ARTS

ASSOCIATE OF ARTS DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES
Course #  Course Title                  Units
ART 70/CSS 70  Graphic Design/Computer Graphics  3.0
ART 75/CSS 75  3D Modeling and Digital Animation  3.0
ART 80/CSS 80/PHO 80  Digital Photographic Imaging  3.0
ART 77/CSS 77  Digital Video & Audio Editing and Production  3.0
ART 71  2D Digital Illustration  3.0
ART 85/CSS 85  Interactive Digital Media Interface Design  3.0
ART 72/CSS 72  Introduction to Multimedia  3.0
ENG 101*  English Grammar and Composition (3.0)
MAT 201**  Pre-Algebra (3.0)

Electives (9.0 units)
ART 76  Intermediate 3D Modeling and Digital Animation  3.0
PHO 1  Introduction to Photography  3.0
PHO 2  Beginning Black and White Photography  3.0
ART 12A  Design  3.0
ART 87/CSS 87  Web Authoring  3.0
ART 3  Drawing and Composition  3.0
MUS 42A  Electronic Music-Recording  2.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:
Requirement   Units
Natural Science  3.0
Social and Behavioral Science  3.0
Humanities***  3.0
Ethnic Groups in the United States  3.0
Language and Rationality  9.0

ADDITIONAL INFORMATION:
* Eligibility for, or completion of, English 1A may be substituted for the English 101 requirement.
** Eligibility for, or completion of, Math 121 may be substituted for the Math 201 requirement.
*** PHO 1, PHO 2, ART 12A and ART 3 may be used in this area.

A grade of “C” or better must be maintained in each required major course.

DIGITAL ARTS CERTIFICATE PROGRAM

REQUIRED COURSES
Course #  Course Title                  Units
ART 70/CSS 70  Graphic Design/Computer Graphics  3.0
ART 75/CSS 75  3D Modeling and Digital Animation  3.0
ART 80/CSS 80/PHO 80  Digital Photographic Imaging  3.0
ART 77/CSS 77  Digital Video & Audio Editing and Production  3.0
ART 71  2D Digital Illustration  3.0
ART 85/CSS 85  Interactive Digital Media Interface Design  3.0
ART 72/CSS 72  Introduction to Multimedia  3.0
ENG 101*  English Grammar and Composition (3.0)
MAT 201**  Pre-Algebra (3.0)

ELECTIVES
ART 76  Intermediate 3D Modeling and Digital Animation  3.0
PHO 1  Introduction to Photography  3.0
PHO 2  Beginning Black and White Photography  3.0
ART 12A  Design  3.0
ART 87/CSS 87  Web Authoring  3.0
ART 3  Drawing and Composition  3.0
MUS 42A  Electronic Music-Recording  2.0

ADDITIONAL INFORMATION:
* Eligibility for or completion of English 1A may be substituted for the English 101 requirement.
** Eligibility for or completion of Math 121 may be substituted for the Math 201 requirement.

A grade of “C” or better must be maintained in each required major course.
DRAFTING TECHNOLOGY/CAD
ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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</thead>
<tbody>
<tr>
<td>DRA 50</td>
<td>Introduction to Drafting</td>
<td>3.0</td>
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<tr>
<td>or</td>
<td>EGN 2 Engineering Graphics/CAD</td>
<td>(4.0)</td>
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<tr>
<td>DRA 52</td>
<td>Introduction to AutoCAD</td>
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<tr>
<td>DRA 53</td>
<td>Advanced AutoCAD</td>
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<td>DRA 54</td>
<td>AutoCAD 3D Modeling</td>
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<td>DRA 56</td>
<td>Comp-Aided Elect. Drawing</td>
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<tr>
<td>DRA 58</td>
<td>Comp-Aided Mechanical Drafting</td>
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<tr>
<td>DRA 68</td>
<td>Geometric Dimensioning and</td>
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<td>Tolerancing</td>
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<tr>
<td>DRA 70</td>
<td>Intro. to Architectural Drawing</td>
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<tr>
<td>DRA 71</td>
<td>Computer Aided Architectural</td>
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<td></td>
<td>Drawing</td>
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<tr>
<td>MAT 151*</td>
<td>Technical Mathematics</td>
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<tr>
<td>or</td>
<td>ENG 101* English Grammar &amp; Comp.</td>
<td>(3.0)</td>
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<tr>
<td>MAT 121</td>
<td>Elementary Algebra</td>
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<td>or</td>
<td>PHY 10 Introduction to Physics</td>
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<tr>
<td>or</td>
<td>PHY 2A General Physics</td>
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ELECTIVES: Select a minimum of 9 units from the following:

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<tbody>
<tr>
<td>ART 4</td>
<td>Perspective Drawing</td>
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<tr>
<td>CSS 43</td>
<td>Introduction to Computers</td>
<td>4.0</td>
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<tr>
<td>CON 50A</td>
<td>Residential Construction:</td>
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<tr>
<td></td>
<td>Building layout</td>
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</tr>
<tr>
<td>CON 63</td>
<td>Construction Estimating</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 55</td>
<td>Introduction to Digital Electronics</td>
<td>3.0</td>
</tr>
<tr>
<td>EGN 1</td>
<td>Introduction to Engineering and</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Technology</td>
<td></td>
</tr>
<tr>
<td>MEC 169</td>
<td>Hazardous Material &amp; Industrial</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td>MEC 55</td>
<td>Applied Industrial Mechanics</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>38-42</td>
</tr>
</tbody>
</table>

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM ABOVE:

Social & Behavioral Sciences
- ECO 5 or PSY 41 recommended 3.0

Humanities
- ART 3, ART 4 or PHO 1 recommended 3.0

Ethnic Groups in the United States 3.0

Language and Rationality:
- Written Composition, ENG 1A 3.0
- Communication & Analytical Thinking 3.0
- 53-57

ADDITIONAL INFORMATION

Additional units to reach a minimum of 60 semester units in degree applicable courses 3.0-7.0

24-30.0

ADDITIONAL INFORMATION

*Eligibility for or completion of English 1A may be substituted for the English 101 requirement.

A grade of "C" or better must be maintained in each required course of the Certificate Program.

DRAFTING TECHNOLOGY CAD - ARCHITECTURAL OPTION

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRA 50</td>
<td>Introduction to Drafting</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>EGN 2 Engineering Graphics/CAD</td>
<td>(4.0)</td>
</tr>
<tr>
<td>DRA 52</td>
<td>Introduction to AutoCAD</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 53</td>
<td>Advanced AutoCAD</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 54</td>
<td>AutoCAD 3D Modeling</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 70</td>
<td>Intro. to Architectural Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>DRA 71</td>
<td>Computer Aided Architectural</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Drawing</td>
<td></td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 151</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>MAT 121 Elementary Algebra</td>
<td>(5.0)</td>
</tr>
<tr>
<td>PHY 10</td>
<td>Introduction to Physics</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>PHY 2A General Physics</td>
<td>(4.0)</td>
</tr>
<tr>
<td>Total</td>
<td>21-27.0</td>
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</tbody>
</table>

ELECTIVES: Select a minimum of 3 units from the following:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 4</td>
<td>Perspective Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>CON 50A</td>
<td>Residential Construction:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Building Layout</td>
<td></td>
</tr>
<tr>
<td>CON 63</td>
<td>Construction Estimating</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Hazardous Material &amp; Industrial</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24-30.0</td>
<td></td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

*Eligibility for or completion of English 1A may be substituted for the English 101 requirement.

A grade of "C" or better must be maintained in each required course of the Certificate Program.
DRAFTING TECHNOLOGY
CAD - MECHANICAL OPTION

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRA 50</td>
<td>Introduction to Drafting Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGN 2</td>
<td>Engineering Graphics/CAD</td>
<td>4.0</td>
</tr>
<tr>
<td>DRA 52</td>
<td>Introduction to AutoCAD</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 53</td>
<td>Advanced AutoCAD</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 54</td>
<td>AutoCAD 3D Modeling</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 58</td>
<td>Computer-Aided Mechanical Drafting</td>
<td></td>
</tr>
<tr>
<td>DRA 68</td>
<td>Geometric Dimensioning and Tolerancing</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 121</td>
<td>Elementary Algebra</td>
<td>5.0</td>
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</table>

ELECTIVES: Choose a minimum of 3 units from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRA 56</td>
<td>Computer-Aided Electronic Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Hazardous Material &amp; Industrial Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>MEC 55</td>
<td>Applied Industrial Mechanics</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
<tr>
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<td>23-29.0</td>
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</tbody>
</table>

ADDITIONAL INFORMATION

*Eligibility for or completion of English 1A may be substituted for the English 101 requirement.

A grade of "C" or better must be maintained in each required course of the Certificate Program.

DRA50. Introduction to Drafting Technology (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Seminesters Offered: Variable
Introduction to drafting and design, this course covers technical sketching, lettering, applied geometry for graphic representation and problem solving. Emphasis placed on orthographic projection, auxiliary views, pictorial projections, basic dimensioning, and sectioning with adherence to drafting standards. Traditional drafting and design instruments will be used. Computer-aided Drafting (CAD) will be introduced.

[CSU]

DRA52. Introduction to AutoCAD (2)
Credit/No Credit Option
Advisory: Recommend completion or concurrent enrollment in DRA 50 and CSS 205
Lec 1 Hrs; Lab 3 Hrs
Seminesters Offered: Variable
This course provides an introduction to the concepts in computer aided drafting and design (CADD) using AutoCAD software. Students will develop an understanding of the features and considerations associated with the computer as a drafting/design tool. The course presents step-by-step and hands on experience using AutoCAD advanced commands such as blocks, attributes, and external references. This course also covers the AutoCAD customizing techniques.

[CSU]

DRA53. Advanced AutoCAD (2)
Credit/No Credit Option
Prerequisite: DRA 52
Lec 1 Hr; Lab 3 Hrs
Seminesters Offered: Variable
This course builds on the knowledge obtained in the Introduction to AutoCAD course. It continues the study of the two-dimensional drawing and editing features of AutoCAD software. The course presents step-by-step and hands on experience using AutoCAD advanced commands such as blocks, attributes, and external references. This course also covers the AutoCAD customizing techniques.

[CSU]

DRA54. AutoCAD 3D Modeling (2)
Prerequisite: DRA 53, Adv. AutoCAD
Lec 1 Hrs; Lab 3 Hrs
Seminesters Offered: Variable
Credit/No Credit Option
This course focuses on three-dimensional concepts and features. AutoCAD software is used to generate wireframes, surface models, and solid models, which can be used for engineering analyses and presentation. This course provides a comprehensive study of the details and procedures used to transform two-dimensional drawings into three-dimensional models. The course also includes the procedures for turning models into the types of detailed drawings required for the manufacturing or construction industry.

[CSU]

DRA56. Computer-Aided Electronic Drawing (3)
Lec 2 Hrs; Lab 3 Hrs
Seminesters Offered: Variable
Practice in reading, understanding and making electrical and electronic drawings. Conventional practice in layouts, symbols, schematics, elementary circuits, cabling/wiring diagrams, printed circuits and integrated circuits. One year of high school mechanical drawing or DRA 50 (which may be taken concurrently) is recommended.

[CSU]

DRA58. Computer-Aided Mechanical Drafting (3)
Credit/No Credit Option
Prerequisite: DRA 50, DRA 52, & MAT 151
Lec 2 Hrs; Lab 3 Hrs
Seminesters Offered: Variable
The advanced study of orthographic views with precision dimensioning. This course also includes tolerance and fit, types of sectional views, screw threads and fasteners, mechanical working drawing for manufacturing. Emphasis placed on modern and applied drafting techniques and standards using the AutoCAD software.

[CSU]

DRA64. Industrial Print Reading (2)
Credit/No Credit Option
Lec 2 Hrs
Seminesters Offered: Variable
This course covers the fundamentals of interpreting and understanding drawings used in engineering, industry, and construction.

[CSU]
DRA68. Geometric Dimensioning and Tolerancing (2)
Credit/No Credit Option
Prerequisite: DRA 50
Advisory: DRA 52
Lec 1 Hrs; Lab 3 Hrs
Semesters Offered: Variable
An advanced study in mechanical drafting and design covering the American National Standards Institute (ANSI) requirements as they apply to industry in drafting, designing and manufacturing the precise and interchangeable parts. In this course students will learn to interpret and use geometric tolerancing symbols and terms. All the laboratory work completed using appropriate CAD software.

[CSU]

DRA70. Introduction to Architectural Drawing and Design (3)
Credit/No Credit Option
Advisory: DRA 50, or one year of high school drafting is recommended.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course covers fundamental techniques and standards of architectural drafting through a study of structural parts and details involved in residential drawings. Areas of instruction include an introduction to building codes, the preparation of plot plan, floor plan, dimensioning, electrical plan, elevation plans, and concepts of room design and residential planning.

[CSU]

DRA71. Computer-Aided Architectural Drawing (3)
Credit/No Credit Option
Prerequisite: DRA 70
Advisory: DRA 52
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Students will use AutoCAD and/or other advanced architectural related application software in preparation of working drawings including site plan, floor plan, elevation, foundation and other necessary details for the residential buildings.

[CSU]

DRA74. Architectural Print Reading (2)
Credit/No Credit Option
Lec 2 Hrs
Semesters Offered: Variable
This course covers the fundamentals of interpreting and understanding drawings used in architecture and the building trades.

[CSU]

DRA145. Special Projects (.5-2)
Credit/No Credit Option
Supervised study and laboratory practice involving special problems in drafting. DRA 50 and DRA 52 or equivalent experiences are recommended.
EARLY CHILDHOOD EDUCATION

ASSOCIATE OF ARTS DEGREE

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

REMAINING GE REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:

AREA UNITS
Natural Sciences 3.0
Social & Behavioral Science 3.0
Humanities 3.0
Ethnic Groups in the United States 3.0
Language and Rationale 3.0
Total 21.0

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 101</td>
<td>Orientation to ECE</td>
<td>1.0</td>
</tr>
<tr>
<td>ECE 1</td>
<td>Principles of ECE</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>ECE 121 Filosofias y principios de estimulacion temprana/Philosophs and Principles of ECE</td>
<td>(3.0)</td>
</tr>
<tr>
<td>ECE 2</td>
<td>Home, School and Community</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>ECE 122 El niño, la familia y la comunidad/Child, Family and Community</td>
<td>(3.0)</td>
</tr>
<tr>
<td>ECE 3</td>
<td>Creative Activities and Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>ECE 123 Introduccion de creatividad/Introduction to Creativity</td>
<td>(3.0)</td>
</tr>
<tr>
<td>ECE 10</td>
<td>Child Study</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 11</td>
<td>Cognitive Activities &amp; Materials</td>
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</tr>
<tr>
<td>or</td>
<td>ECE 12A Preschool Theory &amp; Practicum</td>
<td>6.0</td>
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<tr>
<td>ECE 12B</td>
<td>Preschool Theory &amp; Practicum</td>
<td>6.0</td>
</tr>
<tr>
<td>ECE 80</td>
<td>ECE Practicum for the Employed and</td>
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<tr>
<td>ECE 81</td>
<td>ECE Practicum in Cognitive Development for the Employed</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>ECE 82 ECE Practicum in Physical Development for the Employed</td>
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</tr>
<tr>
<td>ECE 83</td>
<td>ECE Theory Practicum in Social Development of Children</td>
<td>3.0</td>
</tr>
<tr>
<td>or</td>
<td>ECE 12A Preschool Theory &amp; Practicum</td>
<td>6.0</td>
</tr>
</tbody>
</table>

ELECTIVES-Select a minimum of 3 units from the following:

ECE 13 Preschool Curriculum: Literature | 2.0
ECE 14 Preschool Curriculum: Physical Environment | 1.0
ECE 15 Preschool Curriculum: Blocks | 1.0
ECE 16 Preschool Curriculum: Music | 1.0
ECE 17 Preschool Curriculum: Movement | 1.0
ECE 18 Communication Skills in ECE | 2.0
ECE 19 Safety/Health in the Classroom | 2.0
ECE 20 Infant/Toddler Development | 3.0
ECE 21 Infant/Toddler: Group Care | 1.0
ECE 22 Infant/Toddler: Family Relations of Diverse Backgrounds | 1.0
ECE 23 Infant/Toddler: Cognitive and Language Learning | 2.0
ECE 25 Preschool Learning Problems | 1.0
ECE 26 Introduction to Special Education | 3.0
ECE 50 Language Arts Experiences for Young Children | 1.0
ECE 51 Spanish Language Experiences for Young Children | 1.0
ECE 52 Introduction to Bilingual Programs | 3.0

ADDITIONAL RECOMMENDED COURSES

ECE 62 Instructional Experience | 2.0
ECE 70A Supervision and Admin. in ECE | 3.0
ECE 70B Advanced Administration and Supervision of Child Development Programs | 3.0
ECE 71 Supervision of Adults in an ECE Setting | 2.0
ECE 102 Introduction to ECE Practicum | 1.0
ECE 104 Understanding Teenagers | 3.0
ECE 105 Family Day Care | 2.0
ECE 194-198 Topics in ECE | 5-3.0
ECE 199 Selected Topics in ECE | 5-3.0

ADDITIONAL INFORMATION

* Eligibility for completion of Math 121 (5 units) or higher may be substituted for the Math 201 (3 units) requirement.
** Eligibility for English 1A may be substituted for the English 101 requirement.

A grade of “C” or better must be maintained in each course of the Certificate Program.
ECE1. Principles of Early Childhood Education (3)
Lec 3 Hrs
Advisory: ECE 101
Semesters Offered: Variable
A study of philosophies and principles of Child Development that support developmentally appropriate practices within a culturally sensitive and inclusive environment. The types of early childhood education programs include, but are not limited to: meeting licensing standards, working with public programs, CA Desired Results and environmental rating tools. Meets CDA functional areas: 3 through 12. [CSU]

ECE2. Home, School & Community Relations (3)
Lec 3 Hrs
Semesters Offered: Variable
Patterns of living in a democratic society and their implications for people entrusted with the care and education of young children. A consideration of the relationships developed between home and school and the wise utilization of community resources. Meets CDA functional areas: 8, 9, 11, 13. [CSU]

ECE3. Creative Activities & Materials (3)
Lec 3 Hrs
Semesters Offered: Variable
Understanding and developing skills to provide creative experiences for young children in art, music and dramatic activity. Meets CDA functional areas: 3, 7, 8, 12, 13. [CSU]

ECE10. Child Study (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Directed observation of patterns of behavior in young children who are enrolled in an educational program; writing anecdotal records of children's behavior; discussion and evaluation of records; lectures, and techniques of studying children. Meets CDA functional areas: 5, 6, 7, 8, 9, 13. [CSU]

ECE11. Cognitive Activities and Materials (3)
Lec 3 Hrs
Semesters Offered: Variable
Developing knowledge and skill in providing experiences which foster intellectual development in young children. Meets CDA functional areas: 3, 5, 8, 12, 13. [CSU]

ECE12A. Preschool Theory & Practicum (6)
Prerequisite: ECE 12A
Advisory: English 101
Lec 2 Hrs; Lab 12 Hrs
Semesters Offered: Variable
Supervised learning experience in a college demonstration early childhood center. Emphasis on more extensive program planning, teaching strategies, problemsolving the needs of children, and increased responsibilities assumed by student teachers. Lecture reflects classroom and student needs. Student must have TB clearance ad physical exam. [CSU]

ECE12B. Preschool Theory and Practicum (6)
Prerequisite: ECE 12A
Advisory: English 101
Lec 2 Hrs; Lab 12 Hrs
Semesters Offered: Variable
Supervised learning experience in a college demonstration early childhood center. Emphasis on more extensive program planning, teaching strategies, problemsolving the needs of children, and increased responsibilities assumed by student teachers. Lecture reflects classroom and student needs. Student must have TB clearance ad physical exam. [CSU]

ECE13. Preschool Curriculum: Literature (2)
Lec 2 Hrs
Semesters Offered: Variable
Developing an understanding of the role of the teacher as educational planner of preschool curriculum using children's literature as a primary source. Emphasis on using selected books and poetry to aid the preschool child in his/her need for security, belonging, achievement and coping with difficulties. Meets CDA functional areas: 5, 6, 7, 8, 12, 13. [CSU]

ECE14. Preschool Curriculum: Physical Environment (1)
Lec 1 Hr
Semesters Offered: Variable
Developing knowledge and skills in providing activities for preschool children which foster an understanding of the physical environment. Meets CDA functional areas: 3, 5, 7, 12, 13. [CSU]

ECE15. Preschool Curriculum: Blocks (1)
Lec 1 Hr
Semesters Offered: Variable
Techniques and strategies for using block building to help preschool children understand and integrate knowledge about art, mathematics, and the physical world. Emphasis on awareness and responsibilities of the role and instruction of the teacher. Meets CDA functional areas: 3, 5, 10, 12, 13. [CSU]

ECE16. Preschool Curriculum: Music (1)
Lec 1 Hr
Semesters Offered: Variable
Emphasis on different types of music experiences in English and Spanish for language acquisition, cognitive development and ethnic culture appreciation. [CSU]

Hartnell College Catalogue – 2005/06
ECE22. Infant/Toddler: Family Relations of Diverse Backgrounds (1)
Lec 1 Hr
Semesters Offered: Variable
Course focuses on principles and strategies that develop effective working relationships with parents of diverse backgrounds. Emphasis on how partnerships with parents impact the quality of infant/toddler program, parent involvement, Parent education, staff/parent relationships and coping skills.
Advisory: Completion of FCS 14, Child Development, ECE 20 Infant/Toddler Education, or PSY 14, Child Development.
[CSU]

ECE23. Infant/Toddler Education: Cognitive and Language Learning (2)
Lec 2 Hrs
Semesters Offered: Variable
Course focuses on cognitive and language development in infant and toddlerhood. Description and demonstrations of strategies and appropriate activities that support cognitive and language development for infants and toddlers in group settings. Advisory: High recommended that students complete FCS 14, Child Development or ECE 20, Infant/Toddler Education, or PSY 14, Child Development.
[CSU]

ECE25. Preschool Learning Problems (1)
Lec 1 Hr
Semesters Offered: Variable
Course focuses on identification of physical, social, emotional, and cognitive development problems of young children. Emphasis on practical solutions to problems which interfere with children's learning. Meets CDA functional areas: 3, 5, 6, 9, 10, 12, 13.
[CSU]

ECE26. Introduction to Special Education (3)
Lec 3 Hrs
Semesters Offered: Variable
A survey of the field of special education emphasizing the role of the special education assistant in the training of the exceptional child. This course will include an introduction to the types of handicapped children, the function of assistant as a teacher assistant, and the vocational opportunities available. Field trips to educational facilities will be an important part of the instructional program.
[CSU]

ECE45. Special Projects (1-3)
Semesters Offered: Variable
Individualized research and laboratory work in a specialized area of Early Childhood Education. Completion of FCS 14 and ECE 1 with a grade of C or better are recommended.
[CSU]

ECE50. Language Arts Experiences for Young Bilingual Children (1)
Lec 1 Hr
Semesters Offered: Variable
Developing knowledge and skill in providing bilingual experiences which foster intellectual, social and language development in children who are at different levels of bilingualism. Meets CDA functional areas: 5, 6, 8, 13.
[CSU]

ECE51. Spanish Language Experiences for Young Children (1)
Lec 1 Hr
Semesters Offered: Variable
Developing knowledge and skill in providing experiences which foster Spanish language development in Spanish speaking children in the preschool and primary grades. This course is designed for parents and instructional aides of Spanish speaking children. Meets CDA functional areas: 5, 6, 8, 13.
[CSU]

ECE52. Introduction to Bilingual Programs (3)
Lec 3 Hrs
Semesters Offered: Variable
Course focuses on identifying children who are in need of bilingual education and planning and implementing appropriate programs. Emphasis on bilingual education in the United States of America. Historical process of bilingual education and its impact on current issues in bilingual education. Meets CDA functional areas: 3, 5, 6, 8, 9, 11, 12, and 13. Not open to students who have completed INS 52 with a grade of C or better.
[CSU]

ECE70A. Supervision and Admin. in Early Childhood Education (3)
Prerequisites: Completion of ECE 1, ECE 2, ECE 3, ECE 101, and FCS 14.
Lec 3 Hrs
Semesters Offered: Variable
The philosophy and principles of program planning, budgeting, and personnel administration used in the supervision and management of preschool and day care programs. Meets CDA functional areas: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.
[CSU]

ECE70B. Advanced Administration and Supervision of Child Development Programs (3)
Prerequisite: ECE 70A
Lec 3 Hrs
Semesters Offered: Variable
Advanced students of Early Childhood Education, supervisors and administrators of Child Development Programs will extend their skills and resources for development in leadership positions. Staff development, networking, program evaluation and implementation, staff and family counseling, advocacy and professionalism in the Child Development field are among topics which are addressed in this course. Meets CDA Functional areas 1-13.
[CSU]

ECE71. Supervision of Adults in An ECE Setting (2)
Lec 2 Hrs
Semesters Offered: Variable
Course designed for teachers and administrators interested in coordinating and implementing a strong parent, volunteer, and staff component in a licensed program or agency. Meets the new licensing requirements for teachers and directors.
[CSU]

ECE80. E.C.E. Practicum for the Employed (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Course designed to give working students practical experience in teaching strategies within various curricular areas. Focus on creative aspects of program planning and implementation. Meets CDA functional areas: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.
[CSU]

ECE81. E.C.E. Practicum in Cognitive Develop. for the Employed (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Course designed to give working students practical experiences in teaching strategies within various curricular areas. Focus on cognitive aspects of program planning and implementation. Meets CDA functional areas: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.
[CSU]

ECE82. E.C.E. Practicum in Physical Develop. for the Employed (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Course designed to give working students practical experiences in teaching strategies within various curricular areas. Focus on physical competence among preschool children and on program planning and implementation which encourages physical growth.
[CSU]
ECE83. E.C.E. Theory and Practicum in Social Develop. of Children (3) Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Course designed to give working students practical experience in teaching strategies within various curricular areas. Focus on social competence among preschool children and on program planning and implementation which encourages social growth.

[CSU]

ECE101. Orientation: Early Childhood Education (1)
Lec 1 Hr
Semesters Offered: Variable
An exploration of student needs, interests and capabilities in relation to job expectations, job opportunities and levels of education needed to qualify for various career levels in the field of early childhood education. Meets CDA functional areas: 12, 13.

ECE102. Introduction to E.C.E. Practicum (1)
Lab 3 Hrs
Semesters Offered: Variable
An exposure to a college demonstration childhood education center. Limited laboratory experience to become familiar with program planning, selected teaching strategies and the identification of overt needs of children. Focus on effective interpersonal relationships.

ECE103. El crecimiento y desarrollo de ninos/Child Growth and Development (4)
Advisory: Eligible for Spanish 4S or has completed 3 years of high school Spanish when instruction offered in Spanish.
Lec 3 Hrs Lab 3 Hrs
Semesters Offered: Variable
A survey of the social, emotional, physical, and cognitive development stages from conception to adolescence. Emphasis on the developmental process as identified from major theories and research within the context of the child’s family and culture. Meets a core course requirement for Social Services Licensing and Child Development Permit requirements.

Un panorama de las etapas de desarrollo social, emocional, fisico, y cognoscito desde la concepcion hasta la adolescencia. Enfasis sobre los procesos de desarrollo segun las teorias mayores y investigacion cientifica dentro de influencias ambientales de la familia, cultura del nino. Este curso cumple requisitos para la licencia de cuidado infantil del Departamento de Servicios Sociales, y para el Permiso de Desarrollo Infantil del Departamento de Educación.

ECE104. Understanding Teenagers (3) Lec 3 Hrs
Semesters Offered: Variable
Emphasis on understanding intellectual, psychosocial and personality development associated with teenagers from thirteen to nineteen years. Focus on effective interpersonal relationships between parents and teenagers. A major theme of the course is the parental perspective.

ECE105. Family Day Care (2)
Lec 2 Hrs
Semesters Offered: Variable
The philosophy, principles, and practices of Early Childhood Education and nurture within the context of the family day care home.

ECE121. Principles & Philosophy of ECE (3) Lec 3 Hrs
Semesters Offered: Variable
Basic principles and philosophies which promote preschool children's growth and development in a safe and healthy optimum learning environment. Focus on how curriculum, program management, child development, teaching strategies, discipline, and guidance support developmentally appropriate practices.

Los principios basicos y filosofias que promueven el crecimiento y el desarrollo de ninos preescolares en un ambiente de aprendizaje optimo seguro e higienico. Se enfatiza las practicas apropiacias de desarrollo en el plan de estudios de actividades, metodologia, disciplina, y administracion del programa.

ECE122. Family, Child and Community (3) Lec 3 Hrs
Semesters Offered: Variable
Course focuses on social influences that affect the child's socialization in a constantly changing, culturally diverse world. Topics include issues of family dynamics, child care, school, neighborhood, and community agencies that support children and families of diverse backgrounds.

Se enfatiza las influencias sociales que afectan la socializacion de ninos en un mundo de varias culturas. Entre los temas a discutir se incluiran dinamicas familiares, cuidado de nino en la escuela, el barrio, y agencias comunitarias que apoyan a los ninos y familias de culturas diversas.

ECE123. Introduccion de Creatividad/Introduction to Creativity (3) Lec 3 Hrs
Semesters Offered: Variable
Una introduccion de estudios de las teoriaas y etapas de creatividad de estimulacion temprana y los efectos en el desarrollo de los ninos preescolares. Enfatiza las actividades creativas de musica, movimiento, arte, y desarrollo de lenguaje. An introduction to ECE theories and stages in creativity and their effects on preschool children's development. Focus on creative curriculum in music, movement, art, and language.

ECE195 A-M. Topics in ECE:
Curriculum (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Topics organized as workshops, conferences, and/or seminars center on program management related to, current training needs and interests of Early Childhood educators, students, and community employers.

A. Developmentally Appropriate Materials for ECE settings.
B. Classroom environments that promote learning.
C. Music Experiences.
D. Music Curriculum
E. Movement Experiences
F. Math/Science Experiences
G. Emergent Curriculum
H. Large and Small Group Experiences
I. Sensory Integration and Learning
J. Cultural Diversity Issues
K. Multicultural Curriculum
L. Activities to promote literacy
M. Learning centers for ECE programs

ECE196 A-J. Topics in ECE:
Program Management (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Topics organized as workshops, conferences, and/or seminars center on program management responding to, current training needs and interests of Early Childhood educators, students, and community employers.

A. Working with parents
B. Working with children and families at high risk
C. Staff relations
D. Learning Environments
E. Dealing with stress-related situations
F. Staffing issues in ECE programs
G. Emergency preparedness
H. Budgets and finances of ECE programs
I. Facilities: Health and Safety, Design, Playgrounds
J. Safety Reviews

ECE197 A-G. Guidance, Observation, Assessment of Children (1.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Topics organized as workshops, conferences, and/or seminars center on guidance, discipline, observations, assessments, evaluations that respond to current training needs and interests of ECE educators, students, and community employers.

A. Authentic Assessment
B. Desired Results
C. Behavior Management and Conflict Resolution
D. Working Effectively with children with special needs.
E. Helping Children Cope with Stress
F. How and When to Make Referrals for community resources and agencies
G. Child Developmental needs of children from diverse backgrounds.
ECE198  A-I. Topics in ECE: Program and Curricular Options (.5-3)  
Credit/No Credit Only  
Seminars Offered: Variable  
Topics organized as workshops, conferences, and/or seminars center on specific activities, resources, and current trends on programs and curricular options in response to the current training needs and interests of ECE educators, students, and community employers.  
A. High Scope Education  
B. Family Child Care  
C. School-Age Child Care  
D. State Preschool standards  
E. Head Start Standards  
F. Reggio Emilia  
G. Infant/Toddler programs  
H. PITC Philosophy  
I. Emergent Learning  

ECE199. Selected Topics in E.C.E. (.3-3)  
Credit/No Credit Only  
Seminars of special topics of contemporary interest centered on current ECE teaching strategies, methodology, activities, and important issues affecting the ECE educators and parents. Seminars will vary from 0.3-3 units and will be offered as requests are made by the ECE professionals in the community. Students may repeat course for up to six units provided the topic is different.  

ECE200. Parent Enrichment (.3-1)  
Credit/No Credit Only  
Seminars Offered: Variable  
This course serves to introduce parents to the Child Development Center as a facilitator of healthy intellectual and psychosocial development of children. Each student will become familiar with the developmental growth of the child during the early years with methods to enhance this growth. May be repeated for a total of 3 units.  

ECE210. Health and Safety Training for Day Care Providers (1)  
Credit/No Credit Only  
Lec 1 Hr  
Seminars Offered: Variable  
This course may serve either for primary CPR or First Aid Certificate or as a renewal for these. A course designed to teach care providers the correct method of administering Pediatric CPR and Pediatric First Aid, as adopted by the American Red Cross and the American Heart Association. Recognition, management, and prevention of infectious diseases including immunizations in the pediatric population, and prevention of childhood injuries will be discussed. Upon successful completion, students will be eligible to receive American Red Cross First Aid and Pediatric CPR Cards. This course is not open to students who have completed HES 210 with a Grade of C or better.  

ECE220. Orientation to Family Day Care (.5)  
Credit/No Credit Option  
Lec .5 Hrs  
Seminars Offered: Variable  
Overview of requirements and responsibilities of family day care providers as ECE professionals. This course is designed for students interested in setting up quality child care in their business.  

ECE221. Family Day Care: Profession/Business (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Course focuses on administrative duties and responsibilities in operating a licensed family day care program in a home-setting.  

ECE222. Family Day Care: Growth and Development of Children (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Course focuses on general overview of stages and ages of infants, toddlers, preschoolers, and school-aged children, as well as developmentally appropriate activities for each age group.  

ECE223. Family Day Care: Discipline Issues (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Courses focuses on skills and knowledge in disciplining children in a group setting. Practical tips and strategies in guiding children’s behavior.  

ECE224. Family Day Care: Learning Activities (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Course focuses on different learning activities for children in a family day care setting. Emphasis on developmentally appropriate activities according to skills, needs, and interests of children.  

ECE225. Family Day Care: Learning Environments (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Course designed for students interested in establishing a day care in their homes. Emphasis on developing a safe, healthy, and optimum learning environment for children.  

ECE226. Family Day Care: Parent Relations (1)  
Credit/No Credit Option  
Lec 1 Hr  
Seminars Offered: Variable  
Course designed for students interested in developing good working relationships with parents whose children are enrolled in a family day care program.  

ECE227. Family Day Care: Practicum (3)  
Lec 2 Hrs; Lab 3 Hrs  
Seminars Offered: Variable  
Course designed for students interested in gaining practical experience in applying basic principles and theories in family day care programs.
THE EARTH SCIENCE DISCIPLINE PROVIDES THE OPPORTUNITY FOR AN INTERDISCIPLINARY CURRICULUM FOR STUDENTS WHOSE INTERESTS CROSS OVER INTO VARIOUS AREAS OF EARTH SCIENCE. STUDENTS COMPLETING THIS DISCIPLINE BUILD A STRONG FOUNDATION IN SEVERAL ASPECTS OF EARTH SCIENCE, PREPARING THEM TO CONTINUE IN THE FIELD.

ASSOCIATE OF SCIENCE DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEL 1</td>
<td>Physical Geology</td>
<td>4.0</td>
</tr>
<tr>
<td>GEL 6</td>
<td>General Geology--Historical</td>
<td>4.0</td>
</tr>
<tr>
<td>AST 1</td>
<td>Introduction to Astronomy</td>
<td>3.0</td>
</tr>
<tr>
<td>MET 1</td>
<td>Weather and Climate</td>
<td>3.0</td>
</tr>
<tr>
<td>OCN 1</td>
<td>Oceanography</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.0</td>
</tr>
</tbody>
</table>

Electives—One course chosen from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEL 25</td>
<td>Environmental Geology</td>
<td>3.0</td>
</tr>
<tr>
<td>GEL 36</td>
<td>California Geology</td>
<td>3.0</td>
</tr>
<tr>
<td>GEG 1</td>
<td>Introduction to Geography: Physical Elements</td>
<td>3.0</td>
</tr>
<tr>
<td>GEL 51</td>
<td>Geology of the Grand Canyon</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18.5-20.0</td>
</tr>
</tbody>
</table>

Remaining general education requirements in addition to the courses listed above:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
</tbody>
</table>
ECONOMICS

AREA: Fine Arts/Language Arts/Social Sciences

DEAN: Dr. Kathleen Rose

FACULTY: Vacant

DIVISION ADMIN. ASSISTANT: Wini Chambliss

OFFICE: Performing Arts Facility PAF 122

COUNSELOR: Robert Spier
Office – CAB 155
755-6828
bspier@hartnell.edu

Economics is concerned with the study of how people and societies produce various commodities and distribute them for consumption, now or in the future, among various persons and groups in society. As a descriptive academic discipline, it is concerned with accurate portrayals of national economics as well as those of regions, firms and individuals. As an analytical discipline, its tools are used to order, modify, and describe economic activity.

Positions for which graduates in Economics are qualified are as follows:

- Economist Research
- Accountant
- Attorney
- Investment Analyst
- Budget Analyst
- Bus. Conditions Forecaster
- Economic Forecaster Spec.
- Commodity Price Forecaster
- Arbitrator
- Economic Analyst
- Macro Economist
- Economist
- Commodity Economist
- Development Economist
- Manpower Economist
- Natural Res. Economist
- Oper. Research Analyst
- Industrial Relations
- Labor Relations
- Project Economist
- Business Analyst

ASSOCIATE OF ARTS DEGREE

Students may major in Social Sciences by completing 18 units of Social Sciences courses in addition to the other requirements outlined in the Associate Degree. A Social Science degree will be issued.

ECO1. Principles of Economics-Macro (3)
Lec 3 Hrs
Semesters Offered: Variable
Macroeconomics examines national income, employment, inflation, economic cycles and growth, international issues and government policies.
[CSU; UC; CAN ECON 2]

ECO5. Principles of Economics-Micro (3)
Lec 3 Hrs
Semesters Offered: Variable
Microeconomics examines the workings of the marketplace, the economics of the consumer, the business firm, the distribution of income, and the allocation of resources.
[CSU; UC; CAN ECON 4]

ECO45. Special Projects (1-3)
Semesters Offered: Variable
A supervised program of independent research and study in Economics. Completion of Economics 1 or 5 recommended.
[CSU]
EDU1. Multicultural Perspectives in Education (3)
Advisory: English 1A; online students taking this course are advised that they must have basic computer skills for operating a word processing program, a spreadsheet program and email, including sending attachments and files. Students also need access to the Internet and have adequate hardware and software such as Windows 98/2000/XP, Mac OS 8-10 or their equivalent. Students without off-campus access to technology will be able to use the Library Media Center, or open Computer labs to complete their assignments.
Lec 3 Hrs
Offered: Variable

An introduction to education, this course reviews the historical, sociological, philosophical and psychological perspectives, which form the context of the American educational system. Designed to encourage prospective teachers to reflect on their decision to enter the teaching profession, this course will focus on analyzing the multicultural dynamics in the historical and social structure of school and society, while providing opportunities to analyze a variety of teaching perspectives, and to gain and develop the cultural knowledge of self and others necessary to teach in a multicultural society. As such, it includes a service-learning component that involves 30 hours of active participation at a school site.

[CSU]
ELECTRONICS

AREA: Occupational Education
DEAN: Jose' L. Fernandez, M.B.A.
FACULTY: Fred Etcheverry
DIVISION ADMIN. ASSISTANT: Adriana Robledo
OFFICE: Technology Building Tech 11
COUNSELOR: Robert Spier Office – CAB 155 755-6828 bspier@hartnell.edu

The Electronics curriculum is instrument and control oriented, designed to provide students with the hands-on experience needed for the high technology electronics field and/or to transfer to four-year schools in Electronics or Electrical Engineering programs. A solid theory foundation is coupled with practical applications in diverse areas within the electronics field including microcomputers. Students may earn an Associate Degree and/or a certificate in Electronics.

ELECTRONICS TECHNOLOGY

ASSOCIATE OF SCIENCE DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ELE 52</td>
<td>Electronic Fundamentals</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 54</td>
<td>Electronic Devices &amp; Circuits</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 55</td>
<td>Introduction to Digital Electronics</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 56</td>
<td>Advanced Circuit Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 57</td>
<td>Instruments and Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 65</td>
<td>Microcomputer Systems</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 150</td>
<td>Electronics Fabrication</td>
<td>1.0</td>
</tr>
<tr>
<td>ELE 151</td>
<td>DC Circuit Analysis</td>
<td>2.5</td>
</tr>
<tr>
<td>ELE 198</td>
<td>Introduction to Microprocessors</td>
<td>1.0</td>
</tr>
<tr>
<td>DRA 56</td>
<td>Computer-Aided Electronic Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 123</td>
<td>Intermediate Algebra</td>
<td>5.0</td>
</tr>
<tr>
<td>PHY 10</td>
<td>Introduction to Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 2A</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>SPE 1A</td>
<td>Essentials of Public Speaking</td>
<td>3.0</td>
</tr>
<tr>
<td>SPE 3</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
</tbody>
</table>

44.5-51.5

ELECTIVES
Select a minimum of 3 units from the following:

CSS 1 Program Fundamentals 4.0
CSS 2A Object Oriented Programming 4.0
CSS 4 Introduction to Scientific Programming 4.0
CSS 6 Programming in Visual Basic 4.0
CSS 43 Introduction to Computers 4.0
CSS 169 Computer Maintenance & Repair 4.0

47.5 - 54.5

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

Social & Behavioral Sciences:
ECO 1 or ECO 5 is recommended 3.0
Humanities 3.0
Ethnic Groups in the United States 3.0
Language and Rationality: ENG 1A 3.0

59.5 - 66.5

ELECTRONICS TECHNOLOGY

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
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<tr>
<td>ELE 52</td>
<td>Electronic Fundamentals</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 54</td>
<td>Electronic Devices &amp; Circuits</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 55</td>
<td>Intro. to Digital Electronics</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 57</td>
<td>Instruments and Controls</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 65</td>
<td>Microcomputer Systems</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 150</td>
<td>Electronics Fabrication</td>
<td>1.0</td>
</tr>
<tr>
<td>ELE 151</td>
<td>D.C. Circuit Analysis</td>
<td>2.5</td>
</tr>
<tr>
<td>ELE 198</td>
<td>Introduction to Microprocessors</td>
<td>1.0</td>
</tr>
<tr>
<td>CSS 6</td>
<td>Programming in Visual Basic</td>
<td>4.0</td>
</tr>
<tr>
<td>DRA 56</td>
<td>Comp.-Aided Electronic Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

37.5-40.5

ELECTIVES
Select a minimum of 4 units from the following:

CSS 43 Introduction to Computers 4.0
CSS 169 Computer Maintenance & Repair 4.0
ELE 145 Special Projects 5-6.0
PHY 10 Introduction to Physics 4.0
OR
PHY 2A General Physics 4.0

41.5-44.5

*Eligibility for English 1A may be substituted for the English 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade of "C" or better must be maintained in each required course of the Certificate Program.

ELECTRONIC ASSEMBLER/TRAINEE

CERTIFICATE PROGRAM

<table>
<thead>
<tr>
<th>COURSE #</th>
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<tbody>
<tr>
<td>ELE 52</td>
<td>Electronic Fundamentals</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 150</td>
<td>Electronics Fabrication</td>
<td>1.0</td>
</tr>
<tr>
<td>ENG 253</td>
<td>Fundamentals of Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

12.0

A grade point average of 2.0 (C) or better must be maintained in each course of the Certificate Program.
ELE52. Electronic Fundamentals (5)
Lec 4 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduction to basic electronics. Emphasis is on industrial electrical controls and instrumentation.
[CSU]

ELE54. Elect. Devices and Circuits (5)
Advisory: Electronics 52 or equivalent knowledge of electronics.
Lec 4 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A study of semiconductors in circuits including, bipolar and field effect transistors, operational amplifiers, SCRs (Silicon Controlled Rectifiers), triacs, special diodes, opto-isolators, and solid state relays.
[CSU]

ELE55. Intro. to Digital Electronics (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Advisory: Knowledge of basic algebra including simple equations, distributive associative laws and using tables as covered in Math 151 or Math 121.
Introduction to digital circuit including gates, f lops, counters, and Programmable Logic Arrays (PLA) using Boolean algebra, binary number system, Karnaugh maps, timing diagram, and computer emulators.
[CSU]

ELE56. Advanced Circuit Analysis (3)
Credit/No Credit Option
Advisory: Completion of ELE 52, ELE 151, MAT 151 or MAT 121, or equivalent experience reading graphs, using scientific calculators, and reading engineering notation.
Lec 3 Hrs
Semesters Offered: Variable
A study of DC network and reactive circuits including analysis by trigonometry, complex variables, phasors, logarithms (Bode Plots) used in diagnosis of electronic problems.
[CSU]

ELE57. Instruments and Controls (5)
Advisory: ELE 52, Electronic Fundamentals, or basic knowledge of electronics.
Lec 4 Hrs; Lab 3 Hrs
Semesters Offered: Variable
A study of instruments and controls used in processing and manufacturing including motor controls, and sensors, PLC programming and interfacing.
[CSU]

ELE57.15 Instruments and Controls Programming (2)
Advisory: ELE 52, Electronic Fundamentals, or equivalent knowledge of electronics. ELE 57 or equivalent knowledge of PLC programming.
Lec 1.6 Hrs; Lab 1.2 Hrs
Semesters Offered: Variable
This course provides advanced and current PLC programming concepts. Topics include introduction to Analog Variable handing, using comparison instructions, math instructions, FIFO and LIFO instructions, program flow control, interrupts, counters, and faults and error codes. Not open to students who have completed ELE 57 prior to May 2004.
[CSU]

ELE58. Instruments and Controls Motor Controls (1)
Prerequisite: ELE 52, DC/AC Fundamentals (or equivalent) with a grade of C or better.
Lec .5 Hr; Lab 1.5 Hrs
Semesters Offered: Variable
A study of motor controls and motion used in processing and manufacturing. Diagnosis and maintenance of problems with motors and motion controls will be studied. Completion of Electronics 57A, 57B, and 57C is equivalent to ELE 57. This course is a subset of ELE 57.
[CSU]

ELE59. Instruments and Controls Programmable Controllers (1)
Prerequisite: ELE 52, DC/AC Fundamentals (or equivalent) with a grade of C or better.
Lec .5, Lab 1.5
Semesters Offered: Variable
A study of programming controls used in processing and manufacturing. Diagnosis and maintenance of problems with programming controls will be studied. Completion of Electronics 57A, 57B, and 57C is equivalent to ELE 57. This course is a subset of ELE 57.
[CSU]

ELE60. Instruments and Controls - Sensors (1)
Prerequisite: ELE 52 (or equivalent) with a grade of C or better.
Lec .5 Hrs; Lab 1.5 Hrs
Semesters Offered: Variable
A study of sensors used in processing and manufacturing including diagnosis and maintenance of problems. Completion of Electronics 57A, 57B, and 57C is equivalent to ELE 57. This course is a subset of ELE 57.
[CSU]

ELE65. Microcontroller Programming and Interfacing (5)
Credit/No Credit Option
Advisory: Knowledge of digital electronics including, gates, f lops, counters, PLAs, and Boolean algebra, as covered in ELE 55, and assembly language programming including binary and hexadecimal number systems, loops, conditional bransches, flags, addressing and indexing as covered in ELE 198, CIS 3 or CSS 2B.
Lec 4 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Designing, constructing, and programming the MC68HC11 microcomputer interfaces.
[CSU]

ELE145. Special Projects (.5-.2)
Credit/No Credit Option
Prerequisite: Second semester freshman or sophomore standing in Electronics.
Semesters Offered: Variable
Supervised study and laboratory practice in solving special problems in electronics technology, communication, computers and other fields not covered in basic curriculum. May be repeated for a maximum of 6 units.

ELE150. Electronic Fabrication (1)
Credit/No Credit Option
Advisory: Electronics 52
Lab 3 Hrs
Semesters Offered: Variable
This course covers techniques used in electronic fabrication. Students will learn: to solder connections, to construct point-to-point connections by soldering and wire wrapping, to use printed circuit board layout software, to make printed circuit boards, to construct metal and plastic cases and panels using machine and hand tools.

ELE151. D.C. Circuit Analysis (2.5)
Lec 2.5 Hrs
Semesters Offered: Variable
Introduction to D.C. circuits applying Ohm's law, Kirchhoff's laws, and equivalent circuits to analyze D.C. circuits. Introduction to concepts of energy and power distribution, and motor efficiency.

ELE198. Intro. to Microprocessors (1)
Credit/No Credit Option
Lab 3 Hrs
Semesters Offered: Variable
Microprocessor Architecture, Programming and interfacing. This is a self-paced course using a microprocessor trainer and lab book.
ENGINEERING TECHNOLOGY and ENGINEERING

ENGINEERING TECHNOLOGY

ASSOCIATE OF SCIENCE DEGREE

An Associate of Science in Engineering Technology can be earned by completing the following general education required and emphasis courses.

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED BELOW:

AREA | UNITS
---|---
Humanities | 3.0
Ethnic Groups in the United States | 3.0
Total | 6.0

REQUİRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 10</td>
<td>General Biology</td>
<td>4.0</td>
</tr>
<tr>
<td>CHM 1A</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>CSS 2A</td>
<td>Object Oriented Program. in C++ (4.0) OR</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 1</td>
<td>Programming Fundamentals OR</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 4</td>
<td>Introduction to Scientific Programming in C</td>
<td>4.0</td>
</tr>
<tr>
<td>DRA 50</td>
<td>Introduction to Drafting Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>DRA 52</td>
<td>Intro. to AutoCAD</td>
<td>2.0</td>
</tr>
<tr>
<td>ECO 5</td>
<td>Principles of Economics-Micro</td>
<td>3.0</td>
</tr>
<tr>
<td>EGN 4</td>
<td>Material Science</td>
<td>3.0</td>
</tr>
<tr>
<td>EGN 8</td>
<td>Engineering Statics</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1A</td>
<td>College Composition &amp; Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 3A</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 13</td>
<td>Elementary Statistics</td>
<td>5.0</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Material &amp; Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 2A</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 2B</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>SPE 1A</td>
<td>Essentials of Public Speaking OR</td>
<td>3.0</td>
</tr>
<tr>
<td>SPE 3</td>
<td>Introduction to Communication</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>53.0</td>
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</tr>
</tbody>
</table>

CHOOSE ONE EMPHASIS:

CIVIL/CONSTRUCTION EMPHASIS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1A</td>
<td>Accounting Principles (Financial)</td>
</tr>
<tr>
<td>BUS 18</td>
<td>Introduction to Business Law</td>
</tr>
<tr>
<td>CON 60</td>
<td>Construction Materials</td>
</tr>
<tr>
<td>CON 101</td>
<td>Introduction to Construction</td>
</tr>
<tr>
<td>EGN 1A</td>
<td>Plane Surveying</td>
</tr>
<tr>
<td>Total</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Total General Education required and Civil/Construction emphasis courses | 74.0

ELECTRONICS EMPHASIS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>ELE 52</td>
<td>AC/DC Fundamentals</td>
</tr>
<tr>
<td>ELE 54</td>
<td>Electronics Devices &amp; Circuits</td>
</tr>
<tr>
<td>ELE 55</td>
<td>Introduction to Digital Electronics</td>
</tr>
<tr>
<td>ELE 56</td>
<td>Advanced Circuit Analysis</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
</tr>
<tr>
<td>Total</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Total General Education required and Electronics emphasis courses | 71.0

Recommended but not required elective courses

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 57</td>
<td>Instruments and Controls</td>
</tr>
<tr>
<td>ELE 64</td>
<td>Analog Integrated Circuits</td>
</tr>
<tr>
<td>ELE 65</td>
<td>Microcomputer Systems and Interfacing</td>
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</tbody>
</table>

MANUFACTURING EMPHASIS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1A</td>
<td>Accounting Principles (Financial)</td>
</tr>
<tr>
<td>BUS 18</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>EGN 2</td>
<td>Engineering Graphics/CAD</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
</tr>
<tr>
<td>Total</td>
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</tbody>
</table>

Total General Education required and Manufacturing emphasis courses | 70.0

Recommended but not required elective courses

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
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</thead>
<tbody>
<tr>
<td>MEC 56</td>
<td>Hydraulics and Pneumatics</td>
</tr>
<tr>
<td>MEC 57</td>
<td>Commercial Refrigeration</td>
</tr>
</tbody>
</table>

MECHANICAL EMPHASIS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 52</td>
<td>Electronic Fundamentals</td>
</tr>
<tr>
<td>EGN 2</td>
<td>Engineering Graphics/CAD</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
</tr>
<tr>
<td>WLD 50</td>
<td>Basic Welding</td>
</tr>
<tr>
<td>WLD 51</td>
<td>Gas &amp; TIG Welding</td>
</tr>
<tr>
<td>Total</td>
<td>16.0</td>
</tr>
</tbody>
</table>

Total General Education required and Mechanical emphasis courses | 75.0

Hartnell College Catalogue – 2005/06
ENGINEERING

ASSOCIATE OF SCIENCE DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 1A</td>
<td>General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>EGN 6</td>
<td>Introduction to Circuits Analysis</td>
<td>4.0</td>
</tr>
<tr>
<td>EGN 8</td>
<td>Engineering Statics</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS 4</td>
<td>Introduction to Scientific Programming in C</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3A</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3B</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3C</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 5</td>
<td>Differential Equations</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 4A</td>
<td>Physics - Mechanics and Properties of Matter</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4B</td>
<td>Physics - Electricity &amp; Magnetism</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4C</td>
<td>Physics - Heat, Sound &amp; Light</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Total Required Course Units 43.0

Electives - Minimum 5 units required:

- CHM 1B General Chemistry 5.0
- EGN 1A Plane Surveying 3.0
- EGN 1 Introduction to Engineering and Related Technologies 2.0
- EGN 4 Materials Science 3.0
- EGN 2 Engineering Graphics/CAD 4.0
- MAT 4 Linear Algebra 4.0

Total Required Course Units 48.0

Additional Information

The above engineering electives are classes chosen to satisfy particular engineering major requirements of the university to which the student plans to transfer. Certain Engineering majors may require some or most of the above elective courses. Consult your Engineering Counselor.

- **EGN1. Introduction to Engineering and Related Technologies (2)**
  - Credit/No Credit Option
  - Lec 2 Hrs
  - Offered: Fall
  - This course provides a realistic look at what engineering is, engineering professions, requirements, opportunities, challenges, prerequisite(s), responsibilities, aims of technical engineering training, and purpose of engineering technology methods.
  - [CSU; UC]

- **EGN1A. Plane Surveying (3)**
  - Prerequisite: Math 24 or equivalent.
  - Lec 2 Hrs; Lab 3 Hrs
  - Semesters Offered: Variable
  - Care and use of instruments, traverse surveys, leveling, stadia surveys. Plotting and adjusting surveys, computing areas, topographical mapping.
  - [CSU; UC; CAN ENGR 10]

- **EGN2. Engineering Graphics/CAD (4)**
  - Credit/No Credit Option
  - Lec 3 Hrs; Lab 3 Hrs
  - Offered: Fall
  - Principles and methods useful to modern engineering and technology, which are used in determining space relations of points, lines, planes, and their combination. Introduction and development of drafting skills and introduction to sketching, drafting instruments, computer software for graphic representations and problem solving. Emphasis placed on graphical analysis, orthographic projection, auxiliary views, pictorial drawings, dimensioning methods, and sectioning with adherence to engineering standards. AutoCAD or similar computer-aided design software will be used. This course meets the requirements for the engineering transfer students.
  - [CSU; UC; CAN ENGR 2]

- **EGN4. Materials Science (3)**
  - Prerequisite: Completion of or concurrent enrollment in both Chemistry 1A and Physics 4A.
  - Lec 2 Hrs; Lab 3 Hrs
  - Offered: Fall
  - Characteristics and properties of metallic and nonmetallic materials. Atomic and crystalline structures, polymers, heat treatment, phase equilibria, transformations, energy bands in solids, studies of grain structure, and corrosion. Laboratory work in metals, corrosion, magnetic properties and plastics.
  - [CSU; UC; CAN ENGR 4]
ENGLISH

ENGLISH PLACEMENT
ENGLISH COMPOSITION PLACEMENT POLICY: Enrollment in any English composition course at Hartnell College will be determined on the basis of:

a. an evaluation of the Hartnell College English Placement Essay, or the Hartnell College English As A Second Language Placement Examination*
b. a qualifying grade (of C or better) from a previous English composition course at Hartnell College, or an equivalent course and grade (C or better) from another college.*

"The student has the option of taking a course at a level lower than the one designated by the English Placement Essay evaluation or the examination scores; however, the student will not be allowed to enroll at another level once this option is exercised.

The student should contact Admissions and Records to find out when and where the English Placement examination will be administered.

ENGLISH

ASSOCIATE OF ARTS DEGREE
Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1B</td>
<td>College Reading &amp; Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 2</td>
<td>Critical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 10</td>
<td>Introduction to Linguistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ELECTIVES
Select three (3) units from the category, Genre:

ENG 20 Modern Dramatic Literature 3.0
ENG 22 Introduction to Poetry 3.0
ENG 24 The Short Story 3.0
ENG 49 The Novel 3.0

Select six (6) units from the category, Survey:

ENG 44A World Literature 3.0
ENG 44B World Literature 3.0
ENG 46A Survey of English Literature 3.0
ENG 46B Survey of English Literature 3.0
ENG 47A Survey of American Literature to 1865 3.0
ENG 47B Survey of American Literature from 1865 3.0

Select three (3) units from the courses listed below:

ENG 17 The Contemporary Shakespeare 3.0
ENG 31 Creative Arts: Its Written Expression 3.0
ENG 32 Creative Writing 3.0
ENG 9 Technical Writing 3.0
ENG 41 Art of Steinbeck 3.0
ENG 48 Children's Literature 3.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>21.0</td>
</tr>
</tbody>
</table>

COMPETENCY REQUIREMENT
See College Catalog 0-8

ADDITIONAL INFORMATION
Additional units to reach a minimum of 60 semester units in degree applicable courses.

ENGL 1A, College Composition and Reading (5)
Prerequisite: Eligibility for Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
Introduction to composition with emphasis on writing of exposition and reading of selected works. Specific sections will utilize literature that focuses on specific writers. [CSU: UC; CAN ENGL 2; CAN ENGL SEQ A with ENG 1A & 1B]

ENGLB. College Reading and Composition (3)
Prerequisite: Completion of Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
Instruction and practice in critical thinking and writing strong arguments using literature, as subject matter. Students will learn to identify premises and conclusions and recognize patterns of faulty logic in arguments. They will learn to distinguish between deductive and inductive reasoning and will demonstrate this understanding by writing and critiquing essays and utilizing research strategies, applying such skills to a series of progressively difficult essays totaling a minimum of 6,000 words. [CSU: UC; CAN ENGL 4, CAN ENGL SEQ A with ENG 1A & 1B]

ENGL 2. Critical Thinking and Writing (3)
Credit/No Credit Option
Prerequisite: Completion of Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
Critical analysis of arguments; development of ability to incorporate the principles of critical thinking into essay writing. The course is designed to develop critical thinking, reading, and writing skills beyond the level achieved in English 1A. [CSU: UC]

ENGL 9. Technical Writing (3)
Lec 3 Hrs
Semesters Offered: Variable
An explanation of, and practice in the various writing situations confronted by engineers, technicians, and supervisors in technical aspects of industry with an emphasis on the use of technical language and appropriate communication strategies. Eligibility for English 1A recommended. [CSU]

ENGL 10. Introduction to Linguistics (3)
Credit/No Credit Option
Prerequisite: Eligibility for Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
Introduction into the study of language based on a survey of the English language. Includes an inquiry into the nature of language; change and diversity; sound patterns; transportational grammar; language acquisition; and the relationship between linguistics and allied disciplines. [CSU: UC]
ENG17. The Contemporary Shakespeare (3)  
**Prerequisite:** Eligibility for Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Shakespeare's life and times, his poetic and dramatic artistry in modern context. The emphasis will be on close study of several selected plays in connection with the audio-visual materials based on these plays.  
[CSU; UC]

ENG20. Modern Dramatic Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Literary masterpieces of the modern theater from Ibsen to Ionesco. Readings include the plays themselves as well as essays by contemporary dramatists and critics.  
[CSU; UC]

ENG22. Introduction to Poetry (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
This course focuses on the writing of poetry, with emphasis on workshops of students' work. Intensive study of poems by classic as well as contemporary poets.  
[CSU; UC; CAN ENGL 20]

ENG24. The Short Story (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
The study of the development of the short story and its writers from its beginnings in the nineteenth century to the present. Not open to students who have completed any of the following courses: English 24A, B, C.  
[CSU; UC]

ENG24A. The Short Story (1)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 1 Hr  
Semesters Offered: Variable  
A study of the development of the short story and its writers from Hawthorne and Poe through Galsworthy and Conrad. Not open to students who have received credit for English 24.  
[CSU; UC]

ENG24B. The Short Story (1)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 1 Hr  
Semesters Offered: Variable  
A study of the development of the short story in the early part of the twentieth century from Kafka and Anderson through Saroyan and Welty. Not open to students who have received credit for English 24.  
[CSU; UC]

ENG24C. The Short Story (1)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 1 Hr  
Semesters Offered: Variable  
A study of the short story from the depression to the present beginning with John Steinbeck. Not open to students who have received credit for English 24.  
[CSU; UC]

ENG25. American Indian Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Introduction to American Indian literature from the oral tradition to contemporary authors such as Momaday, Erdrich, Campbell, Silkó, and Deloria. The course focuses on literary themes and issues that speak to the history of the United States and to the society and culture of the country. English 25 is identical to Ethnic Studies 25, American Indian Literature. English 25 is not open to students who have completed Ethnic Studies 25.  
[CSU; UC]

ENG26. Chicano Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Introduction to Chicano Literature is a study of Chicano Literature from the oral tradition, el cuento, to the modern contemporary authors such as Valdez, Villasenor, and Villareal.  
[CSU; UC]

ENG27. African-American Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
A close study of John Steinbeck's California novels that best exemplify his themes, style and use of setting.  
[CSU; UC]

ENG31. Creative Arts: Its Written Expression (3)  
**Prerequisite:** Eligibility for Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Writing of short fiction or poetry, as well as an intellectual examination of short stories and literature in order to achieve a better understanding of the interrelationship between creative arts, humanities, and the individual.  
[CSU; UC; CAN ENGL 6]

ENG32. Creative Writing (3)  
**Prerequisite:** Completion of English 31.  
Lec 3 Hrs  
Semesters Offered: Variable  
A continuation of English 31A: Writing and analysis of short stories and other forms of literature.  
[CSU; UC]

ENG33. Creative Writing (3)  
**Prerequisite:** Completion of English 32.  
Lec 3 Hrs  
Semesters Offered: Variable  
A continuation of English 31B: writing poetry, short stories, and other forms of fiction. Students prepare material to publication standards.  
[CSU; UC]

ENG40. Contemp. Popular Fiction (3)  
**Prerequisite:** Eligibility for Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
Selected reading of contemporary fiction chosen for worth as well as for popularity.  
[CSU; UC]

ENG41. Art of Steinbeck (3)  
**Prerequisite:** Eligibility for Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of the great works which have influenced the thought and literature of the western world, from ancient times to the Renaissance.  
[CSU; UC]

ENG44B. World Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of the great works of literature from the Renaissance to the present time.  
[CSU; UC]

ENG45. Special Projects (1-3)  
**Prerequisite:** Completion of Eng. 1A.  
Semesters Offered: Variable  
A program of independent study into a particular field of language or literature.  
[CSU]

ENG46A. Survey of English Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of English literature from the Old English epic Beowulf to the works of Oliver Goldsmith.  
[CSU; UC; CAN ENGL 8, CAN ENGL SEQ B with ENG 46A & 46B]

ENG46B. Survey of English Literature (3)  
**Prerequisite:** Completion of Eng. 1A.  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of English literature from Robert Burns to Samuel Beckett. English 46A is not a prerequisite to 46B.  
[CSU; UC; CAN ENGL 10, CAN ENGL SEQ B with ENG 46A & 46B]
ENG47A. Survey of American Literature to 1865 (3)
Prerequisite: Completion of Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
A study of American literature focusing on the major writers, from the beginnings through the Civil War.
[CSU; UC; CAN ENGL 14, CAN ENGL SEQ C with ENG 47A & 47B]

ENG47B. Survey of American Literature from 1865 (3)
Prerequisite: Completion of ENG 1A.
Lec 3 Hrs
Semesters Offered: Variable
A study of American literature focusing on the major writers, from the Civil War to present.
[CSU; UC; CAN ENGL 16, CAN ENGL SEQ C with ENG 47A & 47B]

ENG48. Children’s Literature (3)
Advisory: Completion of ENG 1A with a grade of C or better.
Lec 3 Hrs
Semesters Offered: Variable
This is a literature course focused on the literary analysis of books written for school-age children and adolescents. It introduces the history, forms, and functions of literature for children, and provides a variety of critical tools for reading, discussing, and writing about literary as well as pedagogical discourses. Readings, lectures, class discussion, and writing assignments will develop students’ awareness of social and pedagogical issues that impact the use of children's literature both in and outside the classroom, their ability to read texts carefully and with attention to literary merit, and their ability to write clear, thoughtful and persuasive prose.

ENG49. The Novel (3)
Prerequisite: Completion of Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
Development of the novel from Defoe to Golding.
[CSU; UC]

ENG50. Film Appreciation To 1960 (3)
Lec 3 Hrs
Semesters Offered: Variable
Introduction to film through the study of representative examples of foreign and domestic films to 1960. The course is designed to develop understanding of plot, setting, and characters as well as develop script writing skills. Eligibility for English 101 recommended.
[CSU; UC]

ENG51. Film Appreciation from 1960 (3)
Lec 3 Hrs
Semesters Offered: Variable
Continued study of film from 1960 to the present through review domestic and foreign films. While plot, setting, and characters are studied, emphasis is placed on the use of special effects, disjointed narrative style, as well as innovative editing and camera techniques.
[CSU; UC]

ENG101. Intermediate Composition and Reading (3)
Prerequisite: Placement through the STAAR, or completion of ENG 253 or ESL 165 or ESL 155 and ESL 158 with a grade of C or better, or an equivalent course with a grade of C or better from another college.
Lec 3 Hrs
Semesters Offered: Variable
Development of writing and reading skills including critical analysis of texts with emphasis on elements of the sentence, the paragraph, and the short essay.

ENG101L. Intermediate Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in ENG 101.
Lab 3 Hrs
Semesters Offered: Variable
This course features individualized, open-entry/open-exit lab instruction in support of the ENG 101 curriculum. It promotes the development of writing and reading skills including critical analysis of texts with emphasis on elements of the sentence, the paragraph, and the short essay.

ENG103. CBEST Prep.: Writing (.3-.5)
Credit/No Credit Only
Semesters Offered: Variable
Basic sentence mechanics and rhetorical practice in essay construction (i.e., comparison and contrast, process analysis, induction and deduction, cause and effect).

ENG123L. College Composition and Reading - Lab (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Individualized instruction emphasizing the curriculum of the lecture class in writing/reading.

ENG124L. College Reading and Writing - Lab (5)
Credit/No Credit Only
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Emphasis on the understanding and use of technical vocabulary used in occupational areas. Practice in understanding and analyzing technical text. Reinforcement of skills required to read chapters and take notes efficiently.

ENG220. English for Special Purposes: Computer & Info. Sciences (3)
Credit/No Credit Only
Prerequisite: Eligibility for Eng. 145.
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course is designed to develop understanding of plot, setting, and characters as well as develop script writing skills. Eligibility for English 101 recommended.

ENG253L. Reading and Writing Skills for Occupational Education Courses (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
An individualized, open-entry/open-exit lab, this course supports the ENG 253 lecture course by reinforcing the development of writing and reading skills with emphasis on elements of the sentence, the paragraph, and the short essay.

ENG253L. Fundamentals of Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in, ENG 253.
Lab 3 Hrs
Semesters Offered: Variable
Development of writing and reading skills with emphasis on elements of the sentence, paragraph, and the short essay.

ENG253L. Fundamentals of Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in, ENG 253.
Lab 1.5 Hrs
Semesters Offered: Variable
A supervised, individualized, multi-media course of text and/or computerized activities focusing on developing and improving specific writing and/or composition skills involving spelling, grammar, punctuation, sentence structure, paragraph and essay structure, and developing research papers.

ENG253L. Fundamentals of Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in, ENG 253.
Lab 3 Hrs
Semesters Offered: Variable
A supervised, individualized, multi-media course of text and/or computerized activities focusing on developing and improving specific writing and/or composition skills involving spelling, grammar, punctuation, sentence structure, paragraph and essay structure, and developing research papers.

ENG253L. Fundamentals of Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in, ENG 253.
Lab 3 Hrs
Semesters Offered: Variable
A supervised, individualized, multi-media course of text and/or computerized activities focusing on developing and improving specific writing and/or composition skills involving spelling, grammar, punctuation, sentence structure, paragraph and essay structure, and developing research papers.

ENG253L. Fundamentals of Composition and Reading - Lab (1)
Credit/No Credit Only
Advisory: Eligibility for, or concurrent enrollment in, ENG 253.
Lab 3 Hrs
Semesters Offered: Variable
A supervised, individualized, multi-media course of text and/or computerized activities focusing on developing and improving specific writing and/or composition skills involving spelling, grammar, punctuation, sentence structure, paragraph and essay structure, and developing research papers.
The reading program offers several reading courses designed to help students improve their reading skills. Students will work on vocabulary, study-type reading, reading flexibility, comprehension, and critical reading. In addition, special programs are available for students whose second language is English and for students interested in preparing for the CBEST.

Several programs are available, such as Individualized Reading, Vocabulary Development, You Can Learn to Learn, MicroSpeed Read, CBEST Preparation, ESL Reading. Students wishing to have their reading skills evaluated are invited to make an appointment with a reading specialist by contacting the Learning Skills Center in the College Center Annex Room 107.

ENG57. College Reading and Study Skills I (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Designed to help below average readers develop critical reading skills for better comprehension and analysis of various college reading materials. [CSU]

ENG184. Basic Academic & Study Strategies (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
A course designed to introduce native and non-native English speaking students to the basic design and structure of printed material as well as study and class participation strategies. This individualized, multimedia course includes reviews of concepts ranging from capital letters, phonemic awareness, writing formats, graphics, main ideas, expository text structures of fiction and nonfiction, to structural features of informational materials.

ENG185. Individualized Study in Reading (.5)
Credit/No Credit Only
Lab 1.5 Hrs
Semesters Offered: Variable
An individualized, multimedia lab course designed to develop and improve reading and academic skills under instructor supervision. Students taking this lab class will consult with their instructor, set their schedule, select from a variety of reading skills including main ideas, inferences, literary analysis, speed-reading and others, and focus on developing and improving a prescribed set of skills.

ENG186. Intensive Reading (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
An individualized, multi-media lab course designed to develop and improve reading and academic skills under instructor supervision. Students taking this lab class will consult with their instructor, select from a variety of reading skills including main idea, inferences, literary analysis, speed-reading and others, and focus on developing and improving a prescribed set of skills.
ENGLISH AS A SECOND LANGUAGE

COURSES IN ENGLISH AS A SECOND LANGUAGE

Courses in English as a Second Language are designed for individuals learning English as a foreign language. The various courses cover writing, conversation, spelling and vocabulary in the English language for these students.

ESL101F. Composition and Grammar for ESL (5)
Prerequisite: ESL 155 and ESL 158, or ESL 165, or placement by STAAR and/or multiple measures with a counselor.
Lab 3 Hrs
Semesters Offered: Variable
Development of writing and reading skills including critical analysis of texts with emphasis on elements of the sentence, the paragraph, and the short essay.

ESL101FL. Composition and Grammar for ESL - Lab (1)
Credit/No Credit Only
Prerequisite: Eligibility for ESL 101F
Lab 3 Hrs
Semesters Offered: Variable
Through individualized, open-entry/open-exit lab instruction that supports the ESL 101F curriculum, ESL 101FL supplements the development of writing and reading skills including critical analysis of texts with emphasis on elements of the sentence, the paragraph, and the short essay. This course is designed for advanced level ESL students.

ESL125. English Foundations (5)
Advisory: Placement by STAAR
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Course covers the skills of listening, speaking, reading, and writing English for high-beginning level ESL students. Basic syntax, vocabulary and grammar are stressed.

ESL125L. English Foundations - Lab (1)
Credit/No Credit Only
Prerequisite: Eligibility for ESL 125
Lab 3 Hrs
Semesters Offered: Variable
Individualized, open-entry/open-exit lab instruction in support of the ESL 125 curriculum for high-beginning level ESL students. Basic vocabulary, grammar, tense and sentence structures are introduced and practiced through listening, reading, writing and speaking activities.

ESL126. Language Lab for English Foundations (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Oral/aural pattern practice using the structures taught in ESL 125, the pronunciation of individual sounds, and the patterns used in relaxed or informal speech.

ESL127. Foundations of Vocabulary for ESL (3)
Advisory: Eligibility for ESL 125.
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Directed practice in understanding vocabulary in context, spelling, and dictionary use for high-beginning ESL students.
ESL145A. Advanced English (2.5)
Prerequisite: A grade of C or better in ESL 135.
Lec 2.5 Hrs
Semesters Offered: Variable
Practice with advanced level structures as used in selected topics. Concurrent enrollment in ESL 148 recommended.

ESL145B. Advanced English (2.5)
Prerequisite: ESL 145A
Lec 2.5 Hrs
Offered: Variable
Practice with advanced level structures as used in selected topics. Concurrent enrollment in ESL 148 recommended.

ESL145L. Advanced English - Lab (1)
Prerequisite: Eligibility for ESL 145 or placement by STAAR
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Individualized, open-entry/open-exit lab instruction in support of the ESL 145 curriculum. Course expands listening, speaking, reading, and writing skills in English for high-intermediate to low-advanced level ESL students. All verb forms, conditionals, reported speech and advanced grammatical structures are introduced and practiced. Multi-sentence writing is emphasized.

ESL146. Language Lab for Advanced English (1)
Credit/No Credit Only
Lab 3 Hrs
Semesters Offered: Variable
Oral/aural pattern practice using the structures taught in ESL 145, the pronunciation of individual sounds, and the patterns used in relaxed or informal speech.

ESL147. High-Intermediate Vocabulary for ESL (3)
Advisory: Students should be eligible for ESL 145
Lec 3 Hrs
Semesters Offered: Variable
Directed practice in academic and practical vocabulary building.

ESL148. Advanced Reading for the ESL Student (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Designed to help ESL students to improve their reading skills. Emphasis is on phonics, word analysis, vocabulary development and comprehension. ESL 148 not open to those students who have completed English 148.

ESL155. Paragraph Development for ESL (5)
Prerequisite: A grade of C or better in ESL 145, or placement according to STAAR and/or multiple measures.
Lec 5 Hrs
Semesters Offered: Variable
ESL 155 introduces writing and reinforces grammar skills. Writing of paragraphs and compositions is emphasized as is the study of various sentence structures. This is the first course in formal composition skills designed for ESL students.

ESL155L. Paragraph Development for ESL - Lab (1)
Credit/No Credit Only
Prerequisite: Eligibility for ESL 155
Lab 3 Hrs
Semesters Offered: Variable
An individualized, open-entry/open-exit lab in support of the ESL 155 curriculum. ESL 155L reinforces the writing concepts introduced in the lecture course and provides additional grammar skills development activities. Writing of paragraphs and compositions is emphasized as is the study of various sentence structures.

ESL158. Extended Reading for the ESL Student (4)
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
This course is designed to teach the beginning word identification skills and literal comprehension skills necessary for the ESL student to read the English printed page. ESL 228 not open to those students who have completed English 228.

ESL165. Paragraph and Basic Essay Writing for ESL (5)
Prerequisite: A grade of C or better in ESL 155, or placement by STAAR and multiple measures.
Lec 5 Hrs
Semesters Offered: Variable
ESL 165 offers the use of critical reading as the basis for compositions and the continued development of writing skills with the emphasis on greater depth of ideas.

ESL165L. Paragraph and Basic Essay Writing for ESL - Lab (1)
Credit/No Credit Only
Prerequisite: Eligibility for ESL 165
Lab 6 Hrs
Semesters Offered: Variable
Individualized, open-entry/open-exit lab instruction in support of the ESL 165 curriculum. ESL 165L develops English proficiency in writing, composition and critical reading skills.
The Environmental Technology program is designed to train technicians for work in the environmental field. The purpose of the program is to provide trained personnel to meet the growing demand for workers in business and industry who comply with environmentally related regulations. Nationwide studies indicate that the demand for trained hazardous materials technicians will continue to grow throughout the next fifteen to twenty years.

In establishing this program, Hartnell College will become one of twenty-three California community colleges offering the ET program. Because the program is standardized at all participating colleges, students who begin the program at one school can complete the program at any of the other colleges. This will enable students to accept employment and complete their program in a location other than the city where they begin their studies.

ENVIRONMENTAL TECHNOLOGY
(Under revision-contact area office for details.)

ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

Remaining general education requirements in addition to the courses listed in the certificate program:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the U.S.</td>
<td>3.0</td>
</tr>
<tr>
<td>English 1A</td>
<td>3.0</td>
</tr>
<tr>
<td>Communication and Analytical Thinking*</td>
<td>3.0</td>
</tr>
</tbody>
</table>

*Speech 1A, Speech 3, or CIS 11 will satisfy this requirement.

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 42</td>
<td>Human Biology</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 48</td>
<td>Environmental Science</td>
<td>3.0</td>
</tr>
<tr>
<td>CHM 60</td>
<td>Principles of Chemistry</td>
<td>4.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>ET 101</td>
<td>Introduction to Environmental Hazardous Materials Tech.</td>
<td>3.0</td>
</tr>
<tr>
<td>ET 110</td>
<td>Waste Stream Generation/Reduction/Treatment</td>
<td>3.0</td>
</tr>
<tr>
<td>ET 130</td>
<td>Health Effect of Haz. Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>ET 150</td>
<td>Hazardous Waste</td>
<td>4.0</td>
</tr>
<tr>
<td>ET 160</td>
<td>Hazardous Materials Management Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>ET 170</td>
<td>Safety &amp; Emergency Response</td>
<td>4.0</td>
</tr>
</tbody>
</table>

AND one communications course chosen from the following: | 3.0 |
| SPE 1A   | Essentials of Public Speaking | (3.0) |
| SPE 3    | Introduction to Communication | (3.0) |
| BUS 175  | Business Communications       | (3.0) |
| CSS 43   | Introduction to Computer Applications | (3.0) |
|          |                                | 40.0  |

Recommended Related Electives

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAT 163</td>
<td>Introduction to Wastewater Treatment</td>
</tr>
<tr>
<td>WAT 164</td>
<td>Adv. Wastewater Treatment</td>
</tr>
</tbody>
</table>

Additional Information

*Eligibility for English 1A may be substituted for the English 101 requirement.
**Completion of Math 121, Elementary Algebra, may be substituted for the Math 151 requirement.

A grade of "C" must be maintained in each required course of the Certificate Program.
Ethnic Studies courses allow for a wide latitude of study to meet a variety of interests with courses which fulfill competence in and an understanding of the unique contributions of American ethnic groups; interpretation of American ethnic culture as manifested in its history, its literature, and its social, economic, political, and philosophical development.

### THESE COURSES FULFILL THE ETHNIC GROUPS IN THE UNITED STATES ASSOCIATE DEGREE REQUIREMENT (3 UNITS)

**ANT10** California Indians (3 Units, GR)
**ANT15** North American Indians (3 Units, GR)
**ART25** Intro. To Ethnic Traditions (3 Units, GR)
**COU35** Intercultural Communic. (3 Units, GR)
**ENG1A** College Composition and Reading (3 Units, GR)
**ENG1B** College Reading and Composition (3 Units, GR)
**ENG25** American Indian Literature (3 Units, GR)
**ENG26** Chicano Literature (3 Units, GR)
**ENG27** African-American Lit. (3 Units, GR)
**ETH1** Intro. to Ethnic Studies (3 Units, GR)
**ETH2** Chicano Leadership (3 Units, GR)
**ETH3** Chicanos in Amer. Society (3 Units, GR)
**ETH4** Chicano Culture (3 Units, GR)
**ETH25** American Indian Literature (3 Units, GR)
**HED6** Multicultural Health Beliefs (3 Units, GR)
**HIS10** History of California (3 Units, GR)
**HIS46** The History of Ethnic Groups in the U.S. (3 Units, GR)
**HIS48** Hist.of Afro-Am. Culture (3 Units, G/C)
**HIS49A** Chicano History (3 Units, GR)
**HIS49B** Chicano History (3 Units, GR)
**HIS52** Japanese American Exp. (3 Units, GR)
**MUS5** Ethnic Musics in the U.S. (3 Units, GR)
**MUS6** Hawaiian Music (3 Units, GR)
**SSC151** Philippine-American Culture (3 Units, GR)
**SOC42** The Soc. of Minority Rel. (3 Units, GR)
**SPA35** Contemporary Mexican-American Literature (3 Units, G/C)
**SPE35** Intercultural Commun. (3 Units, GR)
**THA6A** Chicano Theatre (3 Units, GR)
**THA6B** Chicano Theatre (3 Units, GR)
**THA6C** Chicano Theatre (3 Units, GR)
**THA6D** Chicano Theatre (3 Units, GR)

### ETHNIC STUDIES

**ASSOCIATE OF ARTS DEGREE**

Students may major in Social Sciences by completing the program listed under Social Sciences in the Catalog.

**ETH1. Intro. to Ethnic Studies (3)**
*Lec 3 Hrs*
Semesters Offered: Variable
A survey and comparative analysis of cultural, economic, political, and social factors in the experience of Third World groups in the United States. This includes a historical and contemporary examination of the origins of racial and cultural domination in the United States.

[CSU; UC]

**ETH2. Chicano Leadership (3)**
*Lec 3 Hrs*
Semesters Offered: Variable
A multi-disciplinary approach to Chicano leadership in the United States includes the history, politics, culture, and organizational effort of Chicanos. A review of the implications of historical, ideological, structural and institutional influences on Chicano leadership. An analysis of the impact of Chicano leadership on social change in the United States. Examine the role of legitimacy and co-option and their influence on the effectiveness of Chicano leaders and organizations.

[CSU; UC]

**ETH3. Chicanos in American Soc. (3)**
*Lec 3 Hrs*
Semesters Offered: Variable
A multi-disciplinary approach to the study of the effects of U.S. institutions on Chicanos; the relationship between institutions and the nature of inequality in the United States; the ways political institutions affect the degree of political socialization of Chicanos.

[CSU; UC]

**ETH4. Chicano Culture (3)**
*Lec 3 Hrs*
Semesters Offered: Variable
A multi-disciplinary approach to the study of the Chicano experience as is expressed in the forms of the culture in everyday life; Chicano value norms, language, and belief systems; the unity and diversity of the Chicano experience.

[CSU; UC]

**ETH5. Chicano Politics and the American Political System (3)**
*Lec 3 Hrs*
Semesters Offered: Variable
A study of the influence of American political institutions on the civil and political rights of Chicanos. Chicano organizations, political models, political participation and the American political process will be studied as well as important Constitutional issues and court cases that have affected Chicanos. Not open to those students who have successfully completed Political Science 5.

[CSU; UC]

**ETH25. American Indian Literature (3)**
*Prerequisite: Eligibility for English 1A*
*Lec 3 Hrs*
Semesters Offered: Variable
Introduction to American Indian Literature from the oral tradition to Contemporary authors such as Momaday, Erdrich, Campbell, Silko, and Deloria. The course focuses on literary themes and issues that speak to the history of the United States and to the society and culture of the country. Ethnic studies 25 is identical to English 25, American Indian Literature. Ethnic Studies 25 is not open to students who have completed English 25.

[CSU; UC]

**ETH30. Introduction to Teaching Ethnic Minority Children (3)**
*Lec 1.5 Hrs; Lab 4.5 Hrs*
Semesters Offered: Variable
Introduction to teaching techniques relevant to ethnic minority children in public education. Includes work in classroom under supervision of instructor.

[CSU]

**ETH31. Teaching Ethnic Minority Children (3)**
*Prerequisite: Ethnic Studies 30*
*Lec 1.5 Hrs; Lab 4.5 Hrs*
Semesters Offered: Variable
Introduction to classroom management, curriculum development and teaching strategies relevant to ethnic minority children in public education.

[CSU]
Courses offered in Family and Consumer Studies include FCS 14, Child Development, and FCS 23, Nutrition. These courses are core classes for the Certificate programs in Early Childhood Education, Instructional Aide, and for candidates/students for the Associate Degree program in nursing and community people.

FCS14. Child Development (3)
Advisory: English 253 or eligibility for English 101.
Lec 3 Hrs
Semesters Offered: Variable
This course is a study of the developmental process from prenatal period through adolescence within cultural and family contexts. Focus on the physical, cognitive, and psychosocial development typical of each age span in terms of dominant theories and research in the field. Students apply research approaches and theories in written assignments.
[CSU; UC; CAN FCS 14]

FCS22. Essentials of Nutrition (3)
Lec 3 Hrs
Semesters Offered: Variable
Basic nutrition concepts with an emphasis on practical application. Required for LVN applicants; suggested for ECE majors and general public.
[CSU]

FCS23. Nutrition (3)
Lec 3 Hrs
Semesters Offered: Variable
Nutritional needs throughout the life cycle. Chemical composition of nutrients and their utilization in the body. Principles of weight control. Required for nursing and Family and Consumer Studies majors. Students who have not taken Chemistry 60 (Principles Chemistry); Biology 6 (Introductory Physiology); and Math 201 (Pre-Algebra); should enroll in F&CS 22 (Essentials of Nutrition). Completion of CHM 60 (or CHM 22 or one year of high school chemistry), BIO 6, and Math 201 are recommended.
[CSU; UC; CAN FCS 2]
The Fire Science curriculum is designed to provide theory and practical coursework for "pre-fire service" students as well as firefighters currently working in either paid or voluntary positions. Students may earn an Associate Degree and/or a Certificate in Fire Science.

The Hartnell Community College District is a participant and sponsor of the South Bay Regional Public Safety Training Consortium. This Consortium is a Joint Powers Agency created by several local Community Colleges for the purpose of presenting certified courses associated with public safety. The intent is to enhance the campus based Degree and Certificate programs with the option of going directly into Academy type skill development training presented through the Central Consortium. For more information call (408) 270-6458.

FIRE SCIENCE

ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSC 101</td>
<td>Intro to Fire Science</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 102</td>
<td>Prevention 1A - Fire Inspection Practices</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 112</td>
<td>Command 1A - Command Principles for Co. Officers</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 115</td>
<td>Prevention LB - Code Enforcement</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 119</td>
<td>Fundamentals of Fire Behavior and Control</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 122</td>
<td>Management 1 - Mgt. for Company Officers</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>(3.0)</td>
</tr>
<tr>
<td>MAT 201**</td>
<td>Pre-Algebra</td>
<td>(3.0)</td>
</tr>
</tbody>
</table>

TOTAL 18-25.0

ELECTIVES
Select a minimum of 6 units from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSC 103</td>
<td>Fire Hydraulics</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 104</td>
<td>Fire Company</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 105</td>
<td>Organization &amp; Procedures</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 106</td>
<td>Building Construction for Fire Protection</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 107</td>
<td>Fire Apparatus &amp; Equipment</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 108</td>
<td>Investigation 1A - Cause &amp; Origin Determination</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 109</td>
<td>Fire Protection Equipment and Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>FSC 110</td>
<td>Fire Service Communications Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 111</td>
<td>Fire Service Record and Reports</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 113</td>
<td>Fire Vehicle Maintenance for Operators &amp; Mech</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 114</td>
<td>Command 1B - Hazardous Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 116</td>
<td>Rescue Practices</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 117</td>
<td>Wildland Fire Control I</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 118</td>
<td>Intermediate Fire Behavior</td>
<td>2.0</td>
</tr>
<tr>
<td>FSC 150A</td>
<td>Fire Training Techniques 1A</td>
<td>3.0</td>
</tr>
<tr>
<td>FSC 150B</td>
<td>Fire Training Techniques 1B</td>
<td>3.0</td>
</tr>
</tbody>
</table>

TOTAL 24-31.0

ADDITIONAL INFORMATION
* Eligibility for or English 1A may be substituted for the English 101 requirement.
** Eligibility for Math 121 or higher may be substituted for the Math 201 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.
FSC101. Intro. to Fire Science (3)
Lec 3 Hrs
Semesters Offered: Variable
Philosophy and history of fire protection; history of loss of life and property by fire; municipal fire defenses; organization and function of Federal, State, County and private fire protection agencies; review of career opportunities.

FSC102. Prevention IA--Fire Inspection Practices (3)
Lec 3 Hrs
Semesters Offered: Variable
General fire inspection practices; responsibilities of fire prevention personnel; flammable liquids and gases; properties of hazardous materials; labeling and placarding; fire extinguishers; fixed fire protection systems. Applies to CFSTS certification for FIRE OFFICER, FIRE PREVENTION OFFICER I and PUBLIC EDUCATION OFFICER I.

FSC103. Fire Hydraulics (3)
Lec 3 Hrs
Semesters Offered: Variable
Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation on hydraulic problems; water supply problems; underwriters' requirements for pumps.

FSC106. Building Construction for Fire Protection (3)
Lec 3 Hrs
Semesters Offered: Variable
Classification of buildings; fundamental building construction and design; structural features effecting fire spread; fire protection features; effect of fire on structural strength; fire stops, ratings of materials; fire retardants; Sanborn maps.

FSC107. Fire Apparatus and Equipment (3)
Lec 3 Hrs
Semesters Offered: Variable
Driving laws, driving technique, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment; apparatus maintenance.

FSC108. Fire Investigation 1A--Fire Cause & Origin Determination (3)
Lec 3 Hrs
Semesters Offered: Variable
Techniques required for incendiary, accidental, fatal, vehicle, wildland and juvenile fire investigation; report writing and evidence collection. Applies to CFSTS certification for FIRE OFFICER and FIRE INVESTIGATOR I.

FSC111. Fire Service Records and Reports (3)
Prerequisite: Fire Science 101 or appropriate fire service experience; Eligibility for English 1A.
Lec 3 Hrs
Semesters Offered: Variable
Review of various written records kept on company, station, and departmental levels. Comprehensive instruction in the development and delivery of written and oral reports; courtroom demeanor.

FSC112. Command 1A-Command Principles for Company Officers (3)
Lec 3 Hrs
Semesters Offered: Variable
Review of fire chemistry, equipment, and manpower; basic fire fighting tactics and strategy; emergency scene management; initial fire ground resources; simulations designed for first-in officer. Applies to CFSTS certification for FIRE OFFICER.

FSC114. Command 1B--Hazardous Materials Command for Company Officers (3)
Prerequisite: Fire Science 112
Lec 3 Hrs
Semesters Offered: Variable
Company level scene management for incidents involving chemicals and other hazardous materials. Applies to CFSTS certification for FIRE OFFICER.

FSC115. Prevention 1B--Code Enforcement (3)
Prerequisite: Fire Science 102
Lec 3 Hrs
Semesters Offered: Variable
Fire and building codes; building construction and occupancy classifications; exiting requirements; sprinkler systems; electrical hazards; and detection systems. Applies to CFSTS certification for FIRE OFFICER, FIRE PREVENTION OFFICER I and PUBLIC EDUCATION OFFICER I.

FSC116. Rescue Practices (3)
Lec 3 Hrs
Semesters Offered: Variable
Potential incidents requiring the use of rescue skills and techniques; use of rescue tools and equipment.

FSC119. Fundamentals of Fire Behavior and Control (3)
Lec 3 Hrs
Semesters Offered: Variable
Theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics; fire characteristics of materials; extinguishing agents and materials.

FSC121. ICS Overview/220 (.8)
Credit/No Credit Option
Lec .6 Hr; Lab .4 Hr
Semesters Offered: Variable
An introduction to the Incident Command System and hands-on experience through simulation exercises.

FSC122. Management 1--Mgt. for Company Officers (3)
Lec 3 Hrs
Semesters Offered: Variable
Key concepts of supervision and management; decision making for supervisors; leadership styles; time and stress management; personnel appraisal and counseling guidelines. Applies to Fire Officer certification; accredited by CFSTS.

FSC123. ICS Positional Training--Division/Group Supervisor, Task Force/Strike Team Leader & Staging Area Manager (1)
Credit/No Credit Option
Prerequisite: Fire Science 121, ICS Overview/220 or equivalent fire service experience.
Lec .8 Hrs; Lab .8 Hrs
Semesters Offered: Variable
Skills needed to perform specific functions within the Incident Command System (ICS)-Group/Division Supervisor, Task Force/Strike Team Leader and Staging Area Manager.

FSC150A. Fire Training Tech. 1A (3)
Prerequisite: Fire Science 101 or appropriate experience in the fire service.
Lec 3 Hrs
Semesters Offered: Variable
Methods and techniques to select, develop, and organize material for fire service in-service programs. Psychology of learning. Methods of evaluation. Applies to CFSTS certification for FIRE OFFICER, FIRE INSTRUCTOR I and PUBLIC EDUCATION OFFICER I.

FSC150B. Fire Training Tech. 1B (3)
Prerequisite: Fire Science 150A
Lec 3 Hrs
Semesters Offered: Variable
A continuation of Fire Science 150A. Designed to give the student more sophistication in the development, implementation and evaluation of in-service programs in fire science. Applies to CFSTS certification for FIRE OFFICER, FIRE INSTRUCTOR I and PUBLIC EDUCATION OFFICER I.
FD201. International Foods and Wine (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
An introduction to the study of food, wine and international cuisine. Course includes food preparation techniques, buffet organization and display, menu planning, cost analysis, selection of wine and wine service. A weekly buffet will provide food preparation of typical foods from various countries. Additional wine and food events will provide instruction in the knowledge and service of wine.

FD202. Specialty Foods/Guest Chef Series (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
A study of more advanced food preparation techniques involving dishes presented by professional chefs. Course includes an overview of the industry and an analysis of each Chef's specialties. A buffet will provide hands on training.
The active role the United States is taking in world affairs and trade increases the need for a knowledge of foreign languages and cultures. The acquisition of practical communication skills in a modern foreign language is the primary objective. This is accomplished by the direct oral approach, motivated by lectures, and supplemented by the language laboratory.

Positions for which four-year graduates in a foreign language are qualified are: teaching, business, foreign services, law enforcement, nursing, and secretarial services.

### FRENCH

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<thead>
<tr>
<th>AREA:</th>
<th>Fine Arts/Language Arts/Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEAN:</td>
<td>Dr. Kathleen Rose</td>
</tr>
<tr>
<td>FACULTY:</td>
<td>Vacant</td>
</tr>
<tr>
<td>DIVISION ADMIN. ASSISTANT:</td>
<td>Wini Chambliss</td>
</tr>
<tr>
<td>OFFICE:</td>
<td>Performing Arts Facility PAF 122</td>
</tr>
<tr>
<td>COUNSELOR:</td>
<td>Alison Paul Office – CAB 159 755-6827 <a href="mailto:apaul@hartnell.edu">apaul@hartnell.edu</a></td>
</tr>
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Positions for which four-year graduates in a foreign language are qualified are: teaching, business, foreign services, law enforcement, nursing, and secretarial services.

<table>
<thead>
<tr>
<th>Course</th>
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</table>
| **FRN1. Elementary French I (5)**  
Credit/No Credit Option  
Lec 5 Hrs  
Semesters Offered: Variable  
Beginning course of lessons acquainting the student with the basic structures and pronunciation of French by practice in listening, speaking, reading and writing through structured lessons that include cultural components in the foods, lifestyles, arts, history and literature of French speaking peoples.  
[CSU; UC; CAN FREN 2, CAN FREN SEQ A with FREN 1 & 2]|
| **FRN2. Elementary French 2 (5)**  
Credit/No Credit Option  
Prerequisite: Completion of FRN 1 or two years of high school French, with a minimum grade of C or better.  
Lec 5 Hrs  
Semesters Offered: Variable  
Continued emphasis on oral communication in French, however, with more readings on French-speaking cultures around the world. Introduction to French songs, poetry, and films. It is strongly recommended that the continuity of the study of French not be interrupted.  
[CSU; UC; CAN FREN 4, CAN FREN SEQ A with FREN 1 & 2]|
| **FRN3. Intermediate French (4)**  
Credit/No Credit Option  
Prerequisite: French 2 or three years of high school French or its equivalent, or demonstration of language competency to level.  
Lec 4 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
[CSU; UC; CAN FREN 8, CAN FREN SEQ B with FREN 3 & 4]|
| **FRN4. Intermediate French (4)**  
Credit/No Credit Option  
Prerequisite: French 3 or four years of high school French or its equivalent, or demonstration of language competency to level.  
Lec 4 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
A continuation of French 3. A greater emphasis on practical applications of the language. Readings of short stories, novels, plays. Special units on art, history, politics and geography of French speaking countries.  
[CSU; UC; CAN FREN 10, CAN FREN SEQ B with FREN 3 & 4]|
| **FRN45. Special Projects (1-3)**  
Prerequisite: Two semesters of college French or three years of high school French.  
Semesters Offered: Variable  
Individual and group investigation of topics and problems beyond the scope of regular French courses.  
[CSU] |
General Studies is a major providing a student with the opportunity to select from a broad range of courses offered in General Education toward the fulfillment of his or her unique educational pursuit. Students are afforded the opportunity to choose a program of study based on in-depth exploration in a single discipline or to develop an education plan based on selections from a liberal range interdisciplinary courses. This type of major is offered at many institutions under the Liberal Arts Degree title.

**GENERAL STUDIES**

**ASSOCIATE OF ARTS DEGREE**
Completion of the major requirements plus graduation requirements for the Associate Degree.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any coursework from the Associate Degree General Education list in the current year catalogue in addition to completion of the General Education Requirements listed below.</td>
<td>18.0</td>
</tr>
</tbody>
</table>

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>Requirement</th>
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<td>Natural Science</td>
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</tr>
<tr>
<td>Social &amp; Behavioral Science</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>21.0</td>
</tr>
</tbody>
</table>
GEOGRAPHY

AREA: Fine Arts/Language Arts/Social Sciences
DEAN: Dr. Kathleen Rose
DIVISION ADMIN. ASSISTANT: Wini Chambliss
OFFICE: Performing Arts Facility
         PAF 122
COUNSELOR: Robert Spier
            Office – CAB 155
            755-6828
            bspier@hartnell.edu

Geography is an academic discipline that examines both physical and cultural landscapes, focusing on the environments that humanity inhabits, alters and creates. Positions for which graduates in geography are qualified are as follows:

Geographer  Resource Economist
Cartographer  Soil Conservationist
Climatologist  Aerial Photo Interpreter
Ecologist  Community Development
Envr. Scientist  Geographic Analyst
Land Economist  Geographer-Planner
Site Researcher  Land Use Planner
Reg. Sys. Analyst  Weather Observer
Recr. Res. Planner  Demographer
Teacher  Agriculture Geographer

GEG1. Introduction to Geography: Physical Elements (3)
Lec 3 Hrs
Semesters Offered: Variable
Examination of the various components of the natural environment, including the processes involved in their development and their relationship to humankind.
[CSU; UC; CAN GEOG 2]

GEG2. Introduction to Geography: Cultural Elements (3)
Lec 3 Hrs
Semesters Offered: Variable
The basic cultural elements of geography, including population distribution, land use patterns, transportation, and the use of natural resources in manufacturing, mining, agriculture, forestry and fisheries. Major geographic regions of the world are introduced.
[CSU; UC; CAN GEOG 4]

GEG 10. Geography and World Affairs: A Regional Approach (3)
Advisory: Completion of ENG 101
Lec 3 Hrs
Semesters Offered: Variable
A general survey of the world’s geographic regions. A study of historical development, cultures, economics, and spatial relationship of the geographic realms.
[CSU; UC]

GEG32. Geography Field Trip (2)
Lec 2 Hrs
Semesters Offered: Variable
Study, including field visits, of the basic physical elements of the human habitat, especially climate, landforms, and their formation, soils, and vegetation.
[CSU]

GEG45. Special Projects (1-3)
Semesters Offered: Variable
A supervised program of independent research and study in geography. Completion of Geography 1 or 2 recommended.
[CSU]
The Geology discipline offers courses which concern the earth's history, structure, and economic resources. These courses meet the needs for those students wishing to pursue an academic major and subsequent career in one of the many aspects of geology as well as provide individual courses for those wishing to enhance their understanding of the planet on which we live.

**GEL1. Physical Geology (4)**
- Lec 3 Hrs; Lab 3 Hrs
- Offered: Fall, Spring, Summer
A survey of the nature and structure of the materials composing the earth and the various processes which have shaped or are shaping its surface. The course includes plate tectonics, earthquakes, volcanoes, landforms, minerals, rocks, geologic maps.

[CSU; UC; CAN GEOL 2]

**GEL2. Introduction to Geology (3)**
- Lec 3 Hrs
- Offered: Fall, Spring, Summer
Introduction to phenomena and basic principles of geology, with laboratory demonstrations illustrating the nature of minerals, rocks, landforms, fossils, and geological maps.

[CSU; UC, CAN GEOL 6]

**GEL6. General Geology - Historical (4)**
- Lec 3 Hrs; Lab 3 Hrs
- Semesters Offered: Variable

[CSU; UC; CAN GEOL 4]

**GEL25. Environmental Geology (3)**
- Lec 3 Hrs
- Semesters Offered: Variable
A physical science survey course dealing with the interactions between earth systems and man.

[CSU; UC]

**GEL36. California Geology (3)**
- Lec 2 Hrs; Lab 3 Hrs
- Semesters Offered: Variable
A study of the geology of California. Includes a survey of the topography, structure, geologic history, climate, and mineral resources of each geomorphic province of the state. Offered only on demand.

[CSU; UC]

**GEL45. Special Projects (1-3)**
- Credit/No Credit Only
- Semesters Offered: Variable
Advanced laboratory or field work in earth science.

[CSU]
The active role the United States is taking in world affairs and trade increases the need for a knowledge of foreign languages and cultures. The acquisition of practical communication skills in a modern foreign language is the primary objective. This is accomplished by the direct oral approach, motivated by lectures and supplemented by the language laboratory.

Positions for which four-year graduates in a foreign language are qualified are teaching, business, foreign services, law enforcement, nursing, and secretarial services.

**GER1. Elementary German (4)**
- **Lec 4 Hrs; Lab 1 Hr**
- **Semesters Offered:** Variable
- **Prerequisites:** Pronunciation, oral practice, readings on German Culture and civilization, minimum essentials of grammar.
- **Notes:**
  - [CSU; UC; CAN GERM 2, CAN GERM SEQ A with GERM 1 & 2]

**GER2. Elementary German (4)**
- **Prerequisite:** Either German 1 or two years of high school German or its equivalent, or demonstration of language proficiency to level.
- **Lec 4 Hrs; Lab 1 Hr**
- **Semesters Offered:** Variable
- **Prerequisites:** Pronunciation, oral practice, readings on German culture and civilization minimum essentials of grammar.
- **Notes:**
  - [CSU; UC; CAN GERM 4, CAN GERM SEQ A with GERM 1 & 2]

**GER3. Intermediate German (4)**
- **Prerequisite:** German 2 or demonstration of language proficiency to level.
- **Lec 4 Hrs; Lab 1 Hr**
- **Semesters Offered:** Variable
- **Prerequisites:** A practical application of the fundamental principles of grammar. Reading in German of cultural material, short stories, novels, or plays; oral practice.
- **Notes:**
  - [CSU; UC; CAN GERM 8, CAN GERM SEQ B with GER 3 & 4]

**GER4. Intermediate German (4)**
- **Prerequisite:** German 3 or demonstration of language proficiency to level.
- **Lec 4 Hrs; Lab 1 Hr**
- **Semesters Offered:** Variable
- **Prerequisites:** A practical application of the fundamental principles of grammar. Reading in German of cultural material, short stories, novels, or plays; oral practice.
- **Notes:**
  - [CSU; UC; CAN GERM 10, CAN GERM SEQ B with GER 3 & 4]

**GER45. Special Projects (1-3)**
- **Prerequisite:** Three years of high school German or two semesters of college German.
- **Semesters Offered:** Variable
- **Prerequisites:** Individual and group investigation of topics and problems beyond the scope of regular German courses.
- **Notes:**
  - [CSU]
Health Education stresses the mental, social, and physical well being of the individual.

Four-year graduates in Health Education, Physical Education and Athletics qualify for employment in private industry and recreational agencies and are prepared to seek teaching credentials in elementary or secondary education.
**Program Goals:**

A. To provide students with the necessary academic instruction and professional training in the field of laboratory medicine in order to satisfy the employment needs of the Central Coast Health Care Industry and surrounding communities.

B. To produce a skilled clinical laboratory employee who has a competent, working knowledge of the principles inherent in the laboratory tests being performed.

C. To prepare students to become accurate and reliable members of the health care team.

D. To provide students with an awareness of their role in the delivery of health care to the patient.

E. To develop positive student attitudes in the areas of professionalism and commitment to delivering excellent health care.

**Medical Laboratory Technology**

**Associate of Science Degree**

Completion of the major requirements plus graduation requirements for the Associate Degree.

**Required Prerequisite Courses***

<table>
<thead>
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<tbody>
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<td>HES 10</td>
<td>Introduction to Lab</td>
<td>1.0</td>
</tr>
<tr>
<td>HES 11</td>
<td>Lab Math</td>
<td>1.0</td>
</tr>
<tr>
<td>HES 110A</td>
<td>Theory of Phlebotomy Principles</td>
<td>2.5</td>
</tr>
<tr>
<td>&amp; 110B</td>
<td></td>
<td>15.5-17.5</td>
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<tr>
<td>HES 20 &amp; 20L</td>
<td>Clinical Urinalysis</td>
<td>1.5</td>
</tr>
<tr>
<td>HES 21 &amp; 21L</td>
<td>Clinical Immunology</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 40 &amp; 40L</td>
<td>Clinical Chemistry I</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 41 &amp; 41L</td>
<td>Clinical Chemistry II</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 70 &amp; 70L</td>
<td>Clinical Hematology</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 71 &amp; 71L</td>
<td>Clinical Coagulation</td>
<td>1.5</td>
</tr>
<tr>
<td>HES 60 &amp; 60L</td>
<td>Clinical Microbiology</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 43</td>
<td>Chemistry Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 73</td>
<td>(Five 40 hour/week Clinical Rotation)</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 63</td>
<td>Microbiology Practicum</td>
<td>4.0</td>
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<tr>
<td>HES 23</td>
<td>Serology/Immunohematology Practicum</td>
<td>4.0</td>
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<tr>
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</tr>
<tr>
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<td>3.0</td>
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<tr>
<td>Language &amp; Rationale</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1A***</td>
<td>3.0</td>
</tr>
<tr>
<td>Math 121 or higher level math course</td>
<td>3.0-5.0</td>
</tr>
<tr>
<td>Communication and Analytical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the U.S***</td>
<td>(3.0) 15-20</td>
</tr>
</tbody>
</table>

**Phlebotomy**

The following are sequence of courses required if you want a certificate of Skills in Phlebotomy. This will allow you to sit for the national phlebotomy examination:

- HES 10
- HES 110A & B

HES C will satisfy the new State of California Requirements for education of the experience phlebotomist. This will allow you to sit for the national Phlebotomy Examination.

**Due to State Regulations the Curriculum Will Be Undergoing Changes.**

**Medical Laboratory Technology**

**Associate of Science Degree**

Completion of the major requirements plus graduation requirements for the Associate Degree.

**Required Prerequisite Courses***

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</tr>
</thead>
<tbody>
<tr>
<td>CHM 60 or 23*</td>
<td>The Science of Chemistry or Organic &amp; Biological Chemistry For Health Services</td>
<td>4.0</td>
</tr>
<tr>
<td>BIO 42 or 6 &amp; 6L</td>
<td>Human Biology or Introductory Physiology</td>
<td>3.0-5.0</td>
</tr>
<tr>
<td>BIO 27**</td>
<td>Principles of Microbiology</td>
<td>4.0</td>
</tr>
<tr>
<td>HES 10</td>
<td>Introduction to Lab</td>
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<td>Ethnic Groups in the U.S***</td>
<td>(3.0)</td>
</tr>
</tbody>
</table>

**Additional Information**

A grade of “C” (74.5) or better must be maintained in each required major course.

- Chemistry requirement may be met by completing CHM 60 or 23 or one year of high school Chemistry and a score of 3 or higher in the Chemistry AP exam.

- Principles of Microbiology may be taken concurrently with any clinical course except HES 60 and HES 63.

- Refer to the College Catalogue or Schedule of Classes for a list of approved courses. ENG1A with a Special Perspective (such as Chicano Perspective College Composition and Reading) can be used to fulfill both the English 1A requirement and also the Ethnic Groups in the U.S. requirement. Students who have completed English 1A without a Special Perspective will be required to complete an approved 3.0 unit Ethnic Groups in the U.S. course.

- Students must complete required prerequisite courses and be admitted to the program prior to enrollment in the clinical portion of the program.

**Challenge Procedure**

Information may be secured from the MLT Director for the policy, which addresses evaluation of previous technician education for applicants.

**Baccalaureate Preparation**

Transfer major requirements in Medical Laboratory Technology are available in the Counseling Center. Students should consult a counselor and appropriate college catalogue for specific transfer requirements. Catalogues for California and out-of-state colleges are located in the Learning Resource Center, Counseling Office and Career Center.

**Admission Requirements**

In order to be considered for admission to the Medical Laboratory Technician Program (MLT), the following must be completed:

1. Completion of High School or its equivalent.
2. Required pre-requisite courses.

**Notes:**

- Students must complete their Practicum (clinical site rotation) within six months of completion of the Practicum’s prerequisite.

- Students must complete all their practical rotation within 2 years of their initial enrollment and admission to the MLT program.
HES10. Introduction to the Clinical Laboratory Profession (1)  
Lec 1 Hr  
Semesters Offered: Variable  
Introduces the student to the functions and duties of a Medical Laboratory Technician and compares and contrasts these duties to the Medical Laboratory Scientist. The student will be introduced to clinical laboratory safety issues, regulatory agencies, infection control policies, and professional responsibilities, relative to other departments of health care. The student will study medical terminology, patient's bill of rights, and professional standards of the clinical laboratory technician, proper phlebotomy technique and specimen processing, and study computer skills to data management systems within the clinical laboratory and on-line courses. [CSU]

HES11. Clinical Laboratory Math (1)  
Lec 1 Hr  
Semesters Offered: Variable  
Teachers practical situations encountered in the clinical laboratory to include; accurately solving metric system conversions, solution preparation and pH determinations, applying Beer's law to concentration determinations, correctly calculating statistical data as related to quality control and quality assurance. [CSU]

HES20. Clinical Urinalysis (1)  
Prerequisite: HES 10, 11  
Corequisite: HES 20L  
Advisory: Admission to MLT Program. Completion of HES 73 within six months of completing this course.  
Lec 1 Hr  
Semesters Offered: Variable  
Teaches the student the various properties and constituents of urine. Emphasis is placed on the interpretation of theory and methodology of qualitative and quantitative clinical analysis of urine. The student will be taught to accurately compare results of analysis to normal and abnormal function of the kidney. [CSU]

HES20L. Clinical Urinalysis Lab (.5)  
Prerequisite: HES 10 and HES 11  
Corequisite: HES 20  
Advisory: Admission to MLT Program. Completion of HES 73 within six months of completion of this course.  
Lab 1.5 Hr  
Offered: Variable  
Teaches the student the various properties and constituents of urine via “on hands” learning. Emphasis is placed on the interpretation and handling of urine specimens and their accompanying requisitions. The students will be taught to examine urine physically, chemically, and microscopically and compare clinical values as related to the physiology of the urinary system in health and disease. [CSU]

HES21. Clinical Immunohematology (3)  
Prerequisite: HES 10 and 11  
Corequisite: HES 21L  
Advisory: Completion of HES 23 within six months of completing this course.  
Lec 3 Hrs  
Semesters Offered: Variable  
Introduces the student to the basic principles of antigen and antibody reactions included in blood grouping and typing, compatibility testing and serological procedures. Introduces serological and immunohematology procedures measured qualitatively and quantitatively in today's clinical laboratory. Completion of this course is required prior to enrolling in the clinical rotation in Immunology/Immunohematology, HES 23. This course, HES 21L requires concurrent enrollment in HES 21L. Admission to the MLT program is required prior to registration. [CSU]

HES21L. Clinical Immunohematology Lab (1)  
Prerequisite: HES 10 and 11  
Corequisite: HES 21  
Advisory: Completion of HES 23 within six months of completing this course.  
Lab 3 Hrs  
Semesters Offered: Variable  
Introduces the student to the basic principles of antigen and antibody reactions included in blood grouping and typing, compatibility testing and serological procedures by performance in a student lab environment. Introduces serological and immunohematology procedures and techniques to measure analytes qualitatively and quantitatively. Completion of this course is required prior to enrolling in the clinical rotation in Immunology/Immunohematology, HES 23. [CSU]

HES23. Clinical Immunology/Immunohematology (3)  
Prerequisite: HES 21  
Advisory: Admission to the MLT Program.  
Lab 40 Hrs (4 weeks)  
Semesters Offered: Variable  
This course provides entry-level clinical laboratory practice/experience in the department serology and blood banking. Emphasis is placed on technique, accuracy and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations. [CSU]

HES30. Health Care in the Multicultural Setting (3)  
Credit/No Credit Option  
Lec 54 Hrs  
Semesters Offered: Variable  
This course relates values, beliefs, attitudes, family organization, life styles and health practices of selected ethnic groups to health care and nursing practice. [CSU]

HES40. Clinical Chemistry I (3)  
Prerequisite: HES 10 and 11  
Lec 3 Hrs  
Semesters Offered: Variable  
General laboratory principles and specific basic instrumentation methodologies used in the clinical lab. After review of laboratory math, and a reintroduction to quality control and quality assurance; the student will be introduced to variables of the pre-analytical phase, identification of analytes and trace elements and their relationship to acid base balance. The student will also be introduced to the characteristics important and relevant to enzyme kinetics and define various enzymes clinically assayed. Correlating test results with disease states will be demonstrated. All of the above will be taught in a manner consistent with OSHA standards. HES 41 and HES 41L are taken the semester following successful completion of HES 40 and HES 40L. [CSU]

HES40L. Clinical Chemistry I Lab (1)  
Prerequisite: HES 10 and HES 11, Admission to the MLT program.  
Corequisite: HES 40  
Lec 3 Hrs  
Semesters Offered: Variable  
Teaches general laboratory principles and specific basic instrumentation methodologies used in basic clinical chemistry analysis. After review of laboratory math, and a reintroduction to quality control and quality assurance, the student will be introduced to variables of the pre-analytical phase, characteristics important to quality lab technique and safety. Correlating test results with disease states will be accomplished. Admission to the MLT program and concurrent registration in HES 40 is required. [CSU]

HES41. Clinical Chemistry II (3)  
Prerequisite: HES 40, HES 40L  
Corequisite: HES 41L  
Advisory: Completion of HES 43 within six months of completing this course is recommended.  
Lec 3 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
Teaches relationships between the endocrine system and analytes assayed for in the clinical lab, including tumor markers, therapeutically drugs, and compounds studied in toxicology. The student will be introduced to vitamins assayed and correlate their clinical significance. The student will correlate liver, kidney, and pancreatic function with test results and compare with states of health and disease. The function and laboratory analysis of various body fluids including effusions, spinal fluid, and synovial fluid will be included. Concurrent registration with HES 41L and completion of HES 43 within 6 months of this course is recommended. [CSU]
HES41L. Clinical Chemistry II Lab (1)
**Prerequisite:** HES 40, HES 40L
**Corequisite:** HES 41
**Advisory:** Completion of HES 43 within 9 months is recommended after completion of this course and HES 41.
Lec 3 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Intermediate to advanced laboratory principles and techniques used in clinical chemistry analysis. The student will perform and study tests of the endocrine system, therapeutic drug assays and compounds, and other clinical chemistry tests specific to special chemistry department test menus. Highly automated instrumentation will be studied and used to demonstrate correct quality control, maintenance and clinical operation. This course is taken the following semester after successful completion of HES 40 and 40L. Concurrent registration in HES 41 is required.

[CSU]

HES43. Clinical Chemistry Practicum (4)
**Prerequisite:** HES 40, HES 40L, HES 41, and HES 41L
Lab 12 Hrs
Semesters Offered: Variable
This course provides entry-level clinical laboratory practice/experience in the department of general and special chemistry. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations.

[CSU]

HES53. Emergency Medical Technician 1 (Ambulance) (5.5)
**Prerequisite:** Completion of Health Education 120 or equivalent.
Lec 4.5 Hrs; Lab 3.0 Hrs
Semesters Offered: Variable
At the end of the EMT-1 course, students will demonstrate consistent proficiency in required basic life support skills and knowledge as EMT-1 Ambulance or EMT-1 Non-Ambulance. Students completing the above requirements will be issued a Course Completion Notice which enables them to apply for certification as an EMT-1A or EMT-1NA through the Health Officer of Monterey County as delegated by the State of California Emergency Medical Services Authority.

[CSU]

HES60. Clinical Microbiology (3)
**Prerequisite:** HES 10, 11
**Corequisite:** HES 60L
**Advisory:** Admission to MLT Program.
Completion of HES 63 within six months of completing this course.
Lec 3 Hrs
Semesters Offered: Variable
Microorganisms of medical microbiology with emphasis on the characteristics of clinically significant microorganisms and their biochemical profile, media for isolation, and identification methods for selected pathogens. The student will be introduced to identification methods, theories, and techniques used in basic bacteriology parasitology, and mycology. Emphasizes routine organism identification.

[CSU]

HES60L. Clinical Microbiology Lab (1)
**Prerequisite:** HES 10, 11
**Corequisite:** HES 60
**Advisory:** Admission to MLT Program.
Completion of HES 63 within six months after completing this course.
Lab 3 Hrs
Introduces the various techniques and safety procedures in clinical microbiology. Emphasizes the morphology and identification of common pathogenic organisms. Successful completion of this course and HES 60 is required to enroll in Clinical Microbiology Practicum, HES 63.

[CSU]

HES63. Clinical Microbiology Practicum (3)
**Prerequisite:** HES 60
**Advisory:** Admission to the MLT Program.
Lab 40 Hrs (4 weeks)
Semesters Offered: Variable
This course provides entry-level clinical laboratory practice/experience in the department of microbiology. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as numerous bench/manual techniques. Competence will be evaluated based on final clinical evaluations.

[CSU]

HES70. Clinical Hematology (3)
**Prerequisite:** HES 10 and 11
**Corequisite:** HES 70L
**Advisory:** Completion of HES 73 within six months of completing this course.
Lec 3 Hrs
Semesters Offered: Variable
This course presents the origin of the various types of blood cells with emphasis on the red and white blood cells. The student will learn about human hematological disorders and classify these based on clinical laboratory findings. Admission to MLT Program is necessary prior to registration and completion of HES 73 within six months of completing this course is required. This course, HES 70, is to be taken concurrently with HES 70L.

[CSU]

HES70L. Clinical Hematology Lab (1)
**Prerequisite:** HES 10 and 11
**Corequisite:** HES 70
**Advisory:** Completion of HES 73 within six months of completing this course.
Lab 3 Hrs
Semesters Offered: Variable
Introduces the various techniques and safety procedures in clinical hematology. Emphasizes the morphology and identification of common human blood cells. Successful completion of this course and HES 70 is required to enroll in Clinical Hematology Practicum, HES 73.

[CSU]

HES71. Clinical Coagulation (1)
**Prerequisite:** HES 10, 11
**Corequisite:** HES 71L
**Advisory:** Admission to MLT Program.
Completion of HES 73 within six months of completing this course.
Lec 1 Hr
Semesters Offered: Variable
This course presents an overview of hemostasis process and coagulation disorders.

[CSU]

HES71L. Clinical Coagulation Lab (.5)
**Prerequisite:** HES 10 and HES 11
**Corequisite:** HES 71
**Advisory:** Admission to MLT Program.
Completion of HES 73 within six months of completing this course.
Lab 1.5 Hrs
This course is the laboratory component of HES 71, Clinical Coagulation, and must be taken concurrently.

HES73. Clinical Hematology, Coagulation, and Urinalysis Practicum (4)
**Prerequisite:** HES 70, 71 and 20
**Advisory:** Admission to the MLT Program.
Lab 40 Hrs (5 weeks)
Semesters Offered: Variable
This course provides entry-level clinical laboratory practice/experience in the department of hematology, coagulation, and urinalysis. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations.

[CSU]

HES98. Hazardous Materials & Industrial Safety (1)
**Lec 1 Hr**
Semesters Offered: Variable
A basic course in all aspects as it relates to industry. The course will cover the following topics: Hazardous Materials as it pertains to the specific trades. Examples are construction, welding, auto repair, electronics, auto collision repair and machine technology, health care services, personal protective equipment, materials handling and storage, industrial hygiene, safety inspections, and general industrial safety of the proper use of tools and machines.

[CSU]
HES101. Scientific and Professional Basis of Health Care (5)
Lec 5 Hrs
Semesters Offered: Variable
The study of the fundamental knowledge necessary to provide health care in a variety of settings and occupations. Basic understanding of body structures and functions and the related language needed to communicate them will be presented. Patient rights and professional roles in assuring them will be explored. Legal and ethical aspects of health care will also be studied. Designed for pre-health professions students.

HES110A. Theory of Phlebotomy Techniques (1.5)
Prerequisite: HES 10 with minimum grade C.
Corequisite: HES 110B
Lec 1.5 Hrs
Semesters Offered: Variable
This is a course in phlebotomy concepts and techniques. The topics covered will be blood drawing, specimen requirements, safety, infection control, data collection/clerical, patient/specimen identification, communication skills, customer service, patient satisfaction, non-blood specimen collection, quality, productivity, compliance and ethics, appearance/dress code.

HES110B. Practicum in Phlebotomy Techniques (1)
Credit/No Credit Only
Corequisite: HES 110A - Theory of Phlebotomy Techniques
Lab 3 Hrs
Semesters Offered: Variable
This is a practicum in blood collection techniques by venipuncture and capillary blood collection in a clinical setting. The student must demonstrate clinical readiness by passing a written and practical examination prior to clinical placement.

HES110C. Advanced Theory of Phlebotomy Techniques (1.3)
Advisory: It is recommended experienced phlebotomists with a minimum of 1020 logged hours of phlebotomy employment within one year.
Lec 1 Hr
Semesters Offered: Variable
Designed for a practicing phlebotomist who wants to apply for state and/or national certification and/or requires a review of current phlebotomy techniques. This web-based course will reintroduce basic and advanced concepts of phlebotomy and how they relate to current changes in phlebotomy practice, OSHA requirements, and the latest state and national certification guidelines. The subjects encountered will involve laboratory safety issues, regulatory agencies, infection control policies, and professional responsibilities relative to other departments of health care. Subjects consistent with your experience relative to the anatomy and physiology of the circulatory system, medical terminology, patient's bill of rights and professional standards for phlebotomy. Represents and illustrates practical situations phlebotomists face every workday.

HES120. Foundations of Health Care (1)
Credit/No Credit Only
Lec 7 Hrs; Lab 4.5 Hrs
Semesters Offered: Variable
This course covers content necessary before any health care provider student can enter into clinical experience. Among the areas emphasized are Universal Precautions for Bloodborne Pathogens, Basic Life support for Health Care Providers, and Professional Aspects of Clinical Experience.

HES121. Introduction to Health Unit Coordination (5)
Prerequisite: HES 120
Lec 5 Hrs
Semesters Offered: Variable
A course designed to prepare students for employment as ward clerks or unit assistants in health care settings.

HES 122. Home Care of the Elderly (3.5)
Prerequisite: HES 120
Lec 2 Hrs; Lab 6 Hrs
Semesters Offered: Variable
Introduction to In Home Geriatric Care. Care giving skills and psychosocial aspects of dementia will be emphasized. Home safety, nutrition, and aspects of aging will be applied to the home setting.

HES130A. Certified Nursing Assistant (5)
Prerequisite: HES 120
Lec 3 Hrs; Lab 6 Hrs
Semesters Offered: Variable
This is a beginning course in health care which emphasizes basic patient care skills in the convalescent setting.

HES130B. Certified Nursing Assistant and Home Health Aid (1.5)
Prerequisite: HES 130A
Lec 1 Hr; Lab 1 Hr
Semesters Offered: Variable
This is a continuing course in health care to prepare Certified Nursing Assistants as Home Health Aides.

HES201. Health & Safety Training for Day Care Providers (1)
Credit/No Credit Only
Lec 1 Hr
Semesters Offered: Variable
This course may serve either for primary CPR or First Aid Certificate or as a renewal for these. A course designed to teach care providers the correct method of administering Pediatric CPR and Pediatric First Aid, as adopted by the American Red Cross and the American Heart Association. Recognition, management, and prevention of childhood injuries will also be discussed. Upon successful completion, students will be eligible to receive American Red Cross First Aid and Pediatric CPR Cards. This course is not open to students who have completed ECE 210 with a grade of C or better.

HES254. Refresher Course/Emergency Medical Technician 1 (1.5)
Prerequisite: Health Services 53 or equivalent and Health Services 120 or equivalent
Lec 1.5 Hrs
Semesters Offered: Variable
A review of life-support measures, cardiopulmonary resuscitation, and use of emergency equipment and supplies. This course meets the California State Department of Health criteria for Emergency Medical Technician 1 refresher course. In order to maintain County certification this course needs to be repeated every two years. The student must petition to retake for recertification.

HES255. Emergency Medical Technician Paramedic Refresher (2)
Lec 2 Hrs; Lab .8 Hrs
Semesters Offered: Variable
This course is designed to provide the practicing certified paramedic with a review of didactic and practical treatment modalities and is intended to satisfy the continuing education requirements for recertification. This course will be taught in accordance with the standards of the National Registry of Emergency Medical Technicians. The National Registry exam will be offered at the conclusion of this course. This course has been approved by the Monterey County Emergency Medical Services Agency for 48 hours of continuing education. Students should be a State or Nationally certified paramedic.
History in the broad sense, is the study of all human experience. It examines people, institutions, ideas, and events through the past and into the future. The study of history develops cultural literacy, critical thinking, and other skills while helping to understand today and plan for tomorrow. The discipline provides us with a better understanding of ourselves as individuals and as a society. In the study of history it is more important to learn the skills of finding, interpreting, and relating historical information than it is simply to memorize historical data. Through the study of history, a student can acquire the techniques of gathering and applying information to gain a perspective on the human condition.

Positions for which graduates in history are qualified are as follows:

- Pre-Law/Lawyer Librarian
- Journalist Business
- Pre-Theology/Clergy Writer
- Foreign Service Consultant
- Teacher Historian
- Archivist Banking
- Researcher/Res. Analyst Market Researcher
- Museum Curator Travel
- State Park Historian Historical Societies
- Communications

**HISTORY**

**ASSOCIATE OF ARTS DEGREE**

Completion of the major requirements plus graduation requirements for the Associate Degree.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE#</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>HIS 4A</td>
<td>History of Western Civilization</td>
<td>3.0</td>
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<td>HIS 4B</td>
<td>History of Western Civilization</td>
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<tr>
<td>HIS 17A</td>
<td>History of the United States</td>
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<tr>
<td>HIS 17B</td>
<td>History of the United States</td>
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</tbody>
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**ELECTIVES**

Select an additional six (6) units from the following courses:

- HIS 10 History of California 3.0
- HIS 18 The United States Since 1945 3.0
- HIS 40 Women in American History 3.0
- HIS 47 Religions of the World 3.0
- HIS 48 History of African-American History 3.0
- HIS 49A Chicano History 3.0
- HIS 49B Chicano History 3.0
- HIS 42 Japanese-American Experience 3.0

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
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<tr>
<td></td>
<td><strong>21.0</strong></td>
</tr>
</tbody>
</table>

**COMPETENCY REQUIREMENT**

See College Catalog 0-8

**ADDITIONAL INFORMATION**

Additional units to reach a minimum of 60 semester units in degree applicable courses.

| 13-21.0 | 60.0 |

**HIS4A. History of West. Civilization (3)**

Lec 3 Hrs

Semesters Offered: Variable

A survey of Western Civilization from prehistoric times through the Protestant Reformation of the 16th Century, with special emphasis placed on the interrelationships which characterize intellectual, political, economic, and social change.

[CSU; UC; CAN HIST 2, CAN HIST SEQ A with HIST 4A & 4B]

**HIS4B. History of West. Civilization (3)**

Lec 3 Hrs

Semesters Offered: Variable

A survey of Western Civilization from the rise of secular and scientific institutions in the 16th Century to the emergence of the nuclear and global age of the post World War II period, with special emphasis placed on the interrelationships which characterize intellectual, political, economic, and social change.

[CSU; UC; CAN HIST 4, CAN HIST SEQ A with HIST 4A & 4B]

**HIS10. History of California (3)**

Lec 3 Hrs

Semesters Offered: Variable

A history of California from the Native American period to the present. Political, cultural and economic developments are studied with an emphasis on the contributions made by diverse groups to the institutions and culture of California. Local resources considered in depth.

[CSU; UC]

**HIS17A. History of the United States (3)**

Lec 3 Hrs

Semesters Offered: Variable

A survey of United States history from the Indigenous period through the Civil War, including the development of the major political, social, and economic institutions and ideals in the entire area which is now the United States, with a special emphasis on the roles of major ethnic and social groups.

[CSU; UC; CAN HIST 8, CAN HIST SEQ B with HIST 17A & 17B]

**HIS17B. History of the United States (3)**

Lec 3 Hrs

Semesters Offered: Variable

A survey of United States history from Reconstruction to the present, including the development and evolution of the major political, social, and economic institutions and ideals in the entire area which is now the United States, with a special emphasis on the roles of major ethnic and social groups.

[CSU; UC; CAN HIST 10, CAN HIST SEQ B with HIST 17A & 17B]
HIS25. British Life and Culture (3)  
Credit/No Credit Only  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of British cultural and civilization. Not open to students who have received credit for Sociology 25.

HIS26. Spanish Life and Culture (3)  
Credit/No Credit Only  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of Spanish culture and civilization. Not open to students who have received credit for Spanish 26, Spanish Life and Culture. Eligibility for English 101 recommended.

HIS40. Women in American History (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of women in American history from 1607 to the present concluding with the present day. Includes present day issues and an emphasis on female role models. Eligibility for English 101 recommended.  
[UC; CSU]

HIS45. Special Projects (1-3)  
Semesters Offered: Variable  
A supervised program of independent research and study into a particular field of history. Completion of or concurrent enrollment in History 4A, 4B, 17A, or 17B.  
[CSU]

HIS46. The History of Ethnic Groups in the United States (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of the experiences of America's major ethnic groups.  
[CSU; UC]

HIS47. Religions of the World (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
The world's major religious movements with emphasis upon the origin, historical development, and basic teachings of Hinduism, Buddhism, Judaism, Christianity, and Islam.  
[CSU; UC]

HIS48. History of Afro-American Culture (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
A study of the historical origins and development of Afro-American people in the U.S.A. today. Specific emphasis is given to the development, basis, and make-up of several important social concepts and institutions in Black America.  
[CSU; UC]

HIS49A. Chicano History (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A history of the Chicano experience and culture from the Indigenous cultures of Mexico and including the Spanish, Mexican, and Anglo American periods to 1848.  
[CSU; UC]

HIS49B. Chicano History (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A history of Chicano experience and culture from 1846 to the present, with special emphasis on the social, cultural, political, economic and educational role of Chicanos in the United States.  
[CSU; UC]

HIS51. Women in History (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
An exploration of the cultural, religious, political and economic role played by women in various civilizations since ancient times.  
[CSU, UC]
Curricular content encompasses the various paraprofessional fields included in human services. The traditional paraprofessional fields include community health worker, entry-level positions in human services (system theory and functional perspective) and the judicial system.

**HUMAN SERVICES**

**ASSOCIATE OF ARTS DEGREE**

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED IN THE CERTIFICATE PROGRAM:**

<table>
<thead>
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<tr>
<td>Natural Sciences</td>
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**CERTIFICATE PROGRAM**

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<td>Intro. to Group Process</td>
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<td>EN 1A</td>
<td>College Composition &amp; Reading</td>
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<td>ETH 1</td>
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<tr>
<td>AN 2</td>
<td>Intro. to Anthropology: Cultural (3.0)</td>
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Score of 70% on the Math Assessment Test or Math 201 (3 Units).

**AREA OF EMPHASIS - SELECT ONE AREA**

1. **SOCIAL WORK EMPHASIS**

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2. **COUNSELING EMPHASIS**

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<td>COU 25</td>
<td>Human Effectiveness</td>
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<td>COU 28</td>
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</tr>
<tr>
<td>ETH 1</td>
<td>SOC 1</td>
<td></td>
</tr>
</tbody>
</table>

Spanish Language Class
Health Education 60 Sociology 5

**ADDITIONAL INFORMATION**

A grade of "C" or better must be maintained in each course of the Certificate Program.
HUS67. On-going Assessment and Home Visiting (1.5)
Lec 1.5 Hrs.
Semester Offered: Variable
Basic principles of empowerment-based assessment and home visiting.

HUS69. Specialized Services for Families (1)
Lec 1 Hr
Semester Offered: Variable
The relationship between specialized services and family self-reliance. Helping families use specialized services in order to become self-reliant.

HUS71. Facilitation Skills and Collaboration (1)
Lec 1 Hr
Semesters Offered: Variable
Facilitation of family conferences, support groups and community meetings. The uses of collaboration in family case management.

HUS73. Portfolio Development and Skills Application (2)
Credit/No Credit Only
Prerequisite: HUS 61, 63, 65, 67, 69, 71
Lec 2.0 Hrs
Semesters Offered: Variable
A collection of student work reflecting achievement of outcomes in the Family Development Credential Program. The work includes student-self-analysis and is presented in portfolio form.

[CSU]

HUS201. Foster Child Care I (1)
Lec 1 Hr
Semesters Offered: Variable
Overview of basic knowledge, skills and sensitivity needed in foster parenting. Emphasis on human needs and roles. Survey of agency policies regarding foster care.

HUS220. Introduction to Eligibility Worker Procedure (3)
Credit/No Credit Only
Lec 3 Hrs
Semesters Offered: Variable
Study of regulations and practices relevant to the duties of an Eligibility Worker. Eligibility for English 253 is recommended.
Industrial Technology is an interdisciplinary program of study designed to prepare the student for transfer to four-year college and university programs of the same name or for positions of employment requiring a general background in the application of technology. Courses leading to either a certificate or an Associate Degree are selected from a variety of technological disciplines.

INDUSTRIAL MECHANICS

ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

CERTIFICATE PROGRAM

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
<td>2.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 51</td>
<td>Engine Theory</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 52</td>
<td>Haz. Mat. &amp; Industrial Safety</td>
<td>1.0</td>
</tr>
<tr>
<td>MEC 53</td>
<td>Industrial Electricity</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 54</td>
<td>Mechanical Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 55</td>
<td>Applied Industrial Mechanics</td>
<td>2.0</td>
</tr>
<tr>
<td>MEC 56</td>
<td>Hydraulics &amp; Pneumatics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 57</td>
<td>Commercial Refrigeration</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 60</td>
<td>Small Engine Repair &amp; Maint.</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 151</td>
<td>Gas &amp; TIG Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 52</td>
<td>Sheet Metal Fabrication</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>34.0</td>
</tr>
</tbody>
</table>

ELECTIVES - Choose 3-5 units from the following:

- AUT 50A Intro to Automotive Repair 2.0
- DRA 50 Intro to Drafting Technology 3.0
- ET 101 Intro. to Environmental Tech. 3.0
- ELE 57 Instruments and Controls 3.0
- MEC 59 Industrial Materials & Processes 3.0
- Total 37-39.0

ADDITIONAL INFORMATION
*Eligibility for ENG 1A may be substituted for the ENG 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.

INDUSTRIAL TECHNICIAN

ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

CERTIFICATE PROGRAM

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS 43</td>
<td>Introduction to Computer</td>
<td>3.0</td>
</tr>
<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 56</td>
<td>Computer-Aided Electronic</td>
<td>3.0</td>
</tr>
<tr>
<td>ELE 52</td>
<td>DC/AC Fundamentals</td>
<td>5.0</td>
</tr>
<tr>
<td>ELE 57</td>
<td>Instruments and Controls</td>
<td>3.0</td>
</tr>
<tr>
<td>EGN 4</td>
<td>Materials Science</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151**</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 56</td>
<td>Hydraulics &amp; Pneumatics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 57</td>
<td>Commercial Refrigeration</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 10</td>
<td>Introduction to Physics</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>37.0</td>
</tr>
</tbody>
</table>

ELECTIVES - Select 3-5 units from the following:

- MEC 99 Cooperative Work Experience Education 2.0
- MEC 54 Mechanical Skills 3.0
- MEC 55 Applied Industrial Mechanics 3.0
- MEC 60 Small Engine Repair & Maint. 3.0
- WLD 50 Basic Welding 2.0
- WLD 51 Gas & TIG Welding 2.0
- Total 40-42.0

ADDITIONAL INFORMATION
*Eligibility for ENG 1A may be substituted for the ENG 101 requirement.

**Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.
### INSTRUCTIONAL AIDE

**AREAS:** Fine Arts/Language Arts/ Social Sciences and Occupational Education

**DEAN:** Dr. Kathleen Rose
(Fine Arts/Language Arts/ Social Sciences)

**OFFICE:** Performing Arts Facility
PAF 122

**DIVISION ADMIN. ASSISTANT:** Wini Chambliss

**DEAN:** Jose’ L. Fernandez, M.B.A.
(Occupational Education)

**OFFICE:** Technology Building
Tech II

**DIVISION ADMIN. ASSISTANT:** Adriana Robledo

**COUNSELORS:** Alison Paul
Office - CAB 159
755-6827
apaul@hartnell.edu

Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
jpando@hartnell.edu

Dr. Stefvio Locci
Office – CAB 157
755-6926
slocchi@hartnell.edu

The Instructional Aide program focuses on a base of knowledge and ability that is necessary for a position as paraprofessional teacher aide, an instructional aide or, if one has linguistic ability, a bilingual instructional aide. An academic background is provided for course work at a state college or university.

---

### INSTRUCTIONAL AIDE

**ASSOCIATE OF ARTS DEGREE**

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

### CERTIFICATE PROGRAM

#### I. Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 10</td>
<td>Child Study</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 2</td>
<td>Home, School and Community Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>FCS 14</td>
<td>Child Development</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 18</td>
<td>Communication Skills in ECE</td>
<td>2.0</td>
</tr>
<tr>
<td>MAT *</td>
<td>Any Math course offered in the Math discipline</td>
<td>3.0</td>
</tr>
</tbody>
</table>

* Waived with ACT test score of 17 or above or SAT test score of 400 or above.

Select 17 units from one of the following areas including electives to complete the certificate requirements.

#### II. Options

**A. Basic Program Option**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INS 30</td>
<td>Lang. Arts for Instructional Aides</td>
<td>1.0</td>
</tr>
<tr>
<td>INS 99</td>
<td>Co-op Work Experience Ed.</td>
<td>1.4</td>
</tr>
<tr>
<td>INS 101</td>
<td>The Role of the School Aide</td>
<td>3.0</td>
</tr>
<tr>
<td>PE 30</td>
<td>Elementary Games and Recreational Activities</td>
<td>2.0</td>
</tr>
<tr>
<td>Electives</td>
<td>See Section III following</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**B. Pre K-3 Option**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 1</td>
<td>Principles of ECE</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 3</td>
<td>Creative Activities &amp; Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>ECE 11</td>
<td>Cognitive Activities &amp; Materials</td>
<td>3.0</td>
</tr>
<tr>
<td>Electives</td>
<td>See Section III following</td>
<td>8.0</td>
</tr>
</tbody>
</table>

**C. Third Option: Bilingual/Cross Cultural Education**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INS 52</td>
<td>Intro. to Bilingual Programs</td>
<td>3.0</td>
</tr>
<tr>
<td>SPA</td>
<td>Any Spanish Course Offered at Hartnell College</td>
<td>4.0</td>
</tr>
<tr>
<td>Electives</td>
<td>See Section III following</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**III. Electives:** Select a minimum of one course from each group

**Group A**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 50</td>
<td>Language Arts Experiences for Young Bilingual Children</td>
<td>1.0</td>
</tr>
<tr>
<td>ECE 51</td>
<td>Spanish Language Experiences for Young Children</td>
<td>1.0</td>
</tr>
<tr>
<td>LBT 57</td>
<td>Children and Libraries</td>
<td>3.0</td>
</tr>
<tr>
<td>MUS 3</td>
<td>Music Fundamentals II</td>
<td>3.0</td>
</tr>
<tr>
<td>THA 6A/B/C/D</td>
<td>Chicano Theater</td>
<td>3-3-3.0</td>
</tr>
</tbody>
</table>

**Group B**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 20</td>
<td>Intro. to Anthropology: Cultural</td>
<td>3.0</td>
</tr>
<tr>
<td>AN 20</td>
<td>Cultures of Mexico</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 1A</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY 41</td>
<td>Psych. of Human Relations</td>
<td>3.0</td>
</tr>
<tr>
<td>SOC 1</td>
<td>Introduction to Sociology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Additional Information**

A grade of "C" or better must be maintained in each course of the certificate program.

---

**INS12. Fund. of Teaching ESL (2)**

Semesters Offered: Variable

Designed for instructional aides but is also open to teachers who work with limited English speaking students. There will be lectures, presentations and hands-on experiences in the various types of oral and written drills of the audio-lingual method, the techniques for adapting and individualizing materials and games to make language real communication.

[CSU]


Semesters Offered: Variable

Designed to provide the instructional aide or teacher working with limited English speaking students with background material for identifying and solving predictable trouble spots encountered by a non-English speaker learning English. It will cover the study of potential trouble spots in following areas: phonology (the sound system of English and the nature of language), morphology (comparing words and how they change), syntax (comparing the order of words, and lexicon (the meaning of words, and cognates versus false cognates). There will be lectures readings and class projects.

[CSU]

**INS26. Intro. to Special Education (3)**

Semesters Offered: Variable

A survey of the field of special education emphasizing the role of the special education assistant in the training of the exceptional child. The course will include an introduction to the types of handicapped children, the function of the assistant as a teacher assistant, and the vocational opportunities available. Field trips to educational facilities will be an important part of the instructional program.

[CSU]

**INS30. Language Arts for Instr. Aides (1)**

Semesters Offered: Variable

Emphasis on information and skills related to understanding and teaching concepts of language arts for instructional aides.

[CSU]

**INS52. Intro. to Bilingual Programs (3)**

Semesters Offered: Variable

Historical process of bilingual education in the United States of America. Bilingual programs at the local and federal level. Analysis of current issues in bilingual cross-cultural education. Meets CDA functional areas: 3, 5, 6, 8, 9, 11, 12, and 13. Not open to students who have completed ECE 52 with a grade of C or better.

[CSU]
INS101. The Role of the School Aide (3)
Lec 3 Hrs
Seminars Offered: Variable
Varied roles of instructional aides as exists in special programs as well as the regular classroom. Understanding of various program requirements; development of skills as pertains to the elementary and high school classroom.

INS199. Contemporary Issues in Education (.3-3)
Credit/No Credit Only
Seminars Offered: Variable
Seminars of special topics of contemporary interest centered on current teaching strategies, methodology, activities, and important issues affecting teachers and staff in the education field. Seminars will vary from .3-3 units and will be offered as requests are made by the educators, supervisors and coordinators in the community. Students may repeat course for up to six units provided the topic is different.

INS250. Tutor Training (.3-1)
Credit/No Credit Only
Seminars Offered: Variable
This course is designed to provide an introduction to the theories and methods of effective tutoring, including interviewing, identification of learning problems, the use of tests and evaluative instruments, the study and development of effective communication techniques, and the use of learning theories and methods of effective individualized instruction. Opportunities will be provided for evaluation of an experience in actual tutoring situations, the course is offered for 18 weeks of the semester, an open entry/open exit basis.

INS301. Supervised Tutoring (0)
No Credit
Prerequisite: Participation in the Tutorial Assistance Program. Students may apply for participation in the Tutorial Assistance Program at the Tutorial Center in the College Center Annex, Room 108.
Seminars Offered: Variable
This is a course for Tutorial Program tutees providing individual and group instruction and assistance in preparation for college course class meetings and fulfillment of course completion requirements. Topics covered include identification of learning problems, organization techniques, word study, preparation for exams, report writing, and homework problem practice.
Interdisciplinary studies brings together ideas, concepts, and values that span two or more disciplines. It is an attempt to unify, interpret and synthesize material in a variety of areas and, thus, lead to greater student understanding in the humanities area. Specific courses emphasize discussion and ideas related to topics in the humanities.

IDS1. Boronda Study Group (3)
Credit/No Credit Only
Lec 3 Hrs
An in-depth study of the nation chosen for Boronda study travel. Emphasis on the social and cultural influences that have shaped the nation. Selection to the Boronda Study Group is encouraged. [CSU]

ITA1. Elementary Italian (4)
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
An introduction to the essentials of pronunciation, vocabulary, grammar, and Italian culture.
[CSU; UC; CAN ITAL 2, CAN ITAL SEQ A with ITAL 1 & 2]

ITA2. Elementary Italian (4)
Prerequisite: Italian 1.
Lec 4 Hrs; Lec 1 Hr
Semesters Offered: Variable
A continuation of the essentials of Italian grammar with pronunciation practice.
[CSU; UC; CAN ITAL 4, CAN ITAL SEQ A with ITAL 1 & 2]

ITA3. Intermediate Italian (4)
Prerequisite: Italian 2.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
Advanced principles of grammar. An intensive practice in conversation.
[CSU; UC; CAN ITAL 8]
The active role the United States is taking in world affairs and trade increases the need for a knowledge of foreign languages and cultures. The acquisition of practical communication skills in modern foreign language is the primary objective. This is accomplished by the direct oral approach, motivated by lectures and supplemented by the language laboratory.

Positions for which four-year graduates in foreign language are qualified are teaching, business, foreign services, law enforcement, nursing, and secretarial services.

JPN1. Elementary Japanese (4)
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
Fundamental principles of Japanese grammar and syntax with intensive drill in pronunciation and conversation. Readings from simple prose.
[CSU; UC; CAN JAPN SEQ A with JPN 1 & 2; CAN JPN 2]

JPN2. Elementary Japanese (4)
Prerequisite: Japanese 1.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
Fundamental principles of Japanese grammar and syntax with intensive drill in pronunciation and conversation. Readings from contemporary prose.
[CSU; UC; CAN JAPN SEQ A with JPN 1 & 2; CAN JPN 4]

JPN3. Intermediate Japanese (4)
Prerequisite: Japanese 2.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
An advanced course designed to develop overall skill in speaking, reading, and writing with accurate understanding of modern Japanese-Chinese characters, grammar, and idiomatic usages.
[CSU; UC; CAN JAPN SEQ B, with JPN 3 & 4; CAN JPN 8]

JPN4. Intermediate Japanese (4)
Prerequisite: Japanese 3.
Lec 4 Hrs; Lab 1 Hr
An advanced course designed to develop overall skill in speaking, reading, and writing with accurate understanding of modern Japanese-Chinese characters, grammar, and idiomatic usages.
[CSU; UC; CAN JAPN SEQ B, with JPN 3 & 4; CAN JPN 10]

JPN10. Japanese Lang. & Culture (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
This course is designed for the person who desires to develop his/her basic and practical conversational skills and knowledge of Japanese culture and social behaviors. Class room activities will also feature the development of hiragana writing skills.
[CSU]

JPN11. Japanese Lang. & Culture (3)
Credit/No Credit Option
Prerequisite: Japanese 10 or the equivalent
Lec 3 Hrs
Semesters Offered: Variable
Continued study for the person who desires to develop his/her basic and practical conversational skills and knowledge of Japanese culture and social behaviors. Class room activities will also feature the development of hiragana writing skills.
[CSU]
Journalism is the study of the dynamics of print and non-print communication and its principles, practices, genres, and history within the context of evolving contemporary societies and human behaviors. Journalism is interdisciplinary in nature integrating concepts of mass communication with culture, history, political science, law, ethics, sociology, literature, economics, technology, government, science, and international affairs. This discipline frequently incorporates the written word with photo-journalism, graphics, film, and video.

The following list is a sample of the many career options available for the journalism major. A few of these require an associate degree; most require a baccalaureate degree; and some require a graduate level degree: reporter, copy editor, photo-journalist, columnist, public affairs manager, press relations officer, speech writer, critic, public information specialist, broadcaster, magazine writer, high school or college instructor, graphic designer, correspondent, production technician, and technical writer or editor.

**JRN51. News Writing and Reporting (3)**
Lec 2 Hrs; Lab 3 Hrs
Credit/No Credit Option
Instruction and practice in the fundamentals and professional standards of gathering and writing news and feature story material for news media, especially newspapers. Concentration on organization and style of news stories, interviewing, and basic lead and story types. Enrollment in or completion of English 101 or a higher level English is recommended. [CSU; CAN JOUR 2]
Liberal Studies is an interdisciplinary A.A. Degree. The A.A. Degree in Liberal Studies is designed for students who desire the broadest possible liberal education: (1) as a preparation for teaching all subjects in the elementary school classroom; (2) as an alternative approach to careers in business; (3) as a preparation for entry into professional schools in the health sciences law, ministry, etc.; (4) and as a source of personal growth and development.

Students may also use the Liberal Studies major to prepare for transfer to California State University San Jose, CSU Sacramento, Cal Poly SLO, and CSU Fresno. Students preparing to transfer to other institutions should consult with a Hartnell College counselor. General Education transfer requirements are met by completion of this A.A. Degree. Transfer institutions generally require that students earn a grade of "C" or better in each course within the Liberal Studies major.

## Requirements

### REQUIRED COURSES

**Speech 1A or 3**  
Essentials of Public Speaking  
3.0

**English 1A**  
College Composition and Reading  
3.0

**English 2 or Philosophy 15**  
Critical Thinking  
3.0

**Math 12 or 16 or 24 or 25**  
Transferable Math Course  
3.0

**Two Semesters of the same Foreign Language or ASL in college**  
Spanish Recommended  
6-8.0

**History 17A or 17B**  
History of the United States  
3.0

**Political Science 1**  
American Political Institutions  
3.0

### Electives

The department recommends, but does not require that students select one or more of the following electives:

- **Coun 23, 27, COU/SPE 35**  
  Counseling course  
  3.0

### REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

- **Natural Sciences**  
  3.0
- **Ethnic Groups in the United States**  
  3.0

### OPTIONS

The department recommends, but does not require that students select one of the following options:

#### FRESCO

**Geol 1**  
Physical Science course  
3-4.0

**Biology 1 or 10**  
Life Science  
3-6.0

**Math 12**  
Number Systems  
3.0

**Art 3, 6A, B, or C, 11A, B, or C, Eng 31, 32, or 33, Music 2**  
Area C1 Arts/Humanities course  
3.0

**English 10**  
Linguistics  
3.0

**History 14A**  
Western Civilization  
3.0

**History 17A**  
U.S. History  
3.0

**Computer Science 11**  
Introduction to Computer Applications  
3.0

#### CAL POLY SAN LUIS OBISPO

**Biology 20**  
Field Biology/Natural Science  
3.0

**Biology 1 or 2**  
General Biology  
5.0

**Math 25**  
Pre-Calculus Mathematics  
3.0

**Math 13 or 24**  
Statistics or Trigonometry  
3-6.0

**History 17A and 17B**  
US History  
6.0

**English 10**  
Linguistics  
3.0

**Psychology 1A**  
General Psychology  
3.0

### MONTREY BAY

**Biology 1, 3, 10, 30, 47, or 48**  
Life Science with a Lab  
3-5.0

**Chem 1A, 2A, 4, or 8, Phy 2A, 4A, or 10**  
Physical Science course  
4.0

**Art 1, Geol 1, Geol 2, 6, Met 1, Ocn 1, or 10**  
Earth Science  
4.0

One of the science classes must contain an underlined lab course

**Math 12 or 16**  
Quantitative Literacy  
3.0

**Geography 2 or 5**  
Global Competency  
3.0

**Cou/SPE 35, Eth 1, His 46, 51, Soc 5, or 42**  
Community Participation  
3.0

**Art 10, 15, 20, Eng 25, 26, 27, Eth 2, 3, 4, 25, His 48, 49B, 50A+51A, 55A or 55B**  
Integrated Art  
3.0

**Theatre Arts 3, 6A, 6A, 7A, 10, 11 or 12**  
Integrated Theatre  
3.0

**Music 1A, 1B, 2, 3, 5, 12, 13A, 16, 17A, 20, 22, 27, 30A+31A, 55A or 55B**  
Integrated Music  
3.0

**Integrated Art, Theatre, Music**  
Must include one underlined activity course and one lecture course

#### SAN JOSE

**Biology 47**  
Biological course  
3-4.0

**Chemistry 22**  
Physical Science course  
4.0

**Astronomy 1 or Meteorology 1**  
Physical Science course  
3.0

**Geography 2**  
Intro. to Geography  
3.0

**Math 12**  
Number Systems  
3.0

**Art 1A, 1B, 1C, Music 1A or Theatre Arts 1**  
Fine Arts course  
3.0

**English 47A and 47B**  
American Literature  
6.0

**History 4A and 4B**  
Western Civilization  
6.0

**Psychology 1A**  
General Psychology  
3.0

#### SACRAMENTO

**Biology 10**  
General Biology  
4.0

**Physics 2A**  
General Physics  
4.0

**History 40, 49A or B, 51, or 52**  
History course  
3.0

**Music 2**  
Music Fundamentals I  
3.0

**Economics 1**  
Principles of Economics - Macro  
3.0

**Transferable Math Course**  
Math 24 recommended  
3-4.0

**F&CS 14**  
Child Development  
3.0

### ADDITIONAL INFORMATION

1. Students planning to teach in California should complete geometry in high school or college.
2. Students transferring to CSUMB must complete a third semester foreign language.
3. Consult with a counselor for other colleges, most appropriate transferable courses, CSU GE-Breadth, or further transfer coursework.
4. Students may use an optional or elective course in this area.

A grade of "C" or better must be achieved in each required course of the program.
The Library Instruction curriculum is designed to provide students with basic and intermediate information research skills they will need to succeed in college and in the competitive 21st century work place.

LIB2. Introduction to Using the Academic Library (1)
Credit/No Credit Option
Self-Paced: 3 Hrs
Semesters Offered: Variable
Introduces students to academic library resources and basic library skills. Includes print, non-print, and electronic sources in self-paced instructional lessons.

[CSU; UC]

LIB5. Information Competency in the Sciences and Applied Technology (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
An introduction to the information competency skills required to locate, evaluate and cite materials in the sciences and applied technology. Students will utilize print, Internet and other electronic sources.

[CSU; UC]

LIB6. Information Competency in the Social Sciences (1)
Credit/No Credit Only
Lec 1 Hr
Semesters Offered: Variable
An introduction to the information competency skills required to locate, evaluate and cite materials in the social sciences. Students will utilize print, Internet and other electronic sources.

[CSU; UC]

LIB7. Information Competency in Literature and the Fine Arts (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
An introduction to the information competency skills required to locate, evaluate and cite materials in literature and the fine arts. Students will utilize print, Internet and other electronic sources.

[CSU; UC]

LIB145. Special Projects (1-3)
Credit/No Credit Option
Semesters Offered: Variable
For students wishing a supervised program of additional applications in research, bibliography, and/or library instruction beyond the scope of regular library instruction courses. Designed to fit the student's individual interests and needs.
LIBRARY MEDIA TECHNOLOGY

AREA: Educational Technology and Library Services

ASSOCIATE VICE PRESIDENT: Gary Hughes

FACULTY: Jennifer Lagier-Fellguth, Margaret Mayfield, William Rawson

SECRETARY: Joanne Pleak

OFFICE: Library

COUNSELOR: Alison Paul

The Library/Media Technology program provides training and classes in both technical areas and interpersonal skills to prepare students for traditional and non-traditional careers in the information and library industry. Library assistants, library technicians, media technicians, and genealogists are some career options.

LIBRARY ASSISTANT

ASSOCIATE OF ARTS DEGREE

Completion of the Certificate Program plus graduation requirements for the Associate of Arts Degree.

AREA UNITS
Natural Sciences 3.0
Social and Behavioral Sciences 3.0
Humanities 3.0
Ethnic Groups in the United States 3.0
Language and Rationality 1.0 - 4.0

(Courses 5, 6, 7 or BUS 1A recommended)**

13.0 - 16.0

CERTIFICATE PROGRAM

COURSE # COURSE TITLE UNITS
LIB 2 Introduction to Using the Academic Library 1.0
LBT 52 Technical Services 3.0
LBT 53 Public Services 3.0
LBT 55 On-line Database Searching 3.0
LBT 58 Info. & Reference Services 3.0
LBT 95 Cyber Ethics 3.0
BUS/CSS 109 Introduction to PC Applications or CSS 48 Computer and Information Literacy (4.0)
BUS 110 Beg. Keyboarding and Document Formatting 3.0
CO-OP 99 Occupational Work Exp. Educ. 1.0 - 3.0
CSS/LBT 90 Internet Literacy 3.0
ENG 1A College Comp. & Reading 3.0
MAT 121 Elementary Algebra or higher 3.0 - 5.0

32.0 - 37.0

ELECTIVES (9 units)
LIB 5 Information Competency in the Sciences and Applied Technology 1.0
LIB 6 Information Competency in the Social Sciences 1.0
LIB 7 Information Competency in Literature and the Fine Arts 1.0
LBT 45 Special Projects 0.5 - 3.0
LBT 57 Children and Libraries 3.0
LBT 70 Intro. To Genealogy Research 3.0
LBT/CSS 90 Internet Literacy 3.0
LBT 106 Seminars in Library/Media Tech. 0.3 - 3.0
ART/CSS 67 Web Authoring 3.0
BUS 1A Financial Accounting 3.0
BUS 128 Professionalism in the Workplace 2.0
BUS/CSS 150.15 Word Processing 3.0
BUS/CSS 150.25 Electronic Spreadsheets 3.0
CSS 1 Intro to Computer Science and Programming Fundamentals 4.0
CSS 43 Introduction to Computers 4.0
SPA 1 or 2 Elementary Spanish 5.0
SPA 3 or 4 Intermediate Spanish 4.0

9.0

Additional Information
* Students must sign up for CO-OP 99 (Cooperative Work Experience) at the Career Center.
** LBT 5, 6, 7 and BUS 1A may be used in this area.

A grade of "C" or better must be maintained in each required major course.

LBT54. Special Projects (.5-3)
Credit/No Credit Option 
Semesters Offered: Variable
For students wishing a supervised program of additional applications in research, bibliography, and/or library procedures beyond the scope of regular Library courses. Designed to fit the student's individual interests and needs.

LBT52. Technical Services (3)
Lec 3 Hrs
Semesters Offered: Variable
Course is an introduction to Library/Media technical services. Acquisitions, cataloging, and processing of library materials will be explored in-depth along with the effective use of electronic bibliographic tools. Current issues relating to technical services will be covered. This course may also be delivered through the primary modality of video conferencing.

LBT53. Public Services (3)
Lec 3 Hrs
Semesters Offered: Variable
A course designed to prepare students for planning and controlling systems that provide direct service to the library patron: circulation of materials, effective communication with patrons and staff, services and programs for special patron groups. Publicizing and marketing library services will also be covered.

LBT55. Online Database Searching (3)
Credit/No Credit Option
Advisory: Students taking this course are advised that they must have basic computer skills for operating a word processing program, a spreadsheet program and e-mail, including sending attachments and files. Students also need access to the Internet and have adequate hardware and software such as Windows 98/2000/XP, Mac OS8-10 or their equivalent. Students without off-campus access to technology will be able to use the Library/Media Center or open computer labs to complete their assignments.
Lec 3 Hrs
Semesters Offered: Variable
Overview of online databases and techniques of online searching. Includes searching strategies, evaluation of database structures, implementation and management of search services.

Hartnell College Catalogue – 2005/06
LBT57. Children and Libraries (3)
Lec 3 Hrs
Semesters Offered: Variable
Introduction to literature, electronic and AV resources, storytelling and related activities for children. Includes an overview of literature genres, gender roles and images, an examination of the purpose of children’s literature, an introduction to the diverse community of readers and writers of children’s literature, an examination of censorship issues, and an introduction to electronic resources. [CSU]

LBT58. Info. and Reference Services (3)
Lec 3 Hrs
Semesters Offered: Variable
Knowledge and skills appropriate to the paraprofessional performing information and reference services in a variety of types of libraries/media/information centers. The student will learn the types, uses and arrangement of basic reference tools, information sources and computer networks. [CSU]

LBT70. Intro to Genealogy Research (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Introduction to genealogy research methods and sources. Use of IBM Microcomputer and Personal Ancestral File (PAF) software to record and develop research. Use of Family Search CD-ROM data bases to enhance research, locate living relatives, prevent duplication and speed up the research process. No previous experience necessary. [CSU]

LBT90. Internet Literacy (3)
Advisory: Students taking this course are advised that they must have basic computer skills for operating a word processing program, a spreadsheet program and e-mail, including sending attachments and files. Students also need access to the Internet and have adequate hardware and software such as Windows 98/2000/XP, Mac OS 8-10 or their equivalent. Students without off-campus access to technology will be able to use the Library Media Center or open Computer labs to complete their assignments.
Lec 3 Hrs;
Semesters Offered: Variable
Examines the organizational structure, resources and uses of the Internet. Includes exploration of visible and invisible Web sources, online research strategies, information competency, Web authoring, cyber ethics, and emerging Internet technologies. Not open to students who have completed CIS/CSS 90. [CSU]

LBT95, Cyber Ethics (3)
Lec 3 Hrs
Semesters Offered: Variable
Explores key issues of socially responsible behavior when using technology, specifically the Internet. Examines web use and misuse and the issues of privacy, ownership (especially intellectual property rights), access, free speech and security. Students will improve their technology and critical thinking skills with hands-on applications and ethical analysis.

LBT106. Seminars in Library/Media Technology (.3-3)
Credit/No Credit Option
Semesters Offered: Variable
Workshops and seminars to provide skills, information and resources necessary to library workers who are involved in technological and organizational changes in the field of library and information services. Seminars vary from .3 to 3.0 units and will be offered as requests are made by members of the library community. Students may repeat the course three times, provided the topic is different. May be offered in web-based or videoconferencing format.
The Mathematics discipline offers course work in all levels of mathematics from arithmetic through differential equations and linear algebra. Students seeking improvement in their basic mathematical skills and those desiring development of advanced mathematical methods can all find meaningful activities in the mathematics program. While there are job opportunities in pure mathematics, there are even more in applied mathematics, engineering and other technical fields relying heavily on mathematics. Positions for which four-year graduates in mathematics are qualified can be found in the fields of business, computers, teaching, and research.

MATHEMATICS

ASSOCIATE OF SCIENCE DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 3A</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3B</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3C</td>
<td>Analytic Geometry &amp; Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 4</td>
<td>Linear Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 5</td>
<td>Differential Equations</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Electives one course chosen from the following:

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 12</td>
<td>Number Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 13</td>
<td>Elementary Statistics</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT 16</td>
<td>Finite Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 130</td>
<td>Computer Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 2A</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 2B</td>
<td>General Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4A</td>
<td>Mechanics and Properties of Matter</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4B</td>
<td>Electricity and Magnetism</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4C</td>
<td>Heat, Sound, and Light</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 4</td>
<td>Introduction to Scientific Programming in C</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS 2A</td>
<td>Object Oriented Program. in C++</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Remaining general education requirements in addition to the courses listed above:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Science</td>
<td>3.0</td>
</tr>
<tr>
<td>(Physics 2A, 2B, 4A, 4B, or 4C also meets the Elective requirement below.)</td>
<td></td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
</tbody>
</table>

MAT2. Calculus for Managerial, Life, and Social Sciences (4)

Prerequisite: Math 123 with a grade of C or better.

Lec 4 Hrs

Offered: Fall, Spring, Summer

Linear and quadratic models, introduction to limits, the derivative and its applications, the integral and its applications, methods of integration differential equations, and multivariable calculus. Applications from the life, management, and social sciences are considered throughout the course.

This course is primarily for students in business, social science, biological sciences, education, and humanities.

[CSU; UC; CAN MATH 30; CAN MATH 34]

MAT3A. Analytic Geometry and Calculus (4)

Prerequisite: Math 24 and Math 25 OR Math 26 OR Math Analysis in high school. This prerequisite must have been completed with a grade(s) of C or better.

Lec 4 Hrs

Offered: Fall, Spring, Summer

Includes: limits, differentiation, differentials, extrema, integration, applications, and trigonometric functions. This course is primarily for students in mathematics, physical science, chemistry, and engineering.

[CSU; UC; CAN MATH 18, CAN MATH SEQ B with MAT 3A & 3B, CAN MATH SEQ C with MAT 3A & 3B & 3C]

MAT3B. Analytic Geometry and Calculus (4)

Prerequisite: A grade of C or better in Mathematics 3A.

Lec 4 Hrs

Offered: Fall, Spring

Continuation of Math 3A. Includes logarithmic, exponential, and hyperbolic functions; techniques of integration; indeterminate forms; improper integrals; infinite series; plane analytic geometry; plane curves; and polar coordinates.

[CSU; UC; CAN MATH 2B, CAN MATH SEQ B with MAT 3A & 3B, CAN MATH SEQ C with MAT 3A & 3B & 3C]

MAT3C. Analytic Geometry and Calculus (4)

Prerequisite: Mathematics 3B.

Lec 4 Hrs

Offered: Fall, Spring

A study of functions of several variables, vectors, surfaces, vector-valued functions, partial differentiation, multiple integrals, topics in vector calculus, and an introduction to differential equations.

[CSU; UC; CAN MATH 22, CAN MATH SEQ C with MAT 3A & 3B & 3C]
MAT4. Linear Algebra (3)  
**Prerequisite:** Mathematics 3B.  
Lec 3 Hrs  
Offered: Spring  
A study of matrices, linear systems of equations, determinants, vector spaces, subspaces, linear independence, linear transformations, eigenvalues, eigenvectors and applications.  
[CSU; UC; CAN MATH 26]

MAT5. Differential Equations (3)  
**Prerequisite:** Mathematics 3C  
Lec 3 Hrs  
Offered: Spring  
Differential equations of the first, second and higher order, simultaneous, linear, homogeneous equations; solutions by power series, numerical methods, Fourier series, Laplace transforms; applications.  
[CSU; UC; CAN MATH 24]

MAT10. Math For Liberal Arts (3)  
**Prerequisite:** Math 123 with a grade of C or better.  
Lec 3 Hrs  
Offered: Fall, Spring  
Historical study of elementary mathematics. Topics include: number systems, symbolic logic, geometry, descriptive statistics, number theory, counting principles, and problem solving techniques. This course is designed for students in the liberal arts.  
[CSU; UC; CAN MATH 2]

MAT12. Number Systems (3)  
**Prerequisite:** Math 122 & Math 123.  
Lec 3 Hrs  
Offered: Fall, Spring, Summer  
Problem solving, structure, arithmetic, numeration systems, algebra of the real numbers, set theory, number theory, rationals, irrationals and integers. This course is primarily for teacher preparation (K-8).  
[CSU; UC; CAN MATH 4]

MAT13. Elementary Statistics (5)  
**Prerequisite:** Math 123 with a grade of C or better.  
Lec 5 Hrs  
Offered: Fall, Spring, Summer  
A study of the measures of central tendency, dispersion and position, graphical presentation, sampling, frequency distributions, linear correlation and regression, probability, probability distributions, sample variability, statistical inferences, confidence intervals, Chi-Square tests, analysis of variance, and non-parametric tests. This course is primarily for students in business, social sciences, biological sciences, education, and humanities. Use of some type of technology, including graphing calculators or computers will be extensively integrated as a tool in the description and analysis of data.  
[CSU; UC; CAN STAT 2; CAN PSY6; CAN SOC 8]

MAT16. Finite Mathematics (3)  
**Prerequisite:** Math 123 with a grade of C or better.  
Lec 3 Hrs  
Offered: Fall, Spring  
Sets and logic, probability, linear programming, vector and matrices and game theory with applications to business, social, and biological sciences. This course is primarily for students in business, social science, biological sciences, computer science, education, and humanities.  
[CSU; UC; CAN MATH 12]

MAT24. Trigonometry (3)  
**Prerequisite:** Math 122 and Math 123 with grades of C or better.  
Lec 3 Hrs  
Offered: Fall, Spring, Summer  
Trigonometric functions and their graphs, solution of right and oblique triangles, introduction to vectors, use of trigonometric tables, identities and conditional equations, inverse trigonometric functions and their graphs, analytic trigonometry, and complex numbers.  
[CSU; CAN MATH 8]

MAT25. Pre-Calculus Mathematics (3)  
**Prerequisite:** Math 123 with a grade of C or better.  
Lec 3 Hrs  
Offered: Fall, Spring, Summer  
A study of first degree relations and functions, second degree relations and functions, polynomial functions, rational functions, exponential functions, logarithmic functions, graphing techniques, systems of equations and inequalities, matrices, determinants, translation of axes, parametric equations, Binomial Theorem and Mathematical Induction. This course is designed to prepare students for Math 3A.  
[CSU; UC; CAN MATH 10]

MAT45. Special Projects (1-4)  
Credit/No Credit Option  
Semesters Offered: Variable  
Individual and group investigations of math problems for those students wishing practical experience or additional training beyond the scope of regular math courses.  
[CSU]

MAT114. Using Graphing Calculators (.25)  
Credit/No Credit Only  
Lec .25 Hrs  
Offered: Variable  
This course is designed to help students understand how the graphing calculator operates and to introduce some of the functions used in various math courses. Topics in this course include overview of the keyboard, order of operations, modes and formats, storing information, using the equation editor, using the solver, graphing, setting the window, the MATH menu, and using the table function.  
[CSU; UC; BUS 151, with a minimum grade of C.]

MAT121. Elementary Algebra (5)  
**Prerequisite:** Math 201 or BUS 151, with a grade of C or better.  
Lec 5 Hrs OR Can be Lec/Lab format  
Offered: Fall, Spring, Summer  
Topics include operations with real numbers, simplifying expressions, solving equations, linear graphing techniques, linear equations and inequalities (both one and two variables), polynomials, factoring, rational expressions, exponents, radtards, and applications. This course may be scheduled in a regular lecture or a lecture/lab format. Not open to students who have completed, with a grade of “C” or better, Math 121L2 or Math 121A.

MAT121L1. Elementary Algebra (1)  
**Prerequisite:** Completion of, with a grade of C or better, Math 201 (3 units) or Bus 151.  
Lab 3 Hrs  
Semesters Offered: Fall, Spring, Summer  
A study of real numbers, algebraic expressions, solving linear equations, and applications. Not open to students who have completed, with a C or better, Math 121A or its equivalent. Credit is awarded upon successful completion of the course content within the course outline.

MAT121L2. Elementary Algebra (1.5)  
**Prerequisite:** Completion of Math 121L1 with a grade of C or better.  
Lab 4.5 Hrs  
Offered: Fall, Spring, Summer  
A study of linear equations and inequalities in one variable, exponents, polynomials, factoring, and applications. Not open to students who have completed, with a C or better, Math 121A or its equivalent. Credit is awarded upon successful completion of the course content within the course outline.

MAT121L3. Elementary Algebra (1.5)  
**Prerequisite:** Completion of, with a grade of C or better, Math 121A or Math 121L2.  
Lab 3 Hrs  
Offered: Fall, Spring, Summer  
A study of elementat quadratic equations and inequalities, rational expressions and equations, graphing and finding linear equations, and applications. Not open to students who have completed, with a C or better, Math 121B or its equivalent. Credit is awarded upon successful completion of the course content within the course outline.
MAT121L4. Elementary Algebra (1)
Prerequisite: Completion of Math 121L3 with a C or better.
Lab 4.5 Hrs
Offered: Fall, Spring, Summer
A study of graphing linear inequalities in two variables, roots and radicals, and applications. Not open to students who have completed, with a C or better, Math 121B or its equivalent. Credit is awarded upon successful completion of the course content within the course outline.

MAT122. Plane Geometry (4)
Prerequisite: Math 121 (5 units)
Lec 4 Hrs
Semesters Offered: Variable
Constructions, proofs, congruent triangles, similar polygons, parallel lines, quadrilaterals, circles, areas, inequalities, loci, regular polygons, and circles.

MAT123. Intermediate Algebra (5)
Prerequisite: Math 121 (5 units) with a grade of C or better.
Lec 5 Hrs OR Can be Lec/Lab format.
Semesters Offered: Variable
Review of elementary algebra plus more advanced problems of factoring, rational expressions, linear and quadratic equations, functions and graphs, systems of equations and inequalities, exponents, radicals, exponential and logarithmic functions, conic sections, sequences, series and applications related to all the functions of intermediate algebra. Not open to students who have completed MAT 123L2, or its equivalent, with a grade of C or better.

MAT123L1. Intermediate Algebra (1)
Prerequisite: Math 121 (5 Units) with a grade of C or better.
Lab 3 Hrs
Offered: Fall, Spring, Summer
Credit is awarded upon successful completion of the course content within the course outline. Review of elementary algebra plus more advanced problems of factoring, compound inequalities, absolute value equations and inequalities, formulas, exponents, equations with radicals, and complex numbers. Not open to students who have completed, with a grade of C or better, Math 123 or its equivalent.

MAT123L2. Intermediate Algebra (1)
Prerequisite: Math 123L1 with a grade of C or better.
Lab 3 Hrs
Offered: Fall, Spring, Summer
Credit is awarded upon successful completion of the course content within the course outline. Further study of intermediate algebra. Topics include: Completing the square, the quadratic formula, equations, quadratic in form, formulas, applications, nonlinear inequalities, functions, and variation. Not open to students who have completed with a grade of C or better, Math 123 or its equivalent.

MAT123L3. Intermediate Algebra (1.5)
Prerequisite: Math 123L2 with a grade of C or better.
Lab 4.5 Hrs
Offered: Fall, Spring, Summer
Credit is awarded upon successful completion of the course content within the course outline. Further study of intermediate algebra. Topics include: Linear systems and their applications, determinants, Cramer’s Rule, quadratic functions and their applications, circle, ellipse, hyperbola, square root functions, nonlinear systems, second-degree inequalities, and systems of inequalities. Not open to students who have completed, with a grade of C or better, Math 123 or its equivalent.

MAT123L4. Intermediate Algebra (1.5)
Prerequisite: Math 123L3 with a grade of C or better.
Lec 4.5 Hrs
Offered: Fall, Spring, Summer
Credit is awarded upon successful completion of the course content within the course outline. Intermediate algebra. Topics include: Inverse, exponential and logarithmic functions, equations involving exponential and logarithmic functions, sequences and series, arithmetic sequences, geometric sequences, and the binomial theorem. Not open to students who have completed, with a grade of C or better, Math 123 or its equivalent.

MAT130. Computer Mathematics (3)
Lec 3 Hrs
Semesters Offered: Variable
Basic quantitative methods, base numbers and operations, computer arithmetic, algorithms, flowcharts, selected topics from algebra, sets, logic boolean algebra, and graphing. This course intended for those students who are interested in the mathematics associated with computer usage.

MAT151. Technical Mathematics (3)
Lec 3 Hrs
Semesters Offered: Variable
Linear equations, signed numbers, scientific notation, exponents, combining like terms, using formulae, basic geometry, right triangle trigonometry, and law of sines and cosines. A scientific calculator is used to assist in the solution of meaningful problems in technical fields. This is a course designed for technology students electing not to pursue the engineering pre-calculus mathematics program. Not open to students who have completed Math 151.

MAT151L1. Technical Mathematics (1)
Lab 3 Hrs
Offered: Fall, Spring, Summer
A study of technical mathematics. Topics include: Addition, subtraction, multiplication and division of whole numbers, fractions, and decimals, factoring of whole numbers, exponents, square roots, cube roots, comparing fractions and mixed numbers, using fractions and decimals to convert units, applications of percent, conversion of decimals to fractions, problem solving techniques. A scientific calculator is used to assist in the solution of meaningful problems in technical fields. This is a course designed for technology students electing not to pursue engineering pre-calculus mathematics program. Not open to students who have completed Math 151.

MAT151L2. Technical Mathematics (1)
Lab 3 Hrs
Offered: Fall, Spring, Summer
Further study of technical mathematics. Topics include: Basic Geometry, Metric System, scientific notation, the Pythagorean theorem, reading and interpreting graphs, graphing in a rectangular coordinate system, distance between two points, slope of a line, indirect reasoning, addition, subtraction, multiplication and division of positive and negative numbers and expressions, order of operations and evaluation of algebraic expressions. A scientific calculator is used to assist in the solution of meaningful problems in technical fields. This is a course designed for technology students electing not to pursue the engineering pre-calculus mathematics program. Not open to students who have completed Math 151.

MAT151L3. Technical Mathematics (1)
Prerequisite: Math 151L2
Lab 3 Hrs
Offered: Fall, Spring, Summer
Further study of technical mathematics. Topics include: Equations, formulas, word problems, problem solving techniques, proportions and basic Trigonometry. A scientific calculator is used to assist in the solution of meaningful problems in technical fields. This is a course designed for technology students electing not to pursue the engineering pre-calculus mathematics program. Not open to students who have completed Math 151.

MAT200L. Arithmetic of Whole Numbers (1)
Lab 3 Hrs
Semesters Offered: Variable
Credit is awarded upon successful completion of the course content within the course outline. This course is designed for those students who need practice with basic addition facts and the multiplication table. Topics include: addition, subtraction, multiplication, and division of whole numbers, and order of operations. This course is offered as a self-paced course only.
MAT201. Pre-Algebra (3)
   Lec 3 Hrs
   Offered: Fall, Spring, Summer
   The arithmetic of whole numbers, integers, fractions and decimals. Also includes ratio and proportion problems, percent problems, and unit conversions. This course is designed for those students who do not meet the prerequisite requirements for Math 121, Elementary Algebra. Not open to students who have completed, with a grade of “C” or better Math 201L2.

MAT201L1. Pre-Algebra (1)
   Lab 3 Hrs
   Offered: Fall, Spring, Summer
   The arithmetic of whole numbers and signed numbers. This course is designed for those students who do not meet the entrance requirements for Math 121, Elementary Algebra. Not open to students who have completed Math 201. Credit is awarded upon successful completion of the course content within the course outline.

MAT201L2. Pre-Algebra (1)
   Prerequisite: Completion of Math 201L1 with a grade of C or better.
   Lab 3 Hrs
   Offered: Fall, Spring, Summer
   The arithmetic of fractions, mixed numbers, and decimals. Not open to students who have completed Math 201. This course is offered as a self-paced course only. Credit is awarded upon successful completion of the course content within the course outline.

MAT201L3. Pre-Algebra (1)
   Prerequisite: Completion of Math 201L2 with a grade of C or better.
   Lab 3 Hrs
   Offered: Fall, Spring, Summer
   Ratio and proportion, unit analysis and percent. Not open to students who have completed Math 201. This course is offered as a self-paced course only. Credit is awarded upon successful completion of the course content within the course outline.

MAT201A1. Pre-Algebra (1.5)
   Lab 1.5 Hrs
   Offered: Fall, Spring, Summer
   The arithmetic of whole numbers. This course is designed for those students who do not meet the entrance requirements for Math 121, Elementary Algebra. Not open to students who have completed Math 201. This course is offered as a self-paced course only. Credit is awarded upon successful completion of the course content within the course outline.

MAT201A2. Pre-Algebra (.5)
   Lab 1.5 Hrs
   Offered: Fall, Spring, Summer
   The arithmetic of signed numbers. This course is designed for those students who do not meet the entrance requirements for Math 121, Elementary Algebra. Not open to students who have completed Math 201. This course is offered as a self-paced course only. Credit is awarded upon successful completion of the course content within the course outline.

MAT203. CBEST Preparation: Mathematics (.3-.5)
   Semesters Offered: Variable
   This course is designed to help prepare teachers or prospective teachers pass the mathematics section of the CBEST test.

MAT205. Individualized Study I (.5)
   Credit/No Credit Only
   Lab 1.5 Hours
   Semesters Offered: Variable
   A course for the student interested in reviewing and reinforcing specific computational skills and mathematical concepts within the scope of Math 201, Math 121 and/or Math 123. May be taken concurrently with one of the above-mentioned courses.

MAT206. Individualized Study II (.5)
   Credit/No Credit Only
   Lab 1.5 Hrs
   A course for the students interested in reviewing and reinforcing mathematical concepts covered in Math 122, 10, 12, 13, 16, 24, 25, 2, 3A, 3B, 3C, 4 and/or 5. May be taken concurrently with one of the above-mentioned courses.

MAT300. Lab Hours By Arrangement (0)
   Semesters Offered: Variable
   Designed for scheduling purposes for math courses offered in the Math Lab. Math lab students should sign up in this course CONCURRENTLY with their desired math course.
The Mechanical Technology curriculum is composed of an array of courses designed to give the individual a working understanding of a variety of mechanical, electro-mechanical, hydraulic, pneumatic and refrigeration systems. Most offerings are scheduled in the evening hours to meet the needs of local industry.

MEC51. Engine Theory (3)
Lec 3 Hrs
Semesters Offered: Variable
Engine theory covering all aspects of the service, maintenance repair, and overhaul of the gasoline and diesel engine, as related to industrial, marine, and construction fields.
[CU]

MEC53. Industrial Electricity (3)
Lec 3 Hrs
Semesters Offered: Variable
This course is a study of electrical maintenance in the factory or plant operation. This course will stress safety, proper use of tools or the trade principles of electricity and basic electrical circuits, electrical conductors, grounding techniques and wire practices and layouts. Will also include electrical codes, motor controls, safety switches and relays. Industrial Electrical experience is recommended for successful completion of this course.
[CU]

MEC54. Mechanical Skills (3)
Lec 3 Hrs
Semesters Offered: Variable
Principles of power trains and accessory systems primarily as applied to agricultural equipment. An in-depth study of motors, clutches, transmissions, differentials and final drives.
[CU]

MEC55. Applied Industrial Mech. (1-6)
Semesters Offered: Variable
For the advanced Agriculture Mechanics student, a course in practical and current applications of agriculture mechanics skills. The student will apply skills to construction of major equipment projects and the actual operation of the equipment. Course may be repeated for up to 6 units credit.
[CU]

MEC56. Hydraulics & Pneumatics (3)
Lec 3 Hrs
Semesters Offered: Variable
Basic fundamentals of hydraulic and pneumatic systems: components, applications, troubleshooting malfunctions, maintenance and repair.
[CU]

MEC57. Commercial Refrigeration (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Application of basic refrigeration concepts in light commercial refrigeration installations. Troubleshooting techniques used in light commercial refrigeration maintenance, refrigeration load calculations, refrigeration piping requirements, and industrial water treatment.
[CU]

MEC59. Industrial Materials & Processes (3)
Credit/No Credit Option
Lec 3 Hrs
Semesters Offered: Variable
Study of specific processes, the types and characteristics of common engineering materials; their basic structure including the concept of internal bond; major types of the manufacturing processes including casting, forming, separating, conditioning, assembling and finishing. English 253 with a grade of C or better, or eligibility for English 101 and a STAAR reading score of 10 or above is recommended.
[CU]

MEC60. Small Engine Repair & Maintenance (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Application of the many skills required to overhaul, repair, and service the small gasoline and diesel engine.
[CU]

MEC169. Hazardous Materials and Industrial Safety (1)
Lec 1 Hr
Semesters Offered: Variable
A basic course in all aspects of safety as it relates to industry. The course will cover the following topics: Hazardous Materials as it pertains to the specific trades. Examples are construction, welding, auto repair, electronics, auto collision repair, health care services, personal protective equipment, materials handling and storage, industrial hygiene, safety inspections, and general industrial safety of proper use of tools and machines. Not open to students who have taken AGR 169.
[CU]

MEC201. Industrial Mech. Update (.3-3)
Semesters Offered: Variable
Seminars of special topics of contemporary interest centered on Industrial Mechanics. Seminars will vary from 1/4 to 3 units and will be offered as requests are made by the local industry. Students may repeat course for up to 8 units provided the topics are different.
Meteorology courses are designed to be enjoyable and relevant to the needs, interests, and backgrounds of the non-science major while also providing an excellent foundation for further course work for students majoring in meteorology and other sciences. Students may design special projects to obtain greater depth in particular aspects of the subject.

MET1. Meteorology-Weather and Climate (3)
Lec 3 Hrs
Offered: Fall
Elementary survey of basic principles of weather phenomena, structure, and general circulation of the atmosphere, regional distribution and effects of weather, climate, and climatic cycles. A course designed for all students from all majors who desire a general knowledge and appreciation of weather and climate. [CSU;
Music is the discipline concerned with the production, analysis, and appreciation of musical sound. Music demands team-work, self-discipline, inter-dependency, self-evaluation, develops sensory perception and motor skills, and builds the ability of people to appreciate the beauty of musical sound.

The music discipline's main concern is to develop a keen appreciation of all periods of music, to involve the individual in the performing arts and enhance the potential ability of each person to reach the highest plane of musical understanding and excellence. The music curriculum is designed to meet the needs of all students, i.e., music majors and general education students. Performances by students are an integral part of the music program; however, the music program provides alternatives to students who are not performance oriented.

Positions for which graduates in music are qualified are as follows:

- Accompanist
- Teacher
- Arranger
- Instrumentalist
- Vocalist
- Choir Director
- Entertainer
- Private Instructor

ASSOCIATE OF ARTS DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>MUS 50A</td>
<td>Harmony</td>
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<td>MUS 50B</td>
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<td>MUS 53A</td>
<td>Intermediate Musicanship</td>
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<tr>
<td>MUS 53B</td>
<td>Intermediate Musicanship</td>
<td>2.0</td>
</tr>
</tbody>
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MUSIC APPRECIATION (3 Units)

- MUS 1A Music Appreciation 3.0
- OR
- MUS 1B Music Appreciation (3.0) 23.0

PIANO PROFICIENCY (2 Units)

To be selected from the following depending on entry level skills:

- MUS 13 Beginning Piano 1.0
- MUS 14 Intermediate Piano 1.0
- MUS 15 Advanced Piano 1.0 25.0

ENSEMBLE (4 Units)

To be selected from the following:

- MUS 20 Hartnell College Chorus 1.0
- MUS 21 Hartnell College Singers 1.0
- MUS 22 Community Chorus 1.0
- MUS 25 Hartnell College Wind Ensemble 1.0
- MUS 26 Jazz Ensemble 1.0
- MUS 27 Brass and Woodwind Ensemble 1.0
- MUS 28 Community Concert Band 1.0
- MUS 30 Chamber Orchestra 1.0
- MUS 31 Chamber Music - Strings 1.0
- MUS 32 Concert Orchestra 1.0 29.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED BELOW:

<table>
<thead>
<tr>
<th>AREA</th>
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<tr>
<td>Natural Sciences</td>
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<tr>
<td>Humanities</td>
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<tr>
<td>Ethnic Groups in the United States</td>
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<tr>
<td>Language and Rationale</td>
<td>9.0</td>
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COMPETENCY REQUIREMENT

See College Catalog

ADDITIONAL INFORMATION

Additional units to reach a minimum of 60 semester units in degree applicable courses.

- 2-10.0
- 60.0

MUS1A. Music Appreciation - Historical Perspective (3) Lec 3 Hrs

Semesters Offered: Variable

A survey of Western music from the 6th century C.E. until the present, covering the important style periods along with the composers who created them and the resources they used. [CSU; UC]

MUS1B. Music Appreciation - Genre Perspective (3) Lec 3 Hrs

Semesters Offered: Variable

A survey of Western music with special emphasis on listening, understanding, and enjoyment of musical masterworks in such varied genres as art song, opera, oratorio, mass, symphony and chamber music. [CSU; UC]

MUS1C. Music Appreciation - Women in Music (3) Lec 3 Hrs

Semesters Offered: Variable

A survey of musical style periods with special emphasis on listening, understanding, and enjoyment of musical masterworks created by women composers in such varied genres as the art song, opera, oratorio, symphony and chamber music. [CSU; UC]

MUS2. Music Fundamentals I (3) Lec 3 Hrs

Semesters Offered: Variable

An introduction to music fundamentals and skills for students with no previous musical training. Recommended as preparation for the study of any instrument or as special background for the classroom teacher. [CSU; UC]

MUS3. Music Fundamentals II (3) Prerequisite: Music 2 or ability to read music. Lec 3 Hrs

Semesters Offered: Variable

A detailed study of the fundamentals of music as introduced in Music Fundamental I intended for pre-majors who have completed Music 2 or as concurrent remediation for majors enrolled in Harmony. [CSU; UC]

MUS5. Ethnic Musics in the U.S. (3) Lec 3 Hrs

Semesters Offered: Variable

Introduction to selected ethnic musics that flourish in the United States including: Hispanic/Latino, Chicano/Mexican-American, Black African-American, Native American, Asian-American, Pacific Islander, and European traditions. The course focuses on the relation of musical genres and movements to the history of the United States and to the society and culture of the country. [CSU; UC]

Hartnell College Catalogue – 2005/06
MUS6. Hawaiian Music (3)
Lec 3 Hrs
Semesters Offered: Variable

MUS10. Applied Music - Voice (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Correct physical and mental poise, principles of breathing, use of organs of articulation, study of vowels, essentials of tone production, song literature suitable to individual needs. May be repeated for credit to a maximum of 4 units.

MUS11. Applied Music - Brasses (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Materials and techniques for playing brass instruments (trumpet, horn, trombone, baritone, or tuba) at appropriate level studied in detail. May be repeated for credit to a maximum of 4 units.

MUS12. Applied Music - Woodwinds (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Materials and techniques for playing woodwind instruments (flute, clarinet, oboe, saxophone, or bassoon) at appropriate level studied in detail. May be repeated for credit to a maximum of 4 units.

MUS13A. Beginning Piano (1)
Prerequisite: Concurrent enrollment in Music 19, Music Practicum
Recommends concurrent enrollment in Music 2, Music Fundamentals I.
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Beginning piano study.

MUS13B. Beginning Piano (1)
Prerequisite: Music 13A or equivalent.
Concurrent enrollment in Music 19, Music Practicum
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Continuation of beginning piano study. Concurrent enrollment in Music 2 is recommended.

MUS14. Intermediate Piano (1)
Prerequisite: Music 13B
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable

MUS15. Advanced Piano (1)
Prerequisite: Music 14
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable

MUS16. Applied Music - Organ (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Beginning organ study. May be repeated for credit to a maximum of 4 enrollments.

MUS17A. Guitar (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Class instruction on guitar.

MUS17B. Guitar (1)
Prerequisite: Music 17A
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Continued instruction on guitar with emphasis on sight reading and basic chord and scale fundamentals.

MUS17C. Guitar (1)
Prerequisite: Music 17B
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Instruction on guitar with emphasis on classical and contemporary music.

MUS17D. Guitar (1)
Prerequisite: Music 17C
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
Class instruction on guitar.

MUS18. Music Practicum (1-2)
Semesters Offered: Variable
Supervised practice in instrumental work or in voice as prescribed by the course in any of the performing arts.

MUS19. Music Practicum (1-2)
Semesters Offered: Variable
Supervised practice in instrumental work or in voice as prescribed by the course.

MUS20. Hartnell College Chorus (1)
Lec 1 Hr; Lab 2 Hrs
Semesters Offered: Variable
A performance group studying the choral literature ranging from the works of the early masters to the modern composer. This course is not limited to music majors. Students majoring in vocal music are expected to sing in the choir for two years. May be repeated for credit to a maximum of 4 units.
MUS23.5. Hartnell Chorale - 21st Century Emphasis (1)  
**Advisory:** Intended for persons with previous choral experience.  
Lec 1 Hr; Lab 2 hrs  
Semesters Offered: Variable  
A choral group of mixed voices which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 21st Century music.  
[CSU; UC]  

MUS25. Hartnell College Wind Ensemble (1)  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A performance group studying standard band literature.  Performances include concerts and playing at athletic contests.  Open to all students. Music major students specializing in instrumental music are expected to participate in the band two years. May be repeated for credit to a maximum of 4 units.  
[CSU; UC]  

MUS29.1. Symphonic Band - 18th Century Emphasis (1)  
**Advisory:** Intended for persons with previous band instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphonic band which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 18th century music.  
[CSU; UC]  

MUS29.2. Symphonic Band - 19th Century Emphasis (1)  
**Advisory:** Intended for persons with previous band instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphonic band which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 19th century music.  
[CSU; UC]  

MUS29.3. Symphonic Band - 20th Century Emphasis (1)  
**Advisory:** Intended for persons with previous band instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphonic band which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 20th century music.  
[CSU; UC]  

MUS29.4. Symphonic Band - 20th Century "Pops" Emphasis (1)  
**Advisory:** Intended for persons with previous band instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphonic band which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 20th century "pops" music.  
[CSU; UC]  

MUS29.5. Symphonic Band - 21st Century Emphasis (1)  
**Advisory:** Intended for persons with previous band instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphonic band which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 21st century music.  
[CSU; UC]  

MUS34.1. Symphony Orchestra - 18th Century Emphasis (1)  
**Advisory:** Intended for persons with previous orchestral instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphony orchestra which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 18th century music.  
[CSU; UC]  

MUS34.2. Symphony Orchestra - 19th Century Emphasis (1)  
**Advisory:** Intended for persons with previous orchestral instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphony orchestra which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 19th century music.  
[CSU; UC]  

MUS34.3. Symphony Orchestra - 20th Century Emphasis (1)  
**Advisory:** Intended for persons with previous orchestral instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphony orchestra which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 20th century music.  
[CSU; UC]  

MUS34.4. Symphony Orchestra - 20th Century "Pops" Emphasis (1)  
**Advisory:** Intended for persons with previous orchestral instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphony orchestra which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 20th century "pops" music.  
[CSU; UC]  

MUS34.5. Symphony Orchestra - 21st Century Emphasis (1)  
**Advisory:** Intended for persons with previous orchestral instrument experience.  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
A symphony orchestra which rehearses and performs a wide range of musical literature with special emphasis on the study of techniques for performing 21st century music.  

MUS35. Piano Ensemble (1)  
Lec 1 Hr; Lab 2 Hrs  
Semesters Offered: Variable  
Piano ensemble. Two pianos, four-hand and eight-hand playing of standard piano ensemble literature. Music Practicum 19 (2 units) required. May be repeated for credit to a maximum of 4 units.  
[CSU; UC]  

MUS42A. Electronic Music - Recording (2)  
Lec 2 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
Basis of sound systems, reinforcement, and live sound production. Fundamentals of sound recording.  
[CSU]  

MUS42B. Electronic Music - Synthesizers (2)  
**Prerequisite:** Music 42A  
Lec 2 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
Fundamentals of electronic music synthesis from analog to digital to sampling.  
[CSU]  

MUS43A. Adv. Electronic Mus.- MIDI (2)  
**Prerequisite:** Music 42B  
Lec 2 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
Advanced techniques in audio engineering in microphone placement/application digital sound processing, multi-track recording and introduction to MIDI (Musical Instrument Digital Interface.) applications.  
[CSU]
MUS43B. Adv. Electronic Mus.-MIDI (2)
Prerequisite: Music 43A
Lec 2 Hrs; Lab 1 Hr
Semesters Offered: Variable
Advanced techniques in sound synthesis using analog, digital, and sampling synthesizers. MIDI sequencing. (Musical Instrument Digital Interface) [CSU]

MUS45. Special Projects (1-3)
Semesters Offered: Variable
Individual projects concerned with material not normally a major part of a specific course. Projects may include preparation for a public recital, creative composition, an extensive paper or a combination of the above. [CSU]

MUS50A. Harmony I (3)
Corequisite: Music 51A
Advisory: Familiarity with musical notation and the piano keyboard.
Lec 3 Hrs
Semesters Offered: Variable
The diatonic system of harmony from an analytical and practical point of view, including the basic elements of voice leading, musical analysis, and chord usage. [CSU; UC; CAN MUS 2; CAN MUS SEQ A; CAN MUS SEQ C]

MUS50B. Harmony II (3)
Prerequisite: Music 50A
Corequisite: Music 51B
Lec 3 Hrs
Semesters Offered: Variable
Continuation of Music 50A. The diatonic system of harmony from an analytical and practical point of view, including voice leading, musical analysis, and chord usage. [CSU; UC; CAN MUS 4; CAN MUS SEQ A; CAN MUS SEQ C]

MUS51A. Musicianship I (2)
Corequisite: Music 50A
Advisory: Familiarity with Musical notation and the piano keyboard.
Lec 2 Hrs
Semesters Offered: Variable
The elements of musical notation. Sight-singing, and ear-training using diatonic materials. [CSU; UC; CAN MUS 2; CAN MUS SEQ A; CAN MUS SEQ C]

MUS51B. Musicianship II (2)
Prerequisite: Music 51A
Corequisite: Music 50B
Lec 2 Hrs
Semesters Offered: Variable
Continuation of Music 51A. Sight singing and ear training using diatonic materials. [CSU; UC; CAN MUS 4; CAN MUS SEQ A; CAN MUS SEQ C]

MUS52A. Harmony III (3)
Prerequisite: Music 50B
Corequisite: Music 53A
Lec 3 Hrs
Semesters Offered: Variable
Chromatic harmony, form, musical analysis, and orchestration. [CSU; UC; CAN MUS 6; CAN MUS SEQ C]

MUS52B. Harmony IV (3)
Prerequisite: Music 52A
Corequisite: Music 53B
Lec 3 Hrs
Semesters Offered: Variable
Continuation of chromatic harmony, and introduction of 20th century harmonic techniques, form, music analysis, and orchestration. [CSU; UC; CAN MUS 6; CAN MUS SEQ C]

MUS53A. Musicianship III (2)
Prerequisite: Music 51B
Corequisite: Music 52A
Lec 2 Hrs
Semesters Offered: Variable
Sight-singing, ear-training, dictation, and analysis of exercises involving melodic modulations and chromatic harmonies drawn from 19th Century music literature. [CSU; UC; CAN MUS 6; CAN MUS SEQ C]

MUS53B. Musicianship IV (2)
Prerequisite: Music 53A
Corequisite: Music 52B
Lec 2 Hrs
Semesters Offered: Variable
Sight-singing, ear-training, dictation and analysis of exercises involving impressionistic, early 20th Century, and contemporary melodies and harmonies with examples drawn from 20th Century literature. [CSU; UC]

MUS120A. Introduction to Musical Theatre Prod.: Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical play with an emphasis on the concept and development of script, design elements, and performance techniques. Students may enroll in any combination of Music 120A and Theatre Arts 120A a maximum of four times.

MUS120B. Introduction to Musical Theatre Production: Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical with an emphasis on the implementation and practice of rehearsal and production techniques. Students may enroll in any combination of Music 120B and Theatre Arts 120B a maximum of four times.

MUS120C. Introduction to Musical Theatre Production: Execution and Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical with an emphasis on the execution of a fully realized production. Students may enroll in any combination of Music 120C and Theatre Arts 120C a maximum of four times.

MUS121. Musical Theatre: Modern Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the modern musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 121 and Theatre Arts 121 a maximum of four times.

MUS122. Musical Theatre: Modern Musicals In Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the modern musical play. Students may enroll in any combination of Music 122 and Theatre Arts 122 a maximum of four times.

MUS123. Musical Theatre: The Ensemble Musical in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the ensemble musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 123 and Theatre Arts 123 a maximum of four times.

MUS124. Musical Theatre: The Ensemble Musical in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the ensemble musical play. Students may enroll in any combination of Music 124 and Theatre Arts 124 a maximum of four times.

MUS125. Musical Theatre · World Theatre Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the world theatre musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 125 and Theatre Arts 125 a maximum of four times.
MUS126. Musical Theatre - World Theatre Musicals in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the world theatre musical. Students may enroll in any combination of Music 126 and Theatre Arts 128 a maximum of four times.

MUS127. Musical Theatre- Revival Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the revival of a period musical with an emphasis on performance and stage management. Students may enroll in any combination of Music 127 and Theatre Arts 127 a maximum of four times.

MUS128. Musical Theatre - Revival Musicals in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the revival musical play. Students may enroll in any combination of Music 128 and Theatre Arts 128 a maximum of four times.
### NURSING - REGISTERED

#### AREA:
Mathematics and Science

#### DEAN:
Dr. Charlene Frontiera

#### DIRECTOR:
Debra A. Denham, PhD., RN

#### FACULTY:
Vacant

#### COUNSELOR:
LaVerne Cook
Office: Natividad Professional Bldg – 400
770-6146
lcook@hartnell.edu

Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
ipando@hartnell.edu

### REGISTERED NURSING

#### ASSOCIATE OF ARTS DEGREE

Completion of prerequisites, major requirements, plus graduation requirements for the Associate Degree.

### REQUIRED PREREQUISITES

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<th>COURSE TITLE</th>
<th>UNITS</th>
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<td>ENG 1A</td>
<td>College Comp and Read</td>
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<td>MAT 121</td>
<td>Elementary Algebra</td>
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<td>(Or higher skill level math)</td>
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<tr>
<td>BIO 27i</td>
<td>Principles of Microbiology</td>
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<td>PSY 1A</td>
<td>General Psychology</td>
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</tr>
<tr>
<td>Current Healthcare Provider Cards</td>
<td>25-28</td>
<td></td>
</tr>
</tbody>
</table>

1. English 1A with Special Perspective may be used to fulfill both the English 1A requirement and Ethnic Groups in the United States requirement. Students who have completed English 1A without a Special Perspective are required to complete and approved Ethnic Groups course as listed in this Catalog.

2. BIO-6 Introductory Physiology has a prerequisite of high school chemistry, CHM-22, or CHM-1A or equivalent.

3. BIO-7 General Microbiology has a prerequisite of CHM-1A or equivalent.

4. BIO-27 Principles of Microbiology has a prerequisite of CHM-22 or CHM-50 or equivalent

5. CPR certification for Healthcare Providers may be taken from Hartnell College (HES 120), American Heart Association (Healthcare Providers) or American Red Cross (Professional Rescuer for infants through adult certification)

### REQUIRED GENERAL EDUCATION COURSES FOR AA IN NURSING

<table>
<thead>
<tr>
<th>COURSE#</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>ANT 2</td>
<td>Cultural Anthropology</td>
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<tr>
<td>SPE 1A</td>
<td>Public Speaking</td>
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<tr>
<td>Or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 3</td>
<td>Introduction to Communication</td>
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</tr>
</tbody>
</table>

#### Ethics Groups in the United States

(See AA Degree pages in this catalogue for the required Ethnic Groups course options)

### COURSES REQUIRED FOR THE MAJOR

#### First Semester

<table>
<thead>
<tr>
<th>COURSE#</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>NRN 30</td>
<td>Pharmacology for Nursing</td>
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<tr>
<td>NRN 41</td>
<td>Nursing Theory I</td>
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<td>NRN 41.1</td>
<td>Nursing Clinical I</td>
<td>4</td>
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<td>NRN 41.2</td>
<td>Critical Thinking for Nurses</td>
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<tr>
<td>NRN 41.3</td>
<td>Nursing Skills Lab I</td>
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#### Second Semester

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<tbody>
<tr>
<td>NRN 42</td>
<td>Nursing Theory II</td>
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<td>Nursing Clinical II</td>
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<td>Critical Thinking for Nurses II</td>
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#### Third Semester

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<td>NRN 43</td>
<td>Nursing Theory III</td>
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<td>Nursing Clinical III</td>
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<td>NRN 43.2</td>
<td>Critical Thinking for Nurses III</td>
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<tr>
<td>NRN 43.3</td>
<td>Nursing Skills Lab III</td>
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#### Fourth Semester

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<td>NRN 44</td>
<td>Nursing Theory IV</td>
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<td>NRN 44.1</td>
<td>Nursing Clinical IV</td>
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<td>NRN 44.2</td>
<td>Critical Thinking for Nurses IV</td>
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<tr>
<td>NRN 40</td>
<td>Preceptorship</td>
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</table>

### GENERAL INFORMATION:

#### Nursing Program

The goal of the Hartnell College Nursing program is to provide an educational opportunity for qualified individuals interested in a career in nursing. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Register Nurses (NCLEX-RN).

Nursing requires a separate application procedure in addition to the general college admission application. Entrance to the program is subject to an annual application process.

### Minimum Requirements for Admission Eligibility:

1. Hartnell College application indicating eligibility to attend Hartnell College on file in Admissions and Records Office.

2. High School Verification: Official High School transcripts or equivalent required (Board of Registered Nursing, Rules and Regulations, Section 1412).

3. Completion of all prerequisite courses with a minimum of a "C" grade as documented on official transcripts (in-progress courses will not be accepted).

Application to the Associate Degree Nursing Program and informational materials are available from the Nursing Office and on the Hartnell website (www.hartnell.edu) the first week in January of each year for fall (August) admission. Application with all official documents of verification must be submitted by deadline date as stated on application.

Hartnell College Nursing Program is impacted (more students apply for admission than can be admitted.) Selection is based on criteria established by the Nursing Program and the California Community College Associate Degree Nursing Prerequisites Model for Admissions. The criteria consist of science grade point average, overall prerequisite grade point average, completion of total units toward the degree, letters of recommendations, and work experience in a health related field.

Success in the Nursing Program is based upon theoretical knowledge, manipulative skill proficiency, and the application of both these in the clinical setting. To progress and graduate from the nursing program, students must achieve at least "C" grades in all nursing courses.

The Hartnell College Nursing program is fully accredited by the California Board of Registered Nursing (BRN).

#### Baccalaureate Preparation

Students should consult with a Nursing counselor and appropriate college catalogue for specific transfer requirements. Catalogues of the California and out-of-state colleges are located in the Transfer Center, Library, and Counseling.
LICENCED VOCATIONAL NURSE TO REGISTERED NURSE (2 options)

1) ASSOCIATES DEGREE IN NURSING
   LVN-RN OPTION
Open to licensed vocational nurses who have worked for at least one year. Current and active California Vocational Nursing License must be submitted with application materials.
All program Required Prerequisites Courses (see above) must be completed with a grade of "C" or better before applying to the Nursing Program.
Required General Education Courses for Associate Degree in Nursing (see above) must also be completed.

COURSES REQUIRED FOR THE MAJOR
COURSE # COURSE TITLE UNITS

Fall Semester
NRN 43 Nursing Theory III 4
NRN 43.1 Nursing Clinical III 4
NRN 43.2 Critical Thinking for Nurses III 1
NRN 43.3 Nursing Skills Lab III 1

Spring Semester
NRN 44 Nursing Theory IV 4
NRN 44.1 Nursing Clinical IV 4
NRN 44.2 Critical Thinking for Nurses IV 1
NRN 40 Preceptorship 2.5

Upon successful completion of the Associate Degree in Nursing program requirements, graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

2) CERTIFICATE 30-UNIT LVN-RN OPTION
Open to licensed vocational nurses who have worked for at least one year. Current and active California Vocational Nursing License must be submitted with application materials.

Required Prerequisite Courses for LVN-RN 30-Unit Option
COURSE # COURSE TITLE UNITS
BIO 6 Introduction Physiology 3
BIO 6L Introduction to Physiology Lab 2
BIO 7 General Microbiology 5
Or
BIO 27 Principles of Microbiology 4

1 BIO-6 Introductory Physiology has a prerequisite of high school chemistry, CHM-22, or CHM-1A or equivalent.
2 BIO-7 General Microbiology has a prerequisite of CHM-1A or equivalent.
3 BIO-27 Principles of Microbiology has a prerequisite of CHM-22 or CHM-60 or equivalent.

All program prerequisites must be completed with a grade of "C" or better.

Courses Required for 30-Unit Option
COURSE # COURSE TITLE UNITS

Fall Semester
NRN 43 Nursing Theory III 4
NRN 43.1 Nursing Clinical III 4
NRN 43.2 Critical Thinking for Nurses III 1
NRN 43.3 Nursing Skills Lab III 1

Spring Semester
NRN 44 Nursing Theory IV 4
NRN 44.1 Nursing Clinical IV 4
NRN 44.2 Critical Thinking for Nurses IV 1

Upon completion of the LVN-RN 30-Unit option, the student will receive a Certificate of Completion in compliance with Section 1429 law relating to Nursing Education Licensure Practice. The student is eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

Note: Other states may not recognize the LVN-RN 30-Unit Option as a method to satisfy the requirements for licensure as a Registered Nurse. Interested candidates are urged to contact the respective Boards of Nursing for additional information to make an informed decision.

NURSING STUDENTS TRANSFERRING FROM OTHER INSTITUTIONS

Students from other nursing programs seeking placement into the second, third, or fourth semesters of the Associate Degree in Nursing program at Hartnell College should contact the Director of Nursing for an application. The Director of Nursing will evaluate all transfer student records for nursing course work equivalency. Syllabi, course outlines and catalogues may be requested for the evaluation.
NRN20. Contemporary Med-Surg Nursing (4)
Credit/No Credit Option
Prerequisite: Current California Licensed as a registered nurse or licensed vocational nurse. At least two years must have elapsed since the nurse last practiced in the medical-surgical area.
Lec Hrs 4
Semesters Offered: Variable
Current role and responsibilities of the RN and VN. Emphasis on current nursing theory, and related nursing activities. Focus will be on basic needs, growth and development, pathophysiology, body responses to illness, nursing process, nursing diagnosis, pharmacology and medical treatment plan, and therapeutic and professional communication skills. [CSU]

NRN21. Contemporary Med-Surg Nursing Practice (6)
Credit/No Credit Option
Prerequisite: Completion of Nursing 8 or its equivalent; a current graduate of an approved registered Nursing Program or with an interim permit, or Vocational Nursing Program, and completion of Health Services 120 or its equivalent. Successful results on a TB Skin Test or Chest X-Ray.
Lec 4 Hrs; Lab 6 Hrs
Semesters Offered: Variable
Role and responsibilities of the RN and VN in the clinical setting. Emphasis on current nursing theory, and related nursing activities. Focus will be on basic needs, growth and development, pathophysiology, body responses to illness, nursing process, nursing diagnosis, pharmacology and medical treatment plan, and therapeutic and professional communication skills. Laboratory component in local hospitals. [CSU]

NRN22. Perioperative Nursing (3)
Corequisite: NRN 22L (optional)
Advisory: For RN's or students in RN programs.
Lec 3 Hrs
Semesters Offered: Variable
This course is designed to prepare the registered nurse for practice in the perioperative setting. The nursing process will be used to introduce theory and concepts of surgical nursing. [CSU]

NRN22L. Perioperative Nursing Practicum (1)
Credit/No Credit Only
Corequisite: NRN 22
Lab 3 Hrs
This course presents a clinical experience in perioperative nursing. It is designed to apply the concepts of perioperative nursing using the nursing process in a clinical setting. [CSU]

NRN30. Basics of Pharmacology for Nursing Practice (1)
Corequisite: NRN 41
Lec 1 Hr
Semesters Offered: Variable
Introduction to the basic concepts of pharmacology for nursing practice. In the context of the nursing process, focus is on pharmacokinetics, pharmacodynamics and applications of nursing practice. [CSU]

NRN40. Perceptorship In Nursing (2.5)
Credit/No Credit Only
Prerequisite: NRN 36
Lab 7.5 Hrs
Semesters Offered: Variable
This practicum course provides the fourth semester nursing student with an opportunity to implement the professional roles, responsibilities, and skills of the registered nurse. The student will be assigned to work with a nurse preceptor on the preceptor’s schedule, in acute, restorative, long-term, mental health, or community-based care. [CSU]

NRN41. Nursing Theory I (4)
Prerequisite: Admission to Nursing Program:
BIO 5 Human Anatomy (4)
BIO 6/6L Intro to Phys. & Lab (5)
BIO 27 Principles of Microbiology (4)
MAT 121 Elementary Algebra (5)
NRN 101 Readiness for Nursing (3)
ENG 1A College Comp. & Reading (3)
NRN 101/101L Readiness for Nursing
Corequisite: NRN 41.1, NRN 41.2, NRN 41.3
Lec 1 Hr
Semesters Offered: Variable
Introduction to Roy’s Adaptation Model for nursing practice. Emphasis is on applying the Roy Adaptation Model in the context of the nursing process, focus is on physiological alterations. [CSU]

NRN41.1. Nursing Clinical I (4)
Credit/No Credit Only
Corequisite: NRN 41, NRN 41.1, NRN 41.3
Lab 12 Hrs
Semesters Offered: Variable
Application of the Roy Adaptation Model to provide fundamental nursing care to adult clients with non-life threatening physiological alterations. [CSU]

NRN41.2. Critical Thinking for Nurses I (1)
Credit/No Credit Only
Corequisite: NRN 41, NRN 41.1, NRN 41.3
Lec 1 Hr
Semesters Offered: Variable
Use of critical thinking strategies in the application of theory to clinical practice utilizing a case-study approach. Emphasis is on applying the Roy Adaptation Model in the care of adults with non-life threatening physiological alterations. [CSU]

NRN41.3. Nursing Skills Lab I (1)
Corequisite: NRN 41, NRN 41.1, NRN 41.3
Lab 3 Hrs
Semesters Offered: Variable
Introduction to fundamental nursing skills required for bedside care. Emphasis is on basic physical assessment and nursing skills necessary to support adaptation of the hospitalized client. [CSU]

NRN42. Nursing Theory II (4)
Prerequisite: NRN 41
Corequisite: NRN 42.1, NRN 42.2
Lec 4 Hrs
Semesters Offered: Variable
Application of the Roy Adaptation Model for nursing practice of the childbearing family. Emphasis is on obstetrics, pediatric and young adult clients. [CSU]

NRN42.1. Nursing Clinical II (4)
Credit/No Credit Only
Prerequisite: NRN 41.1
Corequisite: NRN 42, NRN 42.2
Lab 12 Hrs
Semesters Offered: Variable
Application of the Roy Adaptation Model to provide fundamental nursing care to the child-bearing women, newborn, child and young adult client. [CSU]

NRN42.2. Critical Thinking for Nurses II (1)
Credit/No Credit Only
Prerequisite: NRN 41.2
Corequisite: NRN 42, NRN 42.1
Lec 1 Hr
Semesters Offered: Variable
Use of critical thinking strategies in the application of theory to clinical practice utilizing a case-study approach. Emphasis is on applying the Roy Adaptation Model in the care of the childbearing women, newborn, child, and young adult client. [CSU]
NRN43. Nursing Theory III (4)  
**Prerequisite:** NRN 42  
**Corequisite:** NRN 43.1, NRN 43.2, NRN 43.3  
**Lec 4 Hrs**  
**Semesters Offered:** Variable  
**Application of the Roy Adaptation Model for nursing practice. Emphasis is on the care and management of complex clients and leadership.**  
**[CSU]**

NRN43.1. Nursing Clinical III (5)  
**Credit/No Credit Only**  
**Prerequisite:** NRN 42.1  
**Corequisite:** NRN 43, NRN 43.2, NRN 43.3  
**Lab 15 Hrs**  
**Semesters Offered:** Variable  
**Using the Roy Adaptation Model and the nursing process as a framework for providing nursing care, students care for clients with increasingly complex alterations. Emphasis is on the adult, geriatric and mental health client in the acute care and community settings.**  
**[CSU]**

NRN43.2. Critical Thinking for Nurses III (1)  
**Credit/No Credit Only**  
**Prerequisite:** NRN 42.2  
**Corequisite:** NRN 43, NRN 43.1, NRN 43.3  
**Lec 1 Hr**  
**Semesters Offered:** Variable  
**Use of critical thinking strategies in the application of theory to the clinical practice utilizing a case-study approach. Emphasis is on applying the Roy Adaptation Model in the care of adults, geriatric and mental health client with increasingly complex physiological and psychological alterations.**  
**[CSU]**

NRN43.3. Nursing Skills Lab III (1)  
**Prerequisite:** NRN 41.3  
**Corequisite:** NRN 43, NRN 43.1, NRN 43.2  
**Lab 3 Hrs**  
**Semesters Offered:** Variable  
**The Roy Adaptation Model and the nursing process are used as the framework for presenting the nursing skills required for the care of clients with increasing complex physiological and psychological alterations. Emphasis is on the adult, geriatric and mental health client in the acute care and community settings.**  
**[CSU]**

NRN44. Nursing Theory IV (4)  
**Prerequisite:** NRN 43  
**Corequisite:** NRN 44.1, NRN 44.2  
**Lab 4 Hrs**  
**Semesters Offered:** Variable  
**Application of the Roy Adaptation Model for nursing practice. Emphasis is on the application of leadership and management principles in nursing care. Using the Roy Adaptation Model and the nursing process as a framework for providing care, students care for clients with multi-system failure in the acute care and community settings.**  
**[CSU]**

NRN44.1. Nursing Clinical IV (4)  
**Credit/No Credit Only**  
**Prerequisite:** NRN 43.1  
**Corequisite:** NRN 44, NRN 44.2  
**Lab 12 Hrs**  
**Semesters Offered:** Variable  
**Using the Roy Adaptation Model and the nursing process as a framework for providing nursing care, students care for clients with multi-system failure and increasingly complex alterations. Emphasis is on the management of complex clients and leadership.**  
**[CSU]**

NRN44.2. Critical Thinking for Nurses IV (1)  
**Credit/No Credit Only**  
**Prerequisite:** NRN 43.2  
**Corequisite:** NRN 44, NRN 44.1  
**Semesters Offered:** Variable  
**Use of critical thinking strategies in the application of theory to the clinical practice utilizing a case-study approach. Emphasis is on applying the Roy Adaptation Model in the care and management of the complex client and with groups of clients with increasingly complex physiological and psychological alterations.**  
**[CSU]**

NRN45. Special Projects (1-3)  
**Credit/No Credit Option**  
**Prerequisite:** Concurrent enrollment in Nursing 32  
**Semesters Offered:** Variable  
**Individualized research or specialized experience in a clinical field of nursing.**  
**[CSU]**

NRN45. Special Projects (1-3)  
**Credit/No Credit Only**  
**Prerequisite:** Concurrent enrollment in Nursing 32  
**Semesters Offered:** Variable  
**Individualized research or specialized experience in a clinical field of nursing.**  
**[CSU]**

NRN51. Nursing Intermediate Lab Practicum (Intermediate Lab) (1)  
**Credit/No Credit Only**  
**Prerequisite:** Concurrent enrollment in NRN 32  
**Lab 3 Hrs**  
**Semesters Offered:** Variable  
**This course provides supervised instruction and practice to students as they progress from basic to intermediate nursing procedures related to the childbearing and childrearing family. Student performance will be measured and recorded to aid in the development of clinical competency. Computer software and videos will also be available to students to assist with clinical thinking skills, common errors, and nursing tips, as students proceed through each unit of instruction.**  
**[CSU]**

NRN52. Nursing Fundamental Laboratory Practicum (1)  
**Credit/No Credit Only**  
**Prerequisite:** Concurrent enrollment in Nursing 32  
**Lab 3 Hrs**  
**Semesters Offered:** Variable  
**This eight week course facilitates the mastery of basic nursing procedures using the nursing process. Supervised instruction and practice will be provided, and student performance will be measured and recorded to aid students in the development of clinical competency. Computer software and videos will also be available to students to assist with critical thinking skills, common errors, and nursing tips, as students proceed through each unit of instruction.**  
**[CSU]**

NRN54. Intro. To Adv. Nursing (5)  
**Prerequisite:** NRN 36 or equivalent  
**Lec 5 Hrs**  
**Semesters Offered:** Variable  
**A discretely organized classroom experience that presents advanced medical surgical concepts. Management of patient multiple systems failure is examined; the role of nurse in a high acuity setting is emphasized. Advanced patient assessment and management is discussed.**  
**[CSU]**

NRN55. Intro. To Adv. Nursing and Practicum (9)  
**Prerequisite:** NRN 36 or equivalent.  
**Lec 5 Hrs; Lab 9 Hrs**  
**Semesters Offered:** Variable  
**A preexplored experience that provides the student with guided management of multisystem failure patients in high acuity settings.**  
**[CSU]**
NRN59. Skills Review/Skills Competencies Laboratory Practicum (.7)
Credit/No Credit Only
Prerequisite: NRN 30, 32 & 33
Lab 2 Hrs
Supervised instructional review and individual practice of prior learned clinical skills and measurement of skills competency.
[CSU]

NRN 60. The Practice of Nursing (.5)
Credit/No Credit Only
Prerequisite: Completion of Nursing 32 or equivalent.
Lec .5 Hrs
Semesters Offered: Variable
This course is offered in conjunction with the summer externship program. It will cover the students' experiences applying the nursing process to the work setting.
[CSU]

NRN 61. Clinical Experience Work Study (5-12)
Prerequisite: NRN 30, 32, 33, 59
Lab 36 Hrs
Provides an opportunity for senior nursing students to apply current and previous nursing theory and clinical skills in a health care facility. Students will also be able to refine their clinical competencies in patient care settings.
[CSU]

NRN 101. Readiness for Nursing (2)
Corequisite: NRN 101L
Advisory: Completion of at least 2 science prerequisite courses for nursing: BIO 5, BIO 6/6L, BIO 27, MAT 121
Semesters Offered: Variable
Lec 2 Hrs
Semesters Offered: Variable
This course is an introduction to nursing as a profession and an overview of the nursing program, the role and responsibilities of the nursing student, and the requirements for satisfactory progress through the nursing program. Test taking strategies, study skills and tips for success in the nursing program will be addressed. Readiness testing and learning style inventories will be administered in order to assist the individual student to make appropriate career decisions regarding the nursing profession and preparation. Successful completion required for entry into the Hartnell College registered nursing program.
NRN101L. Readiness for Nursing – Lab (1)
Credit/No Credit Only
Advisory: Completion of at least 2 science prerequisite courses for nursing: BIO 5, BIO 6/6L, BIO 27, MAT 121
Lab 3 Hrs
Basic nursing care skills will be demonstrated, practiced and competency tested. Successful completion required for entry into the Hartnell College registered nursing program.

NRN 111. Transition: LVN-RN (1)
Prerequisite: Satisfactory completion of NVN 122 or equivalent course.
Lec 3 Hr
Semesters Offered: Variable
Assistance in the transitional process that will prepare a Licensed Vocational Nurse for advanced standing in the Registered Nurse program. Focus on Nursing Process. Demonstration of ability to engage in critical thinking. Special emphasis on the adjustment process in the role change.

NRN 112. Nursing As A Career (1)
Credit/No Credit Option
Lec 1 Hr
Semesters Offered: Variable
Introduction to the profession of nursing. Provides prospective students an opportunity to examine career and education options, nature of the work world, skills and abilities needed, and contemporary practice. Provides information regarding Hartnell's admission requirements, procedures, and services to enhance student success in the RN and VN programs.

NRN 225. Survival Skills for Student Nurses (.8)
Credit/No Credit Only
Lec .8 Hrs
Semesters Offered: Variable
This course is designed to prepare the new student nurse or other interested persons for the unique challenges of being in a nursing program. The skills necessary to succeed in nursing will be explored.

NRN 260. NCLEX Review (4)
Credit/No Credit Only
Lec 4 Hrs
Semesters Offered: Variable
This course is designed to assist the RN Graduate Nurse to prepare for the National Council Licensing Examination (NCLEX).
Vocational Nursing

Certificate Program
Completion of prerequisites and certification requirements:

**REQUIRED PREREQUISITES COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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<tr>
<td>ENG 1A</td>
<td>College Comp and Read (Or higher skill level math)</td>
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<tr>
<td>MAT 121</td>
<td>Elementary Algebra</td>
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<tr>
<td>FCS 22</td>
<td>Essentials of Nutrition*</td>
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<tr>
<td>FCS 23</td>
<td>Nutrition*</td>
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<tr>
<td>BIO 11</td>
<td>Introductory to Anatomy and Physiology*</td>
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</tr>
<tr>
<td>PSY 1A</td>
<td>General Psychology*</td>
<td>3.0</td>
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</tbody>
</table>

Current Healthcare Provider CPR Card
Current Certified Nursing Assistant Status
1. CPR certification for Healthcare Providers may be taken from Hartnell College (HES 120), American Heart Association (Healthcare Providers) or American Red Cross (Professional Rescuer for infants through adult certification)
2. CNA certificate from Hartnell Colleges course (HES-130A) or other recognized institutions or adult schools.

*Recency: Prerequisite courses and all required in-progress programs must be completed within five (5) years of entering the Vocational Nursing Program in order to receive credit for the hours required by the Board of Vocational Nursing and Psychiatric Technicians of the State of California (BVNPT) Rules and Regulations, Title 16: Professional and Vocational Regulations, Division 25: Board of Vocational Nursing and Psychiatric Technicians of the State of California.

COURSES REQUIRED FOR THE CERTIFICATE

<table>
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<tr>
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<th>COURSE TITLE</th>
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<tr>
<td>NVN 120</td>
<td>Vocational Nursing I: Fundamentals*</td>
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<td>NVN 130</td>
<td>Basic Pharmacology*</td>
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<tr>
<td>NVN 131</td>
<td>Growth and Development Across the Lifespan*</td>
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<tr>
<td>NVN 121</td>
<td>Vocational Nursing II Care of the Childbearing Family*</td>
<td>12.0</td>
</tr>
<tr>
<td>NVN 122</td>
<td>Vocational Nursing III Care of the Adult, Geriatric, and Mental Health Patient*</td>
<td>12.0</td>
</tr>
</tbody>
</table>

**GENERAL INFORMATION**

Vocational Nursing Program
Vocational Nurses perform essential nursing services under the supervision of a registered nurse or physician. They have work opportunities in home health agencies, doctor’s offices, public or private hospitals, long-term care hospitals, clinics, or for private individuals.

The Hartnell College Vocational Nursing (VN) Program is a three-semester program designed to prepare qualified individuals to practice vocational nursing. Hartnell College program includes theory, lab, and clinical experience in cooperation with acute care, long-term settings, and various community agencies. The college grants a certificate in Vocational Nursing after successful completion of the program, and the student is then eligible to take the NCLEX-PN examination for California licensure.

Vocational nursing requires a separate application procedure in addition to the general college admission application. Entrance to the program is subject to an annual application process.

Minimum Requirements for Admission Eligibility:

1. Hartnell College application indicating eligibility to attend Hartnell College on file in Admissions and Records Office.
2. High School Verification: Official High School transcripts or equivalent required (Vocational Nursing and Psychiatric Technicians of the State of California (BVNPT) Rules and Regulations.)
3. Completion of all prerequisite courses with a minimum of a “C” grade as documented on official transcripts (In-progress courses will not be accepted.)

Application to the Vocational Nursing Program and informational materials are available from the Nursing Office and on the Hartnell website (www.hartnell.edu) the first week in September of each year for spring (January) admission. Application with all official documents of verification must be submitted by deadline date as stated on application.

Success in the Nursing Program is based upon theoretical knowledge, manipulative skill proficiency, and the application of both in the clinical setting. To progress and graduate from the nursing program, students must achieve at least “C” grades in all nursing courses.

The Hartnell College Vocational Nursing program is fully accredited by the Vocational Nursing and Psychiatric Technicians of the State of California (BVNPT).

LVN-RN Preparation
(See Registered Nursing catalogue pages.)
Students should consult with a Nursing counselor and appropriate college catalogue for specific requirements.
NVN31. Growth and Development Across the Lifespan (2)
Prerequisite: Psychology 1A
Lec 2 Hrs
Semesters Offered: Variable
This course focuses on the promotion of wellness across the life span. Using the nursing process and critical thinking skills, study emphasizes normal physical, cognitive, ethnicity, sociocultural, sexuality, and personality development extending from conception to death is emphasized.

NVN120. Vocational Nursing I: Fundamentals (10)
Prerequisite: BIO 11, ENG 1A, FCS 22, MAT 121, PSY 1A
Corequisite: NVN 130, NVN 31
Lec 5 Hrs; Lab 15 Hrs
Semesters Offered: Variable
Introduction to the nursing process in the fundamental nursing care of adult patients with non-life threatening physiological alterations.

NVN121. Vocational Nursing II: Care of the Childbearing Family (12)
Prerequisite: NVN 120: Vocational Nursing I: Fundamentals
Lec 6 Hrs; Lab 18 Hrs
Semesters Offered: Variable
Application of the nursing process in the nursing care of the childbearing family.

NVN122. Vocational Nursing III: Care of the Adult, Geriatric, and Mental Health Patient (12)
Prerequisite: NVN 121
Lec 6 Hrs; Lab 18 Hrs
Semesters Offered: Variable
Application of the nursing process in the nursing care of adult, geriatric and mental health patients with increasingly complex alterations in health.

NVN130. Basic Pharmacology (3)
Prerequisite: Math 201 Pre-Algebra
Lec 3 Hrs
Semesters Offered: Variable
A survey course in pharmacology with heavy emphasis on calculations. Focus on major drugs in the cardiovascular, respiratory, endocrine, gastrointestinal and nervous systems, with specific reference to the action and nursing implications.

NVN150. Vocational Nursing Lab. Practicum (.3-2.0)
Prerequisite: Concurrent enrollment in NVN 120, 121, or 122.
Semesters Offered: Variable
Vocational Nursing Laboratory Practicum is a course designed to provide laboratory practice for nursing skills taught in the regular program. Supervised practice and instruction will be given in the skills concurrently taught in each of three vocational nursing semesters.

NVN210. Intravenous Therapy Tech. (2)
Prerequisite: NVN 122
Lec 1.9 Hrs; Lab .4 Hrs
Semesters Offered: Variable
This course provides authorized allied health personnel with knowledge and skill to competently and safely perform a venipuncture. Emphasis will be placed on current concepts and measures of starting, monitoring, adapting, and maintaining the intravenous therapy and blood administration for patient care.
The oceanography curriculum provides a sound introduction to the marine environment which comprises 71% of the earth’s surface. The courses are designed for both science and non-science majors and are fundamental for students planning to major in oceanography.

**OCN1. Oceanography (3)**
- **Lec 3 Hrs**
- **Offered:** Fall, Spring, Summer
- An introductory course with topics including plate tectonics, coastal geology, sediments, physical and chemical properties of seawater, weather, and biological aspects.
  - [CSU; UC]
Philosophy concerns the study of fundamental questions that arise in different areas of human experience, thought or practice. The study of philosophy is designed to acquaint students with the distinctive nature of philosophical activity and to help them increase their skills in critical thinking about matters of fundamental philosophical concern; e.g., the nature of correct reasoning, the scope and limits of human knowledge, the generic and pervasive characteristics of reality, and the sources of value and obligation. It stresses systematic and abstract thought. Philosophy provides a foundation for students pursuing any major.

It is an appropriate element in career preparation for the following:

- Law
- Medicine
- Education
- Management
- Government
- Ministry
- Research
- Teaching
- Publishing
- Social Work
- Human service careers

### PHILOSOPHY ASSOCIATE OF ARTS DEGREE

Students may major in Social Sciences by completing the program listed under Social Sciences in the Catalog.

- **PHL2. Introduction to Philosophy (3)**
  - Lec 3 Hrs
  - Semesters Offered: Variable
  - An introduction to philosophical issues and methods concerning knowledge, reality and values. Metaphysical, epistemological, ethical, religious and social issues will be explored in their theoretical and practical contexts.
  - [CSU; UC; CAN PHIL 2]

- **PHL6. Introduction to Philosophy: Greek to Medieval Period (3)**
  - Lec 3 Hrs
  - Semesters Offered: Variable
  - An introduction to Western philosophy from an historical viewpoint, stressing in particular an analysis of the original text material of various philosophers from the Greek to the Medieval period.
  - [CSU; UC; CAN PHIL 6 & 8]

- **PHL8. Introduction to Philosophy: Renaissance to the Twentieth Century (3)**
  - Lec 3 Hrs
  - Semesters Offered: Variable
  - An introduction to Western philosophy from an historical viewpoint, stressing in particular an analysis of the original text material of various philosophers from the Renaissance to the twentieth century Existentialists.
  - [CSU; UC; CAN PHIL 10, CAN PHIL SEQ A with PHL 6 & 8]

- **PHL10. Ethics (3)**
  - Lec 3 Hrs
  - Semesters Offered: Variable
  - An examination of the basic concept of morality and values, representative ethical theories and their application to moral problems.
  - [CSU; UC; CAN PHIL 4]

- **PHL15. Critical Thinking (3)**
  - Credit/No Credit Option
  - Lec 3 Hrs
  - Semesters Offered: Variable
  - An introduction to the principles of sound reasoning with emphasis on deductive logic. The course studies formal techniques of propositional logic and includes inductive reasoning, language, and fallacies as topics of study.
  - [CSU; UC; CAN PHIL 6]

- **PHL45. Special Projects (1-3)**
  - Semesters Offered: Variable
  - A supervised program of independent research and study into a particular field of philosophy. Completion of or concurrent enrollment in Philosophy 2, 6, or 8 recommended.
  - [CSU]
PHOTOGRAPHY

ASSOCIATE OF ARTS DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHO 1</td>
<td>Introduction to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 2</td>
<td>Beginning Black and White Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 3</td>
<td>Advanced Photography Lab Course</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 4</td>
<td>Portfolio Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 12A</td>
<td>Design</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
</tbody>
</table>

ELECTIVES

Select an additional three (3) units in Art or Photography

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
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<td></td>
<td>18.0</td>
</tr>
</tbody>
</table>

PHOTOGRAPHY

CERTIFICATE PROGRAM

The Photography Certificate is awarded upon the completion of the required courses and elective units.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
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<td>Beginning Black and White Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 3</td>
<td>Advanced Photography Lab Course</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 4</td>
<td>Portfolio Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 70</td>
<td>Graphic Design/Computer Graphics OR</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 70</td>
<td>Graphic Design/Computer Graphics OR</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
<tr>
<td>CIS 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO 80</td>
<td>Digital Photographic Imaging OR</td>
<td>3.0</td>
</tr>
<tr>
<td>ART 12A</td>
<td>Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101*</td>
<td>English Grammar and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 201**</td>
<td>Pre-Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Plus one course from the following:

| ART 77 or CIS 77 Digital Video, Audio Editing and Production | 3.0   |
| ART 75 or CIS 75 3D Modeling and Digital Animation          | 3.0   |
| ART 1A History of Art                                       | 3.0   |
| ART 1B History of Art                                       | 3.0   |
| ART 1C Asian Art                                            | 3.0   |

27.0

*Eligibility for or completion of English 1A may be substituted for the English 101 requirement.

**Eligibility for or completion of Math 121 may be substituted for the Math 201 requirement.

A grade of "C" or better must be maintained in each required course of the Certificate Program.

PHO1. Introduction to Photography (3)  
Semesters Offered: Variable  
A beginning course in which the fundamental technology, theory, history, techniques and personal/professional applications of photography are studied and practiced. Students participate using a 35mm camera and slide film. No darkroom techniques are covered. Digital cameras are demonstrated and analyzed.

PHO2. Beginning Black and White Photography (3)  
Advisory: Photography 1  
Lec 3 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
This is an introductory course designed to teach the fundamental skills of Black and White photography. Students produce prints of high technical quality and esthetic value. Course study includes the processing of various films, contact printing, enlargement printing, composition, print after-work, digital applications and mounting.

PHO3. Advanced Photo. Lab Class (3)  
Prerequisite: Photography 2  
Lec 3 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
This course emphasizes the development of a photographic portfolio in which the student establishes near professional level skills in a variety of photographic mediums.

PHO4. Portfolio Photography (3)  
Prerequisite: Photography 3  
Lec 3 Hrs  
Semesters Offered: Variable  
This course is an advanced extension of Photography 1. Students refine exposure and technical skills in the use of color slide film. Assignments will be geared toward competence in exposure control, strengthening a sense of composition, natural and studio lighting, a comparison of different color transparency films, and an encouragement to explore the use of filters for color control and special effects. The culmination of this course is a multi-media slide presentation No darkroom work required.

PHO5. Adv. Color Transparency (3)  
Prerequisite: Photography 1 or equivalent beginning photographic skills.  
Lec 3 Hrs  
Semesters Offered: Variable  
This course is an advanced extension of Photography 1. Students refine exposure and technical skills through the use of color slide film. Assignments will be geared toward competence in exposure control, strengthening a sense of composition, natural and studio lighting, a comparison of different color transparency films, and an encouragement to explore the use of filters for color control and special effects. The culmination of this course is a multi-media slide presentation No darkroom work required.

**Eligibility for or completion of Math 121 may be substituted for the Math 201 requirement.

Hartnell College Catalogue -- 2005/06
PHO10. Basic Color Printing (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 3 Hrs
Seminars Offered: Variable
A survey of subtractive and additive color technology in color printing. Completion of Photography 2 recommended.

[CSU]

PHO25. Film History and Production (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 4 Hrs
Seminars Offered: Variable
Film history, theory, and production technology combines historical survey with student film production.

[CSU; UC]

PHO26. Film Making and Video (3)
Credit/No Credit Option
Lec 2 Hrs; Lab 4 Hrs
Seminars Offered: Variable
Introduction to film and video as a visual art. Theory, production processes, and technologies of these visual forms in application.

[CSU; UC]

PHO45. Special Projects (1-3)
Lab 3-9 Hrs
Seminars Offered: Variable
Individual research and investigation within specialized creative art areas. Designed to fit the student's individual interests.

[CSU]

PHO46. Photography Practicum (1-3)
Seminars Offered: Variable
Supervised studio work in photography. Completion of Photography 1, 2, and 3 recommended.

[CSU]

PHO80. Digital Photographic Imaging (3)
Lec 2 Hrs; Lab 3 Hrs
Seminars Offered: Variable
A course in digital photographic imaging. Students will utilize Adobe Photoshop to work with scanned photographs and photographs from digital camera equipment. Not open to students who have successfully completed CIS 80, CSS 80 or ART 80.

[CSU]

PHO131. Portraiture Workshop (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
The portraiture workshop is a lecture and laboratory class that will cover portraiture techniques, both indoor and outdoor situations. Completion of Photography 1 recommended.

PHO140. Photo. of Garrapata Beach and the Big Sur Coast (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
A field oriented course offering the students an opportunity to learn photographic skills through the technical control and creative composition of images made along the coastline. Students will experience the use of 35mm, medium format, and large format camera work.

PHO150. Photography Gallery Tour (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
This course will involve a tour of several photography galleries in the Carmel, San Jose and San Francisco area. Students will have the opportunity to study historical contemporary photographers' work. This is a field oriented course with class discussion and lecture on site.

PHO152. Death Valley Workshop (1)
Credit/No Credit Only
Lec 2 Hrs; Lab 2 Hrs
Seminars Offered: Variable
The study of landscape in relation to photography.

PHO153. Yosemite Workshop (1)
Credit/No Credit Only
Lec .5 Hrs; Lab 1.5 Hrs
Seminars Offered: Variable
A field oriented course offering the students an opportunity to learn photographic skills through the technical control and creative composition of landscape photography.

PHO154. Photo. at San Diego Zoo (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
A photographic field oriented course offering the students an opportunity to learn photographic skills through the technical control and creative composition of animal photographs. Students will experience the use of 35mm and medium format camera work.

PHO155. Photo Workshop in Redwood National Park (1)
Credit/No Credit Only
Lec 5; Lab 1.5
Seminars Offered: Variable
A field oriented course where students learn the photographic techniques and creative composition of landscape photography. Students will photograph in the Del Norte Coast and Prairie Creek area of the Redwood National Park.

PHO160. Digital Photography with Adobe Photoshop (.5)
Credit/No Credit Only
Lec .2 Hrs; Lab .7 Hrs
Seminars Offered: Variable
This course will cover digital photography and scanning photographs. Through hands on experience utilizing the Macintosh computer and Adobe Photoshop software, students will learn digital photo imaging, color correction, and special effects.

PHO170. Non-Silver Photographic Techniques (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
This course will cover the non-silver photographic processes. Students will use these historic processes as a means of applying the photographic image onto drawing paper. Students will investigate the opportunity to create alternative photographic images.

PHO180. Methods of Color Photography Workshop (.5)
Credit/No Credit Only
Lec .3 Hrs; Lab .7 Hrs
Seminars Offered: Variable
This course investigates the challenges of exposing and printing color negatives. Emphasis will be on color negative work and "Type C" printing. Students will learn the subtractive printing methods and develop an eye for color correction. This class involves lecture and laboratory work. Completion of Photography 1 recommended.
PHYSICAL EDUCATION

ASSOCIATE OF SCIENCE DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 5</td>
<td>Human Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>BIO 6</td>
<td>Introductory Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>HED 2</td>
<td>Individual Health</td>
<td>3.0</td>
</tr>
<tr>
<td>HED 55</td>
<td>Health Education - Advanced First Aid</td>
<td>3.0</td>
</tr>
<tr>
<td>PE 15</td>
<td>Care and Prevention of Athletic Injuries</td>
<td>4.0</td>
</tr>
<tr>
<td>PE 16</td>
<td>Concepts of Fitness &amp; Wellness</td>
<td>3.0</td>
</tr>
<tr>
<td>PE 20</td>
<td>Intro. to Physical Education</td>
<td>2.0</td>
</tr>
<tr>
<td>PE 42A/B</td>
<td>Leadership Organization of Physical Ed. Activities</td>
<td>1.5-2.0</td>
</tr>
<tr>
<td>PE 45</td>
<td>Special Projects</td>
<td>1-3.0</td>
</tr>
</tbody>
</table>

A minimum of 2.0 units is required from the following list of Theory & Analysis classes:

- PE 51A/B/C/D Theory & Analysis of Football
- PE 52A/B Theory & Analysis of Basketball
- PE 53A/B Theory & Analysis of Baseball
- PE 54A/B Theory & Analysis of Track
- PE 55A/B Theory & Analysis of Volleyball
- PE 58A/B Theory & Analysis of Soccer

RECOMMENDED ELECTIVES

- COU 25 Human Effectiveness 1.0
- CHM 22 The Science of Chemistry 4.0
- ETH 1 Introduction to Ethnic Studies 3.0
- FCS 23 Nutrition 3.0
- HUS 2 Introduction to Group Process 3.0
- CSS 90 Internet Literacy 3.0

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

- Natural Sciences (see above) 3.0
- Social & Behavioral Sciences (see above) 3.0
- Humanities 3.0
- Ethnic Groups in the United States 3.0
- Language and Rationale 9.0
- Recommend SPE 1A

ADDITIONAL INFORMATION

A grade of “C” or better must be maintained in each required major course.

RECOMMENDED PHYSICAL EDUCATION COURSES:

The department recommends but does not require, that students broaden their experience by taking one class from each activity category below:

- One Racquet Activity 1.5
- One Aquatic Activity 1.5
- One Team Activity 1.5
- One Fitness Activity 1.5

ADAPTIVE P.E. CLASSES

Adaptive Physical Education classes are designed to enable disabled students who cannot benefit from the regular physical education college program because of a physical, communication, or learning disability.

Students must complete an application in the D.S.P. & S. or Adaptive P.E. office for verification of eligibility for these classes as well as a doctor's, physical therapists, or chiropractic referral. Students' individual needs are assessed and evaluated each semester to provide a total wellness program.

Please call either:

1) D.S.P. & S. Office
   Wayne Davis - 755-6760
   D.S.P. & S. Counselor - HCC 102

2) Adaptive Physical Education
   Yvonne Reid - 770-6187
   Melissa Stave - 755-6876
   Adaptive Specialist - PE 144
PE1.110. Basketball (1.5)
Semesters Offered: Variable
A course designed to develop a thorough understanding of the game of basketball. Individual game skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game will be discussed and analyzed. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.111. Fundamentals of Basketball (1, 1.5)
Semesters Offered: Variable
A course designed to develop an understanding of the game of basketball. Individual game skills, basic offensive and defensive skills, popular systems of play and strategy, and the rules of the game will be discussed and analyzed. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.112. Basketball (1)
Semesters Offered: Variable
A course designed to develop a thorough understanding of the game of basketball. Individual skills of the game, basic offensive and defensive skills, popular systems of play and strategy, and the rules of the game will be discussed and analyzed. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.131. Weight Training (1, 1.5)
Semesters Offered: Variable
A progressive weight-training program to increase flexibility, strength, endurance, and skills. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.134. Swim Fitness (1, 1.5)
Credit/No Credit Only
Advisory: Intermediate swimming ability recommended.
Semesters Offered: Variable
A course to develop endurance and swimming skills in order to maintain good cardiovascular physical fitness. Intermediate swimming ability recommended. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.136. Aquatic Exercises (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
A program of fitness exercises designed specifically for water. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.137. Aerobics I (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Emphasis is on developing a cardiovascular fitness base of 65-70% of their maximum heart rate and maintaining that level for 15 minutes while performing exercise routines to music. Class activity is divided into three (3) essential areas: warm-up, vigorous activity, and cool down. Course is designed to prepare the student for entry into Aerobics II. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.138. Aerobics II (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Course emphasis is on reviewing, evaluating, and reconditioning of the cardiovascular system. Students advancing from Aerobics I will be able to maintain a cardiovascular fitness level of 70-75% of their maximum heart rate. This rate will be maintained for 25-30 minutes while performing exercise routines to music. Students attending without previous attendance in Aerobics I will be evaluated and conditioned at a level of 65-70% of their maximum heart rate. Class activity for both levels will still consist of a warm-up, vigorous activity, and a cool down. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.144. Adaptive Cardiac Wellness: A Positive Change in Life-Style (1.5)
Credit/No Credit Option
Offered: Variable
This course is designed to help the cardiac student develop his physical potential and restore the student to an optimally productive and active life as soon as possible following a myocardial-infarction, bypass surgery, and/or recognition of heart disease. The exercise period will provide information on diet, exercise, risk factors and stress reduction. This class is offered on an open-entry, open/exit basis. Students should complete an application in the DSP&S Office for verification of eligibility for this class. [CSU]

PE1.146. Var. Sports Conditioning (1.5)
Lab 4.5 Hrs
Semesters Offered: Variable
Course designed to improve the cardiovascular endurance, flexibility, strength, and energy level necessary to the requirements of the particular sport of the individual. Emphasis: Baseball, Basketball, Cross Country, Football, Golf, Rodeo, Soccer, softball, Swimming, Tennis, Track, Volleyball, and Water Polo. [CSU]

PE1.147. Adapt. Fitness Exercise (1, 1.5)
Semesters Offered: Variable
Adaptive Fitness Exercise is a specially designed course for individuals with physical handicaps or disabling situations which last six months or longer. This course is geared toward self-improvement of physical fitness and overall health parameters. This class is offered on an open/entry open/exit basis. Students should complete an application in the DSP&S Office for verification of eligibility for this class. [CSU]

PE1.150. Beginning Golf (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Fundamentals of stance, grip, and swing the basic clubs used in golf as well as the rules of the game. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.151. Advanced Golf (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Advanced theory, techniques, rules of the game of golf. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of golf skills such as stance, swings, iron and woods, rules and etiquette. [CSU]

PE1.160. Beginning Swimming (1, 1.5)
Semesters Offered: Variable
This course offers simple skill techniques which a beginner must acquire to feel at home in the water and to prepare for learning the more complex skills of swimming. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of the following water skills: bobbing and floating; leg action kicks such as flutter, frog and scissor; and propulsion through prone glide, finning, sculling and arm movement. Students should be able to use swim strokes such as the crawl, beginning back stroke, back crawl and side stroke. [CSU]

PE1.161. Intermediate Swimming (1.5)
Semesters Offered: Variable
This course offers skill techniques in five of the nine basic swim strokes. Introduces the student to diving from the low and high springboards. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of the following water skills: bobbing and floating; leg action kicks such as flutter, frog and scissor; and propulsion through prone glide, finning, sculling and arm movement. Students should be able to use swim strokes such as the crawl, beginning back stroke, back crawl and side stroke. [CSU]
PE1.162. Advanced Swimming (1.5)
Semesters Offered: Variable
This course offers advanced skill techniques in both swimming and springboard diving. Develops a strong physical stamina and introduces students to water sports. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of the following strokes: front crawl, back crawl, breast stroke, side stroke, and inverted breast stroke. Students should also be knowledgeable in jumping and diving into the pool from the deck, low and high boards.
[CSU]

PE1.163. Adaptive Swimming (1.5)
Credit/No Credit Option
Semesters Offered: Variable
A course designed for the physically challenged student to acquire basic fundamental skills, appropriate social behavior, and fundamental knowledge of safety to enable the student to successfully participate in swimming. Students should complete an application in the DSPS Office for verification of eligibility for this class.
[CSU]

PE1.164. Adaptive Aquatics (1.5)
Credit/No Credit Option
Semesters Offered: Variable
This aquatic course is individually designed for physically challenged students. Student assistants are used for those students that require one-on-one aid to better enhance the student's participation and to improve their motor skills. This course is also designed to give students additional fitness and directed exercises to enable them to participate in water activity. This class is offered on an open/entry open/exit basis. Students should complete an application in the DSPS Office for verification of eligibility for this class.

PE1.170. Beginning Tennis (1, 1.5)
Semesters Offered: Variable
Introduction to basic techniques and skills of tennis. Emphasis on scoring and rules of play as well as competitive play. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.171. Intermediate Tennis (1, 1.5)
Semesters Offered: Variable
Intermediate skills development of basic strokes including strategy and rules interpretation. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of tennis terminology, scoring, and functional skills such as a grips, serve, forehand and backhand drive, and volley.
[CSU]

PE1.172. Advanced Tennis (1, 1.5)
Semesters Offered: Variable
Advanced techniques, competitive play. Emphasis on strategy in the game of tennis. Course will begin with a health screening and baseline or functional capacity fitness assessment. Students should be knowledgeable of advanced tennis skills such as forehand and backhand volleys, serving, lobbing and the strategy for single and doubles tennis.
[CSU]

PE1.180. Advanced Distance Running (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
This course includes a variety of long runs with concentration on LSD (long slow distance) and interval training. It also includes a general weight training program with stretching exercises supplementing the long runs. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.182. Self-Defense (1, 2)
Semesters Offered: Variable
Methods of Japanese style of self-defense for men and women. Emphasis on protection from assaults and use of defensive measures. Learn Katas required for belt promotions and weaponry. Become more aware of your energy and strength. Development of confidence in and benefits to body, mind and spirit. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.183. Soccer (1, 1.5)
Semesters Offered: Variable
Fundamental techniques, rules, and practice in the sport of soccer. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.184. Softball (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Fundamental techniques, rules, and practice in the sport of softball. Slow pitch will be used. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.185. Track and Field (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
A physical education class in which the fundamentals of track and field events are practiced. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.186. Volleyball (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
Fundamental techniques, rules, strategies, and practice in volleyball. Course will begin with a health screening and baseline or functional capacity fitness assessment.

PE1.187. Water Polo (1, 1.5)
Semesters Offered: Variable
Fundamentals and philosophy of water polo. Course will begin with a health screening and baseline or functional capacity fitness assessment.
[CSU]

PE1.189. Advanced Baseball (1, 1.5)
Semesters Offered: Variable
Instruction and practice in offensive and defensive fundamentals for each position. Course will begin with a health screening and baseline or functional capacity fitness assessment.

PE1.193. Wellness Through Walking (1, 1.5)
Credit/No Credit Option
Semesters Offered: Variable
A physical education program which introduces methods of walking performed in the water utilizing floatation devices and other resistance building equipment, such as tights, long sleeve shirts, webbed gloves, etc. Course will begin with a health screening and baseline or functional capacity fitness assessment.

PE1.194. Aquatic Resistance Training (1, 1.5)
Semesters Offered: Variable
A program of resistive training performed in the water utilizing floatation devices and other resistance building equipment, such as tights, long sleeve shirts, webbed gloves, etc. Course will begin with a health screening and baseline or functional capacity fitness assessment.

PE1.197. Power Lifting (1, 1.5)
Semesters Offered: Variable
A physical education program which increases the student's flexibility, strength, and explosive power. The emphasis is on lifting for power by concentrating on the olympic lifts and their supplemental floor lifts with free weights. Course will begin with a health screening and baseline or functional capacity fitness assessment.

PE1.198. Aerobic Strength Conditioning (1, 1.5)
Semesters Offered: Variable
A physical education class involving the use of progressive resistance machinery to concentrate on the improvement of one's cardiovascular, strength, and flexibility components of physical fitness. Course will begin with a health screening and baseline or functional capacity fitness assessment.
PE1.200. Strength Conditioning  
Lab (1, 1.5)  
Semesters Offered: Variable  
A progressive weight training and conditioning course involving the use of weight machines, free weights and cardiovascular equipment to develop muscular strength, endurance and general fitness. This course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]

PE1.204. Circuit Endurance Training (1, 1.5)  
Semesters Offered: Variable  
A fitness class involving the use of state of the art equipment used in a progressive resistance program to enhance the student's cardiovascular endurance as well as develop muscle strength and flexibility. Course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]

PE1.205. Adaptive Aquatic Maintenance Workout For the Diabetic (1, 1.5)  
Semesters Offered: Variable  
This course is designed to increase awareness of the importance of exercise for the blood glucose control of the diabetes mellitus client. It is to train those students in the effectiveness of water exercise as a therapeutic tool. Students will learn to monitor and record their blood glucose levels as to their response to exercise in the water. Depending on those values, the students will take the necessary recorded information monthly and consult with their doctor after conferring with the instructor on their progress. This class is offered on an open/entry open/exit basis. Students should complete an application in the Enabler’s Office for verification of eligibility for this class.  
[CSU]

PE1.206. Stress Reduction (1, 1.5)  
Credit/No Credit Option  
Semesters Offered: Variable  
A physical education class emphasizing a wide variety of stretching and relaxation techniques such as Tai Chi, as well as breathing exercises for stress reduction to help round out one's overall physical fitness program. Course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]

PE1.208. Aerobic Water Exercise (1, 1.5)  
Credit/No Credit Option  
Semesters Offered: Variable  
A program of calisthenics performed in water with the use of Aqua Fit barbells, Aqua Joggers, and Aqua Runners. Course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]

PE1.211. Adaptive Basketball (1)  
Credit/No Credit Only  
Semesters Offered: Variable  
A course designed for the physically disabled student to develop a thorough understanding of the game of basketball. The physically limited student will acquire basic fundamental skills, appropriate social behavior, and functional knowledge of the rules to enable them to successfully participate in a regulation or modified game of basketball. Students should complete an application in the Enabler’s Office for verification of eligibility for this class.  
[CSU]

PE1.214. Adaptive Swimming (1)  
Credit/No Credit Only  
Semesters Offered: Variable  
A course designed for the physically disabled student to acquire basic fundamental motor patterns, coordination, timing, balance, muscular endurance, cardiovascular conditioning and flexibility components of physical fitness. This class is offered on an open/entry open/exit basis. Students should complete an application in the Enabler's Office for verification of eligibility for this class.  
[CSU]

PE1.217. Adaptive Injury Rehabilitation (1,1.5)  
Semesters Offered: Variable  
A course designed for the individuals with disabling injuries which last several months or longer. The course is geared toward self-improvement of physical fitness and overall wellness. This class is not designed to replace physical therapy but to complement it and to continue once physical therapy has been terminated. Students must complete an application in the Enabler’s Office for verification of eligibility for this class. This class is offered on a open/entry open/exit basis. Students should complete an application in the Enabler’s Office for verification of eligibility for this class.  
[CSU]

PE1.218. Adaptive Strength Conditioning (1,1.5)  
Semesters Offered: Variable  
A course designed for the physically disabled student to acquire basic fundamental skills and knowledge of safety for the use of progressive resistance machinery and free weights to develop one's cardiovascular, strength, and flexibility components of physical fitness. This class is offered on an open/entry open/exit basis. Students should complete an application in the Enabler’s Office for verification of eligibility for this class.  
[CSU]

PE1.219. Adaptive Circuit Endurance Training (1, 1.5)  
Credit/No Credit Only  
Semesters Offered: Variable  
A course designed for the physically disabled student to enhance their cardiovascular endurance by using progressive resistance machines to develop muscle strength and flexibility. This class is offered on an open/entry open/exit basis. Students should complete an application in the Enabler's Office for verification of eligibility for this class.  
[CSU]

PE1.220. Adaptive Movement (1, 1.5)  
Credit/No Credit Option  
Semesters Offered: Variable  
A course designed for the physically disabled student to acquire basic fundamental motor patterns, coordination, timing, balance, muscular endurance, cardiovascular conditioning and flexibility components of physical fitness. This class is offered on an open/entry open/exit basis. Students should complete an application in the Enabler's Office for verification of eligibility for this class.  
[CSU]

PE1.221. Water Jogging (1, 1.5)  
Credit/No Credit Option  
Semesters Offered: Variable  
A fitness class involving the use of Wet Vests and Aqua Jogger Belts, to enhance the student’s cardiovascular endurance as well as developing a balanced muscular system through toning, strengthening, and flexibility. Course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]

PE1.222. Step Aerobic Training (1, 1.5)  
Credit/No Credit Option  
Semesters Offered: Variable  
Emphasis on the development of step aerobic techniques, strength, endurance, and flexibility. Routines are coordinated with the use of step benches, which will lend to the improvement of overall fitness level. Class activity is divided into three areas: warm-up; vigorous activity; cool down. Course will begin with a health screening and baseline or functional capacity fitness assessment.  
[CSU]
PE1.223. Adaptive Back Exercise Program (1.5)
Credit/No Credit Option
Seminars Offered: Variable
A course designed for the individuals with back injuries which lasts several months or longer. This course is geared toward education, motivation and a supervised exercise program geared toward self-improvement and well being of the student’s back. This class is not designed to replace physical therapy, but to complement it and to continue once physical therapy has been terminated. This class is offered on an open/entry open/exit basis. Students should complete an application in the DSPS Office for verification of eligibility for this class. [CSU]

PE1.224. Adaptive Soccer (1, 1.5)
Seminars Offered: Variable
A course designed for the multi-handicapped student to acquire basic fundamental skills, knowledge of the rules, and appropriate social behavior to enable them to successfully participate in a regulation or modified game of soccer. The overall aim of training is to improve fitness, learn a new sport and encourage an enjoyable and beneficial use of leisure time. Students should complete an application in the Enabler’s Office for verification of eligibility for this class. [CSU]

PE1.225. Advanced Volleyball (1, 1.5)
Credit/No Credit Option
Seminars Offered: Variable
This course is designed to give the experienced volleyball player an opportunity to strengthen his/her skills. Emphasis will be placed on performance in actual competitive situations during class time as preparation for continued participation in competitive volleyball outside the classroom. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.228. Strength Training (1, 1.5)
Seminars Offered: Variable
A progressive weight training course designed to provide instruction in the techniques and training of muscular strength, muscular endurance and muscle definition through the use of free weights and machines. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.229. Hydro-Fitness (1, 1.5)
Seminars Offered: Variable
A cardiovascular exercise program designed to be done in the pool. The workouts will include a warm up, arm and leg exercises using “Hydro-Fit” system apparatus, and a cool down. Individualized programs will be established if needed. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.230. Fundamentals of Football (1, 1.5)
Credit/No Credit Option
Seminars Offered: Variable
A course designed to develop an understanding of the game of football. Individual game skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game are discussed and analyzed. Course will begin with a health screening and baseline or functional capacity fitness assessment. [CSU]

PE1.231. Adaptive Aquatic Circuit Endurance Training (1, 1.5)
Credit/No Credit Only
Seminars Offered: Variable
A course designed to enhance the student’s cardiovascular endurance, muscle strength, and flexibility using both land and resistance equipment designed specifically for the water. This class is offered on an open entry/open exit basis. Students should complete an application in the Enabler’s Office for verification of eligibility for this class. [CSU]

PE1.232. Wall Climbing (1.5)
Credit/No Credit Option
Seminars Offered: Variable
This course is designed to provide instruction for fitness development in a wall-climbing environment. This course introduces climbing as a sport in individual and group formats. This course focuses on methods of personal empowerment through individual, motivation, achievement, and teamwork. This course will address the cognitive skills required to analyze, evaluate, develop strategies and arrive at solutions to overcome both mental and physical barriers. The course will cover affective areas of attitudes, values, motivation, fear, and self-esteem. Psychomotor skills will include motor fitness, sensorimotor function, and self-expression demonstrated by the general student population. [CSU]

PE1.233. Adaptive Wall Climbing (1.5)
Credit/No Credit Option
Seminars Offered: Variable
This course is designed to provide instruction for fitness development in a wall-climbing environment. This course is for the adaptive student who will be introduced to climbing as a sport both in individual and group formats. This course focuses on methods of personal empowerment of the adaptive student through motivation, achievement, adaptability and teamwork. This course will address the cognitive skills required to analyze, develop strategies and arrive at solutions to overcome both mental and physical barriers. This course will cover affective areas of attitudes, values, motivation, fear, and self-esteem. Psychomotor skills will include motor fitness, for the disability sensorimotor integration, and self-expression demonstrated by their exposure to the general student population. This program of adaptive wall climbing will be integrated with the able-bodied climbing classes. [CSU]

PE3.510. Men’s Varsity Baseball (2)
Seminars Offered: Variable
Advanced instruction and practice in offensive and defensive fundamentals for each position, rules, organizational methods and coaching principles. [CSU]

PE3.511. Varsity Basketball for Men (.5, 1, 1.5)
Seminars Offered: Variable
An advanced course designed to develop, promote and participate in men’s basketball at a collegiate level. Individual game skills, basic offensive and defensive drills, and system of play and strategy. [CSU]

PE3.512. Varsity Basketball for Women (.5, 1, 1.5)
Seminars Offered: Variable
An advanced course designed to develop and promote women’s basketball skills, techniques, strategies, and rules for intercollegiate competition. [CSU]

PE3.513. Men’s Varsity Football (2)
Seminars Offered: Variable
Advanced instruction and practice in offensive and defensive fundamentals, techniques for each position, rules, organizational methods and coaching principles. [CSU]

PE3.514. Varsity Soccer (2)
Seminars Offered: Variable
Advanced instruction and practice designed to develop, promote, and encourage participation at a collegiate level. Individual skills, game strategy, rules of the sport, and offensive and defensive system used by Hartnell. [CSU]

PE3.515. Varsity Softball for Women (2)
Seminars Offered: Variable
An advanced course designed to develop and promote skills, techniques, and strategies. Emphasis on application of rules and preparation for women’s intercollegiate softball competition. [CSU]
PE3.516. Varsity Volleyball for Women (2)
   Semesters Offered: Variable
   An advanced course designed to develop and promote volleyball skills, techniques, rules, and strategies with emphasis on and preparation for intercollegiate volleyball competition.
   [CSU]

PE3.530. Varsity Cross Country (2)
   Semesters Offered: Variable
   An advanced course designed to develop, promote, and participate in varsity cross country running at the collegiate level. Individual event skills, techniques, and strategy as used at Hartnell.
   [CSU]

PE3.531. Varsity Track and Field (2)
   Semesters Offered: Variable
   An advanced course designed to develop, promote, and participate in varsity track and field at the collegiate level. Individual event skills techniques, and strategy as used at Hartnell College.
   [CSU]

PE3.540. Varsity Swimming (2)
   Semesters Offered: Variable
   Intercolligate competition throughout California as individual and relay races plus diving.
   [CSU]

PE3.541. Varsity Water Polo (2)
   Semesters Offered: Variable
   Intercolligate water polo competition throughout California.
   [CSU]

PE15. Care and Prevention of Athletic Injuries (4)
   Semesters Offered: Variable
   This course is designed to prepare prospective coaches, athletic trainers, and physical educators in the recognition, evaluation and care of athletic injuries. Laboratory activities will be included that provide direct application of classroom content.
   [CSU; UC]

PE16. Concepts of Fitness and Wellness (3)
   Semesters Offered: Variable
   This course will introduce the basic concepts of fitness, nutrition, health promotion and disease prevention. The students will gain knowledge to make intelligent choices that contribute to a healthy lifestyle. The course will incorporate both lecture and physical activity laboratory assignments.
   [CSU]

PE20. Introduction to Physical Education (2)
   Semesters Offered: Variable
   An orientation course in physical education to develop a basic understanding of the profession. Topics include: aims and objectives, history, curriculum trends, issues and concerns of today, leisure time needs.
   [CSU; UC; CAN KINE/PE 2]

PE42A. Leadership Organization of Physical Education Activities(1.5)
   Semesters Offered: Variable
   Methods in teaching and coaching physical education classes and teams at a junior high and high school level. Students are under supervision of school instructors.
   [CSU]

PE42B. Leadership Organization of Physical Education Activities (2)
   Semesters Offered: Variable
   Methods in teaching and coaching physical education classes and teams at a junior high and high school level. Students are under supervision of school instructors.
   [CSU]

PE45. Special Projects (1-3)
   Semesters Offered: Variable
   Individualized research and laboratory work in a specialized area of physical education or athletics.
   [CSU; UC]

PE51A. Theory & Analysys of Football (2)
   Semesters Offered: Variable
   Rules of the game, fundamentals and systems of offense and defense. Psychology of coaching, study of films, and organization of coaching staff.
   [CSU; UC]

PE51B. Theory & Analysis of Football (2)
   Semesters Offered: Variable
   Provides students with the fundamental concepts, theories, and techniques of coaching and playing intercollegiate and interscholastic football. (Each phase of the course (A, B, C, D) will demand progressively higher levels of competence and skills.)
   [CSU; UC]

PE51C. Theory & Analysis of Football (1)
   Semesters Offered: Variable
   Rules of the game, fundamentals and systems of offense and defense. Psychology of coaching, study of films, and organization of coaching staff. Organization of practice sessions and drills.
   [CSU; UC]

PE51D. Theory & Analysis of Football (1)
   Semesters Offered: Variable
   Provides students with detailed application of rules pertaining to football. Modern theories of nutrition and its application to the development of strength and power are explored. Emphasis of social development and mental - emotional growth of the individual.
   [CSU; UC]

PE52A. Theory & Analysis of Basketball (2)
   Semesters Offered: Variable
   A course designed to develop a thorough understanding of the game of basketball. Individual game skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game are discussed and analyzed.
   [CSU; UC]

PE52B. Theory & Analysis of Basketball (2)
   Semesters Offered: Variable
   A course designed to develop a thorough understanding of the game of basketball. Individual game skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game are discussed and analyzed.
   [CSU; UC]

PE53A. Theory & Analysis of Baseball (2)
   Semesters Offered: Variable
   A course designed to develop a thorough understanding of the game of baseball. Individual game skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game are discussed and analyzed.
   [CSU; UC]

PE53B. Theory & Analysis of Baseball (2)
   Semesters Offered: Variable
   A course designed to develop a thorough understanding of the game of baseball. Individual skills, basic offensive and defensive drills, popular systems of play and strategy, and the rules of the game are discussed and analyzed.
   [CSU; UC]

PE54A. Theory & Analysis of Track (2)
   Semesters Offered: Variable
   A lecture class designed to develop interest and knowledge toward track and field activities.
   [CSU; UC]

PE54B. Theory & Analysis of Track (2)
   Semesters Offered: Variable
   A lecture class designed to develop interest and knowledge toward track and field activities.
PE55A. Theory & Analysis of Volleyball (2)
Semesters Offered: Variable
A lecture class designed to develop interest and knowledge toward all aspects of power volleyball.
[CSU; UC]

PE55B. Theory & Analysis of Volleyball (2)
Semesters Offered: Variable
A lecture class designed to develop interest and knowledge toward all aspects of power volleyball.
[CSU; UC]

PE58A. Theory & Analysis of Soccer (2)
Semesters Offered: Variable
Provides students with the advanced concepts, theories and techniques of coaching and playing intercollegiate and interscholastic soccer.
[CSU; UC]

PE58B. Theory & Analysis of Soccer (2)
Semesters Offered: Variable
Provides students with the advanced concepts, theories and techniques of coaching and playing intercollegiate and interscholastic soccer.
[CSU; UC]

PE115. Practical Field Experience in the Care and Prevention of Athletic Injuries (1)
Credit/No Credit Option
Semesters Offered: Variable
A coeducational course designed to offer the prospective coach, trainer, health and physical educator an introductory practical experience in the care and prevention of athletic injuries and the field of athletic training.

PE116. Practical Field Experience in the Care and Prevention of Athletic Injuries (2)
Credit/No Credit Option
Semesters Offered: Variable
A coeducational course designed to offer the prospective trainer, therapist, physical educator a continuing practical experience reinforcing and applying the concepts and terminology learned in PE 15, The Care and Prevention of Athletic Injuries, and the field of athletic training. Knowledge in the recognition, evaluation, and care of athletic injuries or practical experience in care and prevention of athletic injuries is recommended.

PE117. Practical Field Experience in the Care and Prevention of Athletic Injuries (2)
Credit/No Credit Option
Semesters Offered: Variable
A coeducational course designed to offer the prospective trainer, therapist, or physical educator a continuing practical experience reinforcing and applying the concepts and terminology learned in PE 15, The Care and Prevention of Athletic Injuries, and the field of athletic training. Knowledge in the recognition evaluation, and care of athletic injuries or practical experience in care and prevention of athletic injuries is recommended.

PE118. Practical Field Experience in the Care and Prevention of Athletic Injuries (2)
Credit/No Credit Option
Semesters Offered: Variable
A coeducational course designed to offer the prospective trainer, therapist, or physical educator a continuing practical experience reinforcing and applying the concepts and terminology learned in PE 15, The Care and Prevention of Athletic Injuries, and the field of athletic training. Skill and knowledge in applying the concepts and terminology learned in care and prevention of athletic injuries is recommended.

PE223. Physical Fitness Assessment (.3)
Credit/No Credit Only
Semesters Offered: Variable
A course designed to assess the physical fitness level of the student based on established criteria and standards. In addition to assessment, students will determine strategies to improve individual fitness levels and quality of life.

PE224. Fitness Education and Assessment (.3)
Credit/No Credit Only
Semesters Offered: Variable
Designed to educate students in developing their exercise program for lifetime fitness. Health history and quality of life issues are emphasized including: risk factors, aging, stress management, and nutrition.
The Physics discipline offers course work for a diverse range of students from the community-starting with those merely wishing to learn more of the world around them and finishing with the student pursuing a four-year degree in science or engineering.

Physics courses are available at three different levels, all of which will satisfy the needs of students wishing to transfer to four-year colleges and universities. The level of the physics course that students initially enroll in is largely dependent on their individual math skills. For those with little math background, the first level (Physics 10) would be appropriate. For students whose math background includes intermediate algebra and trigonometry, the second level (Physics 2A, 2B) provide both lecture and laboratory experience in physics. This sequence is often required for those pursuing studies in medicine, biology, physical therapy, and related fields. The third level is a calculus based sequence (Physics 4A, 4B, 4C), with both lecture and laboratory, and is appropriate for those majoring in engineering, mathematics, physics, chemistry, and other physical sciences.

The emphasis at all levels is on developing an understanding and appreciation for the basic laws of our physical universe. This is done largely through the development of problem solving skills and laboratory investigations. The physics program at Hartnell College is fortunate to possess an excellent inventory of laboratory apparatus for demonstrations and student use in the laboratories, and special projects.

Some positions for which four-year graduates in physics are qualified are in research, teaching, engineering, medicine, and industry.

**PHYSICS**

**ASSOCIATE OR SCIENCE DEGREE**
Completion of the major requirements plus graduation requirements for the Associate Degree.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 3A</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3B</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 3C</td>
<td>Analytic Geometry and Calculus</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT 5</td>
<td>Differential Equations</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY 4A</td>
<td>Mechanics and Properties of Matter</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4B</td>
<td>Electricity and Magnetism</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 4C</td>
<td>Heat, Sound, and Light</td>
<td>4.0</td>
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</table>

Remaining general education requirements in addition to the courses listed above:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Natural Sciences</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
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<tr>
<td>Humanities</td>
<td>3.0</td>
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<tr>
<td>Language and Rationality</td>
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<tr>
<td>Ethnic Groups in the United States</td>
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</table>

**PHY2A. General Physics (4)**
Prerequisite: Math 24
Lec 4 Hrs; Lab 3 Hrs
Offered: Fall
Lectures and labs covering vectors, motion, forces, gravity, satellites, work, energy, momentum, rotational motion, mechanical properties of matter, and heat. Required for pre-medical, pre-dental, biology, pharmacy, and related majors.

**PHY2B. General Physics (4)**
Prerequisite: Physics 2A
Lec 4 Hrs; Lab 3 Hrs
Offered: Spring
A continuation of Physics 2A. Lectures and laboratories covering waves, sound, light, electricity, magnetism and atomic physics. Required for pre-medical, pre-dental, biology, pharmacy, and physical therapy majors.

**PHY4A. Physics—Mechanics and Properties of Matter (4)**
Prerequisite: Math 3A
Lec 4 Hrs; Lab 3 Hrs
Offered: Fall, Spring
Lectures and laboratories covering vectors, particle kinematics and dynamics, work, energy, momentum, angular momentum, conservation laws, rigid bodies, oscillations. Required for engineering and physical science majors. Strongly recommended for math majors.

**PHY4B. Physics—Electricity and Magnetism (4)**
Prerequisite: Physics 4A
Lec 4 Hrs; Lab 3 Hrs
Offered: Fall
Lectures and laboratories covering electric charges and currents, electric and magnetic fields, capacitance, inductance, resistance, Maxwell's equations, electromagnetic oscillations and waves. Required for engineering and physical science majors. Strongly recommended for math majors.

PHY4C. Heat, Sound and Light (4)
Prerequisite: Physics 4A
Lec 4 Hrs; Lab 3 Hrs
Offered: Spring
Lecture and laboratory hours covering:
fluids, waves, sound, thermal properties of
matter, kinetic theory of gases, heat
transfer, laws of thermodynamics,
reflection, refraction, interference,
diffraction of light, lens systems,
electromagnetic waves. Required for
engineering and physical science majors.
Strongly recommended for math majors.
[CSU; UC; CAN PHYS 14, CAN PHYS
SEQ B with PHY 4A & 4B & 4C]

PHY10. Introduction to Physics (4)
Advisory: MAT 121 or MAT 151
Lec 3 Hrs; Lab 3 Hrs
Offered: Variable
A brief presentation of some of the more
important and interesting phenomena in
physics. Lecture and laboratory covering
falling bodies, Newton's laws of motion,
satellite and planetary motion, heat, light,
sound, waves, atomic structure, nuclear
physics, energy, electricity and magnetism.
Emphasis is on developing a practical
understanding of principles rather than a
detailed mathematical treatment. Open to
students with or without high school
physics, but not open to those who have
credit for or are taking concurrently Physics
2A, 2B, 4A, 4B, or 4C.
[CSU; UC]

PHY45. Special Projects (1-3)
Semesters Offered: Variable
Laboratory work in the field of physics.
Enables the student to investigate topics
beyond the scope of the regular physics
courses.
[CSU]
Political Science is the study of the acquisition and use of power and authority. Politics and government affect everyone’s life and impinge on activities in many fields. Political science studies society as it relates to the political formation of values, myths and folkways. Also, it describes the way in which political systems function in the realm of power confrontation and decision making abilities.

Political science provides a foundation for careers in government and business. It is especially desirable for students who might work for civil government at any level, be commissioned as military officers, or who intend to become lawyers.

Positions for which graduates in political science are qualified are:
- Attorney
- Elected Official
- Public Opinion Surveyor
- Lobbyist
- Political Economist
- Campaign Aide
- Foreign Service Officer
- Budget Analyst
- Government Worker
- City Planner
- Foreign Trade Specialist
- Political Scientist
- Personnel Manager
- Staff Member
- Occupational Analyst
- Military Officer
- Public Information Officer
- Legislative Aide
- Public Relations Specialist

ASSOCIATE OF ARTS DEGREE

Students may major in Social Science by completing the program listed under Social Science in the Catalog.

POL1. American Political Institutions (3)
Lec 3 Hrs
Semesters Offered: Variable
Introduction to the U.S. Constitution, American political institutions, and California State Government.
[CSU; UC; CAN GOVT 2]

POL2. Contemporary Governments Abroad (3)
Lec 3 Hrs
Semesters Offered: Variable
A comparative study of the principles, institutions, and postwar problems of the governments of the following countries: Britain, France, the U.S.S.R., Italy, Germany, Japan and China. The progress and problems of the United Nations.
[CSU; UC]

POL5. Chicano Politics and the American Political System (3)
Lec 3 Hrs
Semesters Offered: Variable
A study of the influence of American political institutions on the civil and political rights of Chicanos. Chicano organizations, political models, political participation and the American political process will be studied as well as important Constitutional issues and court cases that have affected Chicanos. Not open to those students who have successfully completed Ethnic Studies 5.
[CSU; UC]

POL45. Special Projects (1-3)
Semesters Offered: Variable
A supervised program of independent research and study in Political Science. Completion of Political Science 1 or the equivalent recommended.
[CSU]
PRE-DENTISTRY/PRE-MEDICINE/ PRE-VETERINARY

COUNSELOR: Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
ipando@hartnell.edu

Consult the science counselor and college or university catalogue of the school to which you intend to transfer. You should also consult your counselor and a teacher who majored in your area of interest.

General Education: See the individual campus catalogue for General Education requirements for the California State Colleges and Universities, the University of California, or private universities.

Recommended preparation courses for Pre-Dentistry, Pre-Medicine, and Pre-Veterinary are:
- Biology 1, 2
- Chemistry 1A, 1B, 12A, 12B
- Math 3A, & 3B (pre-medicine)
- Physics 2A, 2B

PRE-LAW

COUNSELOR: Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
ipando@hartnell.edu

Consult the college or university catalogue of the school to which you intend to transfer. You should also consult your counselor and a teacher who majored in your area of interest.

General Education: See the individual campus catalogue for General Education requirements for the California State Colleges and Universities, the University of California, or private universities.

PRE-PHARMACY

COUNSELOR: Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
ipando@hartnell.edu

Consult the college or university catalogue of the school to which you intend to transfer. You should also consult your counselor and a teacher who majored in your area of interest.

General Education: See the individual campus catalogue for General Education requirements for the California State Colleges and Universities, the University of California, or private universities.

PRE-PHYSICAL THERAPY

COUNSELOR: Dr. Ignacio Pando
Office – Merrill Hall 21
759-6057
ipando@hartnell.edu

Consult the college or university catalogue of the school to which you intend to transfer. You should also consult your counselor and a teacher who majored in your area of interest.

General Education: See the individual campus catalogue for General Education requirements for the California State Colleges and Universities, the University of California, or private universities.

Recommended courses for Physical Therapy are:
- Biology 5, 6, 6L
- Chemistry 1A
- Math 24, 13
- Physics 2A, 2B
- Psychology 1A

ASSOCIATE OF ARTS OR SCIENCE DEGREE

An applicant must have an Associate of Arts, Associate of Science, or a higher degree before beginning the Clinical Practicum.

Prerequisites for Admission:
- United States citizen or permanent visa.
- High school diploma or equivalent.
- Satisfactory completion of courses in High School or College chemistry and algebra.
- Nelson-Denny test and Writing Skills Exam (used for counseling purposes only--candidates receiving interviews will be notified of the testing dates).
- A minimum of 3000 hours of direct patient care experience by the closing date of the application period.
- Preclinical program courses are required of all candidates without exception. A grade of C or better must be attained in each of these courses. Only work from a regionally accredited college can be accepted.

Anatomy and Physiology with Lab

Microbiology with Lab

General Psychology

Notes:
- If taken seven years or more prior to acceptance, anatomy and physiology courses must be repeated; or documentation of competency must be established by successful passage of a written examination available through the Stanford office. This applies to all applicants.

Applications
Application forms will be available after September 1st for the class beginning the following September. To obtain application forms, contact the Primary Care Associate Program, 702 Welch Road, Suite F, Palo Alto, CA 94304, telephone (415) 725-5342. All course work must be completed by the admissions deadline of February 1, i.e., no in-progress reports will be accepted to satisfy academic prerequisites.

CERTIFICATE PROGRAM
Stanford University Medical Center awards a certificate of clinical proficiency. This certificate does not represent Stanford University credit.

Clinical Curriculum (15 months)
- Fall Quarter Family Medicine Didactic 80
- Family Medicine Clinical 80P
- Winter Quarter Family Medicine Didactic 81
- Family Medicine Clinical 81P
- Spring Quarter Family Medicine Didactic 82
- Family Medicine Clinical 82P
- Summer Quarter Family Medicine Didactic 83
- Family Medicine Clinical 83P
- Fall Quarter Family Medicine Didactic 84
- Family Medicine Clinical 84P

Fees
- Instructional & Registration fees of approximately $2000.00 per quarter will be assessed through Foothill College.

CONTACT YOUR COLLEGE COUNSELOR FOR ADDITIONAL CLINICAL INFORMATION

NOTE: Fees and Curriculum are subject to change (See current brochure.)
Psychology is the scientific discipline concerned with the study of the mind. It is a natural and a social science concerned with the study of human behavior. As such, it is a broad discipline which involves both pure science and practical application of science to matters of everyday living.

Positions for which graduates in psychology are qualified include:
- Probation
- Juvenile Counseling
- Rehabilitation Programs
- Human Services

ASSOCIATE OF ARTS DEGREE
Students may major in Behavioral Sciences by completing the program listed under Behavioral Sciences in the Catalog.

PSY1A. General Psychology (3)
Lec 3 Hrs
Semesters Offered: Variable
This is a general introduction to the fundamental principles and concepts of human behavior and mental processes. The course content includes psychology as a science; biological bases of behavior; lifespan development; consciousness; learning processes; stress and health; theories of emotion; psychological disorders; and methods of therapy. This course is recommended for college and university transfer students [CSU; UC; CAN PSY 2]

PSY1B. Advanced General Psychology (3)
Prerequisite: Psychology 1A
Lec 3 Hrs
Semesters Offered: Variable
A continuation of Psych 1A with an emphasis on experimental methods. Course content includes research methods; sensation and perception; memory; personality theories; language and cognition; intelligence; tests and measurement. Students will design and conduct original research as an integral course requirement. [CSU; UC]

PSY14. Child Psychology (3)
Lec 3 Hrs
Semesters Offered: Variable
An introduction to human development from the prenatal period through adolescence. The physical, cognitive, social and emotional aspects of development are studied. Topics discussed include infant development, parenting, peer relations, and the conflicts of adolescence. [CSU; UC]

PSY15. Human Sexuality (3)
Lec 3 Hrs
Semesters Offered: Variable
A current and comprehensive introduction to the topic of human sexuality from the perspective of psychology. Laboratory and survey research, findings from clinical experience, and historical sources will be considered. Topics to be discussed (but not limited to) include sexual anatomy, sexual beliefs and expressions, and concerns related to human sexuality. The medical aspects including the various methods of contraception and safer sex practices will be evaluated. [CSU; UC]
PSY22. Abnormal Psychology (3)
Prerequisite: Psychology 1A
Lec 3 Hrs
Semesters Offered: Variable
An introduction to the research and theories regarding the major types of psychopathology, including schizophrenia, and the anxiety, mood, dissociative, somatoform, and personality disorders. Emphasis on understanding the symptoms, causes, treatments and prevention of the disorders as viewed from the psychological, social and biological perspectives.
[CSU; UC]

PSY33. Personal and Social Adjustment (3)
Lec 3 Hrs
Semesters Offered: Variable
This course is designed to study the theories of development and maintenance of a healthy personality. Common difficulties in personal and social adjustment will be explored, as well as the application of specific techniques and methods to overcome those challenges. Contemporary theories of personality structure and approaches to theories of personal growth are examined. Other topics include stress management, improving interpersonal relationships, becoming more job marketable, and dealing with health diseases and disorders.
[CSU]

PSY41. Psychology of Human Relations (3)
Lec 3 Hrs
Semesters Offered: Variable
A study of the psychological principles of communication as they apply to the development and maintenance of human relationships. Topics discussed include (but are not limited to) effective communication skills, relationship dynamics, intimacy, managing difficult emotions, and conflict resolution.
[CSU]

PSY45. Special Projects (1-3)
Semesters Offered: Variable
A supervised program for exceptional students to conduct independent research and study into a particular field of psychology.
[CSU]
REAL ESTATE

ASSOCIATE OF ARTS DEGREE

Completion of the Certificate Program plus graduation requirements for the Associate Degree.

CERTIFICATE PROGRAM

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RE 144</td>
<td>Principles of Real Estate</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 145</td>
<td>Real Estate Practices</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 146</td>
<td>Legal Aspects of Real Estate</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 147</td>
<td>Real Estate Finance</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 148</td>
<td>Real Estate Appraisal 1</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 149</td>
<td>Real Estate Economics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Electives

Select 6 units from the following:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 1A</td>
<td>Accounting Principles (Financial)</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS 18</td>
<td>Introduction to Business Law</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS 160</td>
<td>Sales Techniques</td>
<td>2.0</td>
</tr>
<tr>
<td>RE 150</td>
<td>Property Management</td>
<td>3.0</td>
</tr>
<tr>
<td>RE 153</td>
<td>Escrow Procedures</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Total Units: 24.0

Additional Information

A grade of "C" or better must be maintained in each required course of the Certificate Program.

RE140. Real Estate License Preparation (3)
Credit/No Credit Option
Prerequisite: Completion of or concurrent enrollment in Real Estate 144, Principles of Real Estate
Semesters Offered: Variable
The student is introduced to study materials useful in preparing for the Real Estate Salesman and Broker Examinations. Subject matter that should be concentrated upon for the examination is emphasized with practice exams similar to, but not taken from, California Real Estate Exam.

RE144. Principles of Real Estate (3)
Lec 3 Hrs
Semesters Offered: Variable
Emphasis is on consumer needs, but completion of the course is a requirement to sit for the State of California Real Estate Sales license examination. Includes real estate history and basics of real estate transactions, legal aspects, planning, valuation and investment.

RE145. Real Estate Practices (3)
Prerequisite: Real Estate 144
Lec 3 Hrs
Semesters Offered: Variable
Techniques of operating a real estate business, with emphasis on the daily activities of brokers and salespeople. Required for broker’s license.

RE146. Legal Aspects of Real Estate (3)
Credit/No Credit Option
Advisory: Students taking this course are advised that they must have basic computer skills for operating a word processing program, a spreadsheet program and e-mail, including sending attachments and files. Students also need access to the Internet and have adequate hardware and software such as Windows 98/200/XP, Mac OS 8-10 or their equivalent. Students without off-campus access to technology will be able to use the Library Media Center or open Computer labs to complete their assignments.
Lec 3 Hrs
Semesters Offered: Variable
A study of California real estate law, including real property law, governmental regulation of property, contracts, agency, and practical concerns relating to real estate sales agents and brokers. This course is required for the California real estate broker’s license.
RE147. Real Estate Finance (3)
Prerequisite: Real Estate 144 or Real Estate 145 and completion of mathematics graduation requirements for Associate in Arts degree.
Lec 3 Hrs
Semesters Offered: Variable
Study and analysis of money markets, interest rates, and real estate financing, with actual case illustrations demonstrating lending policies, problems, and rules involved in financing real property, including residential, multi-family, commercial, and special purpose properties. Required for broker's license.

RE148. Real Estate Appraisal I (3)
Prerequisite: Real Estate 144 or Real Estate 145 and completion of mathematics graduation requirements for Associate in Arts Degree.
Lec 3 Hrs
Semesters Offered: Variable
A first course in real estate appraisal, acquainting the student with the appraisal process, particularly as it relates to the single family dwelling. The course is a preparation for more advanced appraisal courses. Case study methods are employed by field work and the utilization of FNMA 1004 Forms - Appraisal Report, Single Family Residence.

RE149. Real Estate Economics (3)
Prerequisite: Real Estate 144 and Real Estate 145
Lec 3 Hrs
Semesters Offered: Variable
A practical study of economic aspects of real estate designed to provide a grasp of the dynamic factors that create value in real estate. This is the final unifying course of the basic real estate curriculum.

RE150. Property Management (3)
Prerequisite: Real Estate 148 or other required Real Estate Certificate courses
Lec 3 Hrs
Semesters Offered: Variable
Acquaints students with Real Estate Management. Includes responsibilities, procedures, operating statement preparation, income and expense analysis, leasing, neighborhood analysis as well as income and market analysis, and the management of various types of properties.

RE153. Escrow Procedures (3)
Prerequisite: Real Estate 144 or Real Estate 145.
Lec 3 Hrs
Semesters Offered: Variable
An introduction to the terminology and mechanics of escrow functions involved in real estate transactions. Specifically designed with particular emphasis on the mechanics of taking, processing and closing escrows.
The Social Sciences are a group of disciplines that deal with society and the individual. Although the disciplines concentrate on an aspect of the human experience, there is an intricate relationship among them.

Positions for graduates in the social sciences are diverse since the social science is a broad major. The study of the social sciences can lead to professional work in governmental and private agencies. It is also valuable for those going into other professions such as law.

**ASSOCIATE OF ARTS DEGREE**
Completion of the major requirements plus graduation requirements for the Associate Degree.

**REQUIRED COURSES**
Any course numbered 1-99 in the following disciplines:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography</td>
<td>3.0</td>
</tr>
<tr>
<td>Political Science</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>3.0</td>
</tr>
<tr>
<td>History</td>
<td>3.0</td>
</tr>
<tr>
<td>Economics</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
</tr>
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</table>

**ELECTIVES**
Select an additional three (3) units from any discipline listed above.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>18.0</td>
</tr>
</tbody>
</table>

**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

<table>
<thead>
<tr>
<th>Area</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>21.0</td>
</tr>
</tbody>
</table>

**COMPETENCY REQUIREMENT**
See College Catalog 0-8

**ADDITIONAL INFORMATION**
Additional units to reach a minimum of 60 semester units in degree applicable courses

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 - 21.0</td>
</tr>
<tr>
<td>60.0</td>
</tr>
</tbody>
</table>
Consult the college or university Catalogue of the school to which you intend to transfer. You should also consult your counselor and a teacher who majored in your area of interest.

General Education: See the individual campus Catalogue for General Education requirements for the California State colleges and Universities, the University of California, or private universities.

Sociology is both a scientific and a humanistic discipline. It is concerned with the study systems of social action and their interrelations. The systems of action include, in increasing order of size and complexity; single social acts, social relationships, organizations, institutions, communities and societies. Through a systematic analysis of society, its groups, institutions and processes, sociology attempts to understand and, in some instances, predict human behavior.

Positions for which graduates in sociology are qualified include but are not confined to the following:

- Social Worker
- Probation Officer
- Correctional Officer
- Human Services Worker
- Police Officer
- Criminologist
- Teacher
- Urban Planner
- Redevelopment Director
- Personnel Manager
- Social Gerontologist
- Religious Vocations
- Journalist
- Market Researcher
- Sales Director
- Advertising Executive
- Management Consultant
- Rehabilitation Programs
- Population Analyst
- Parks and Recreation Director

Sociology 189

Sociology

ASSOCIATE OF ARTS DEGREE

Students may major in Behavioral Sciences by completing the program listed under Behavioral Sciences in the Catalog.

SOC1. Introduction to Sociology (3)
Lec 3 Hrs
Semesters Offered: Variable
A general introduction to the study of social interaction and the organization of modern society. Topics include culture, social structure, socialization, deviance and crime; class ethnicity; and gender; social institutions; collective behavior and social movements; and demography and urbanization. [CSU; UC; CAN SOC 2]

SOC5. Introduction to Social Problems (3)
Lec 3 Hrs
Semesters Offered: Variable
The application of sociological principles to an examination of the structure and problem aspects of American society. The analysis of problems of social institutions (including the economy, government and family), problems of social inequality (including poverty, race, ethnicity, and gender), deviance (including crime and substance abuse), and demographic problems (population and urbanization) will serve as focal points for the course. [CSU; UC; CAN SOC 4]

SOC41. Marriage and Family Relations (3)
Lec 3 Hrs
Semesters Offered: Variable
This course provides a survey of marriage and the family from a sociological perspective. Topics include theoretical and methodological approaches, historical and cultural variation, partner selection, sexual relations, cohabitation, marriage, parenthood, single parent families, family relationships, family violence, divorce and remarriage. [CSU; UC]

SOC42. The Sociology of Minority Relations (3)
Lec 3 Hrs
Semesters Offered: Variable
The principle objective of this course is to examine dominant-minority group relations in the United States, with emphasis on contemporary America. The experiences of minority groups, including Latinos, African Americans, Asian Americans, and Native Americans, will be considered from various sociological perspectives. [CSU; UC]

SOC45. Special Projects (1-3)
Semesters Offered: Variable
A supervised program of observation of the work of social agencies in the community or a program of research into a particular area of the discipline of sociology. Completion of Sociology 1 recommended. [CSU]
SPANISH

SPA1. Elementary Spanish (5)
Credit/No Credit Option
Lec 5 Hrs
Semesters Offered: Variable
Fundamentals of Spanish with emphasis on the development of listening, speaking, reading, and writing skills, with Spanish as the primary language of instruction. Language acquisition will be enhanced by exposing students to the life, people, and cultures of the Spanish speaking world. Course designed for students with no prior background in Spanish. Not open to students who have taken Spanish 1S or Spanish 1X.

[CSU; UC; CAN SPAN 2, CAN SPAN SEQ A with SPA 1 & 2]

SPA1A. Elementary Spanish (2)
Credit/No Credit Option
Lec 2 Hrs; Lab .5 Hr
Semesters Offered: Variable
This two-semester sequence (Spanish 1A, Spanish 1B) is equivalent to Spanish 1. The course will cover the fundamentals of spoken and written Spanish. Not open to students who have taken Spanish 1.

[CSU; UC]

SPA1X. Spanish for Chicano Students (4)
Credit/No Credit Option
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
Spanish 1X for Chicano students is designed for the English dominant student whose home languages include Spanish. This course will also serve Latin American Students whose first language is not Spanish. The subject content parallels that of Spanish 1 and Spanish 1S. This course is designed to meet the student's oral, reading and writing communication skills in Spanish. An auditory comprehension and a basic oral command of Spanish are strongly recommended for success.

[CSU; UC]

SPA1B. Elementary Spanish (2)
Prerequisite: Spanish 1A or demonstration of language proficiency to level.
Credit/No Credit Option
Lec 2 Hrs; Lab .5 Hr
Semesters Offered: Variable
This two-semester sequence (Spanish 1A, Spanish 1B) is equivalent to Spanish 1. The course will cover the fundamentals of spoken and written Spanish. Not open to students who have taken Spanish 1.

[CSU; UC]

SPA1S. Elem. Spanish Speakers (4)
Credit/No Credit Option
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
A parallel Spanish 1 course for Spanish speakers, conducted totally in Spanish with emphasis on grammar and writing. An oral command of the Spanish language required.

[CSU; UC]

SPA2. Elementary Spanish (5)
Credit/No Credit Option
Prerequisite: Spanish 1 or (two years of high school Spanish with a grade of "C" or higher.)
Lec 5 Hrs
Semesters Offered: Variable
Continuation of Spanish 1 with further development of listening, speaking, reading, and writing skills, with Spanish as the primary language of instruction. Language acquisition will be enhanced by exposing students to the life, people, and cultures of the Spanish speaking world. Not open to students who have taken Spanish 2S or Spanish 2X.

[CSU; UC; CAN SPAN 4, CAN SPAN SEQ A with SPA 1 & 2]

SPA2A. Elem. Spanish Speakers (4)
Credit/No Credit Option
Prerequisite: Spanish 1S or Spanish 1X.
Credit/No Credit Option
Prerequisite: Spanish 2 or three years of high school Spanish and demonstration of language proficiency to level.
Lec 4 Hrs; Lab 1 Hr
Semesters Offered: Variable
This course introduces students to more advanced grammatical constructions and provides for a systematic acquisition of new vocabulary. Special emphasis on idioms, composition, and oral presentation.

[CSU; UC; CAN SPAN 8, CAN SPAN SEQ B with SPA 3 & 4]

Hartnell College Catalogue – 2005/06
SPA3S. Interm. Spanish Speakers (4)  
Credit/No Credit Option  
Prerequisite: Spanish 2S or demonstration of language proficiency to level. 
Lec 4 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
A parallel Spanish 3 course for Spanish speakers, conducted totally in Spanish with emphasis on written composition and difficult grammatical problems, and Hispanic arts and literature.  
[CSU; UC]

SPA4. Intermediate Spanish (4)  
Credit/No Credit Option  
Prerequisite: Spanish 3 or four years of high school Spanish.  
Lec 4 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
Continuation of Spanish 3. Further emphasis on advanced grammar and special problems of Spanish syntax. Expansion of vocabulary skills aimed at enabling the student to understand literary, technical or other specialized texts.  
[CSU; UC; CAN SPAN 10, CAN SPAN SEQ B with SPA 3 & 4]

SPA4S. Interm. Spanish Speakers (4)  
Credit/No Credit Option  
Prerequisite: Spanish 3S or demonstration of language proficiency to level.  
Lec 4 Hrs; Lab 1 Hr  
Semesters Offered: Variable  
A parallel Spanish 4 course for Spanish speakers, conducted totally in Spanish with emphasis on advanced grammar, intensive reading, and oral presentations on Hispanic arts and literature.  
[CSU; UC]

SPA25A. Advanced Spanish (3)  
Credit/No Credit Option  
Prerequisite: Spanish 4 or demonstration of language proficiency to level.  
Lec 3 Hrs  
Semesters Offered: Variable  
Readings on Latin American culture. Written and oral presentations.  
[CSU; UC]

SPA25B. Advanced Spanish (3)  
Credit/No Credit Option  
Prerequisite: Spanish 4 or demonstration of language proficiency to level.  
Lec 3 Hrs  
Semesters Offered: Variable  
Readings on Hispanic literature. Written and oral presentations.  
[CSU; UC]

SPA35. Contemporary Mexican-American Literature (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
A survey of contemporary Chicano literature. Readings will include poetry, novels, short stories, theater, and essays.  
[CSU; UC]

SPA45. Special Projects (1-3)  
Credit/No Credit Option  
Prerequisite: Three years of high school Spanish or two semesters college Spanish.  
Semesters Offered: Variable  
Individual and group investigation of topics and problems beyond the scope of regular Spanish courses.  
[CSU]

SPA254. Vocational Spanish (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
A course in fundamental practical Spanish for persons who come into contact with Spanish-speaking people in a variety of vocational settings

SPA255. Vocational Spanish (3)  
Credit/No Credit Option  
Prerequisite: Spanish 254 or proficiency to level.  
Lec 3 Hrs  
Semesters Offered: Variable  
Continuation of Vocational Spanish 254. Aimed at developing conversational skills and enlarging the specific vocabulary and grammatical basis.

SPA256. Adv. Vocational Spanish (3)  
Credit/No Credit Option  
Prerequisite: Spanish 255 or proficiency to level.  
Lec 3 Hrs  
Semesters Offered: Variable  
An advanced study of Spanish for vocational personnel and settings.

SPA260. Medical Spanish (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
A course in fundamental practical Spanish for persons working in the medical field.
SPEECH

AREA: Fine Arts/Language Arts/Social Sciences

DEAN: Dr. Kathleen Rose

FACULTY: Dr. Stanley Crane Shawna DeMeyer

DIVISION ADMIN. ASSISTANT: Wini Chambliss

OFFICE: Performing Arts Facility PAF 122

COUNSELOR: Alison Paul Office - CAB 159 755-6827 apaul@hartnell.edu

Dr. Stelvio Locci Office – CAB 157 755-6926 slocci@hartnell.edu

Speech is the academic discipline that meets the need of skillful and effective oral communication. The emphasis of the discipline of speech in the development of skills and techniques essential for effective intrapersonal and interpersonal communication. Courses in speech are designed for practical communication skills needed to fulfill diversity of educational goals.

Positions for which graduates in speech are qualified are: teaching, public relations, communication, electronic media, advertising, political science, and theatre arts.

ASSOCIATE OF ARTS DEGREE
Student may major in Speech by completing 18 units of Speech and Theater or English courses in addition to the other requirements outlined in the Graduation Requirements for the Associate Degree. A General Studies degree will be issued.

SPE1A. Essentials of Public Speaking (3)
Prerequisite: English 101 or Eligibility for Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
This communication class meets the CSU oral communication requirements and focuses on the student’s ability to present his/her ideas in the public setting with confidence and poise. The students will learn basic methods of designing and delivering speeches to reach a variety of audiences.
[CSU; UC; CAN SPCH 4]

SPE3. Introduction to Communication (3)
Prerequisite: Eligibility for Eng. 1A.
Lec 3 Hrs
Semesters Offered: Variable
The study and application of oral skills and principles in different communication contexts; dyads, small groups, and public communication in exercises that emphasize analytical and organizational abilities, listening proficiencies, verbal and non-verbal behaviors and communication techniques.
[CSU; UC]

SPE5. Introduction to Organizational Communication (3)
Prerequisite: Eligibility for Eng. 1A
Lec 3 Hrs
Semesters Offered: Variable
This course will study and demonstrate application of oral skills and principles in different communication and contexts specifically focusing upon business applications. Dyads, small groups, and public communication exercises will be used to emphasize analytical and organizational abilities, listening proficiency, verbal and non-verbal behaviors and communication techniques.
[CSU]

SPE18. Voice and Diction (3)
Lec 3 Hrs
Semesters Offered: Variable
The improvement of voice quality, rate, flexibility, energy and volume. Clarification of blurred speech. Theatre Arts 18 is identical to Speech 18. This course is not open to students who have completed Theatre Arts 18.
[CSU; UC; CAN DRAM 6]

SPE35. Intercultural Communication (3)
Lec 3 Hrs
Offered: Variable
Study of intercultural communication among people in the United States such as Mexican-American, Hispanic, Native American, Asian American, and African American, and in cultures throughout the world such as India, Japan, Europe, Africa, North Central and South America. Analysis of the influence of cultural patterns, language, values, norms, beliefs, and roles on world views and behavior. Special study of prejudice, ethnocentrism, nationalism, and racism in intercultural communication. Includes development of intercultural communication competence. Not open to students who have completed Counseling 35.
[CSU; UC]

SPE45. Special Projects (1-3)
Credit/No Credit Option
Semesters Offered: Variable
A program of independent study in a particular field of speech.
[CSU]

SPE145. Special Projects (1-3)
Credit/No Credit Option
Semesters Offered: Variable
A program of independent study in a selected area of speech. Eligibility for English 101 recommended.
THEATRE ARTS

ASSOCIATE OF ARTS DEGREE

Completion of the major requirements plus graduation requirements for the Associate Degree.

REQUIRER COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>THA 1</td>
<td>Introduction to Theatre</td>
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<tr>
<td>THA 3</td>
<td>History of Theatre</td>
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<tr>
<td>THA 10</td>
<td>Theatre Games for Acting</td>
<td>3.0</td>
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<tr>
<td>SPE 1A</td>
<td>Essentials of Public Speaking</td>
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ELECTIVES

<table>
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<tbody>
<tr>
<td>THA 2A</td>
<td>Art of Interpretative Speech</td>
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<tr>
<td>THA 6A</td>
<td>Chicano Theatre (A)</td>
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<td>THA 6B</td>
<td>Chicano Theatre (B)</td>
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<td>THA 7A</td>
<td>Children's Theatre (A)</td>
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<td>THA 7B</td>
<td>Children's Theatre (B)</td>
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<tr>
<td>THA 11</td>
<td>Intermediate Acting</td>
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<td>THA 12</td>
<td>The Art of Make-Up</td>
<td>1.0</td>
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<td>THA 14</td>
<td>Characterization</td>
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<tr>
<td>THA 16</td>
<td>Movement Theatre</td>
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<td>THA 17</td>
<td>Singing for Actors</td>
<td>2.0</td>
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<tr>
<td>THA 18</td>
<td>Voice and Diction</td>
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<tr>
<td>SPE 18</td>
<td>Voice and Diction</td>
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<tr>
<td>THA 30A</td>
<td>Stagecraft (A)</td>
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<tr>
<td>THA 30B</td>
<td>Stagecraft (B)</td>
<td>3.0</td>
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<tr>
<td>THA 45</td>
<td>Special Projects</td>
<td>1.0-3.0</td>
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<tr>
<td>DAN 100</td>
<td>Beginning Ballet</td>
<td>1.0</td>
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<tr>
<td>DAN 130</td>
<td>Beginning Jazz Dance</td>
<td>1.0</td>
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<tr>
<td>ENG 17</td>
<td>The Contemporary Shakespeare</td>
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<tr>
<td>ENG 20</td>
<td>Modern Dramatic Literature</td>
<td>3.0</td>
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<tr>
<td>ENG 43</td>
<td>American Short Story in Film</td>
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</table>

REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>Natural Sciences</td>
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<tr>
<td>Social and Behavioral Sciences</td>
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<tr>
<td>Humanities (outside of Theatre Arts)</td>
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<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language and Rationality</td>
<td>9.0</td>
</tr>
</tbody>
</table>

ADDITIONAL INFORMATION

*THA 6A will satisfy this requirement.

A grade of “C” or better must be maintained in each required major course.

THA1. Introduction to Theatre (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
This course provides a basic definition of drama and then clarifies its many divisions so that people will have better understanding of what it is attempting to do, and thus establish a more satisfying experience. Required of all drama majors.  
[CSU; UC; CAN DRAM 18]

THA2A. Art of Interpretative Speech (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
The study of literature through the medium of oral performance. Prose, poetry and dramatic literature are used as sources of material. Speech 2A is identical to Theatre Arts 2A.

THA3. History of the Theatre (3)  
Lec 3 Hrs  
Semesters Offered: Variable  
A comprehensive history of the Theatre from its prehistoric origins and the Greeks through the American Theatre of the twentieth century.  
[CSU; UC]

THA6A. Chicano Theatre (3)  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
Introduction course in Theatre form which expresses the culture and identity of the Chicano through development of self-expression.  
[CSU; UC]

THA6B. Chicano Theatre (3)  
Prerequisite: Theatre Arts 6A  
Lec 2 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
Continued practice in Chicano Theatre as an art form.  
[CSU; UC]

THA7A. Children’s Theatre (3)  
Lec 1 Hr; Lec 6 Hrs  
Semesters Offered: Variable  
To develop and apply all of the theories and skills utilized in the rehearsals, technical preparation and performance of dramatic literature especially designed for a child audience.  
[CSU]

THA7B. Children’s Theatre (3)  
Lec 1 Hr; Lab 6 Hrs  
Semesters Offered: Variable  
To develop and apply all of the theories and skills utilized in the rehearsals, technical preparation and performance of dramatic literature especially designed for a child audience.  
[CSU]
THA10. Theatre Games for Acting (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Fundamental techniques for the beginning actor. Physical, emotional, and mental phases of acting are studied and practiced in dramatic scenes, improvisations, and theatre exercises and games.
[CSU; UC; CAN DRAM 8]

THA11. Intermediate Acting (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Intermediate study of the fundamental techniques of acting through the use of character analysis and outside reading. Physical, mental and emotional phases of acting are studied and practiced through improvisations and dramatic scenes. The major styles of acting are discussed and practiced. Completion of Theatre Arts 10 recommended.
[CSU; UC; CAN DRAM 22]

THA12. Art of Makeup (1)
Lec 1 Hr; Lab 1 Hr
Semesters Offered: Variable
The application of straight and character makeup. Required of all Theatre Arts majors.
[CSU; UC]

THA14. Characterization (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Study of the fundamental techniques of acting through the use of character analysis and practice. The major styles of acting are discussed and practiced, emphasizing the tools necessary for bringing a character alive on stage.
[CSU; UC]

THA16. Movement Theatre (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Application of techniques learned in body mechanics to different genres of stage movement.
[CSU; UC]

THA17. Singing for Actors (2)
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Principles of breathing, diction, tonal production, and musicality for the Actor. Emphasis will be placed on the use of literature from the American Musical Theatre.
[CSU; UC]

THA18. Voice and Diction (3)
Lec 3 Hrs
Semesters Offered: Variable
The improvement of voice quality, rate, flexibility, energy and volume. Clarification of blurred speech. Speech 18 is identical to Theatre Arts 18. This course is not open to students who have completed Speech 18.
[CSU; UC; CAN DRAM 6]

THA30A. Stagecraft (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Design, construction, painting and furnishing of stage settings for stage and television production. Drama major requirement.
[CSU; UC; CAN DRAM 12]

THA30B. Stagecraft (3)
Lec 2 Hrs; Lab 3 Hrs
Semesters Offered: Variable
Design, construction, painting and furnishing of stage settings for stage and television production. Drama major requirement.
[CSU; UC; CAN DRAM 12]

THA45. Special Projects (1-3)
Semesters Offered: Variable
Individual projects concerned with material not normally a major part of a specific course.
[CSU]

THA90A. Outreach/Young Audiences Project-Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Development of productions and programs with particular emphasis on serving community needs and furthering community contact.
[CSU]

THA90B. Outreach/Young Audiences Project - Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Rehearsal of productions and programs with particular emphasis on serving community needs and furthering community contact.
[CSU]

THA90C. Outreach/Young Audiences Project - Execution and Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Performance of productions targeted to meeting community needs.
[CSU]

THA91A. New Works Project - Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
This course will identify and nurture original ideas and existing non-dramatic texts with potential for development into dramatic texts and suggest a preliminary time-line for their development.
[CSU; UC]

THA91B. New Works Project - Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
This course will guide a previously identified concept for a new theatrical work through the first stages of drafting and revision of text.
[CSU; UC]

THA91C. New Works Project - Execution and Assess. (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Rehearsal and presentation of new theatrical texts under development.
[CSU; UC]

THA92A. Solo Artist Project - Concept and Origination (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Identification and initial development of diverse types of material for a variety of solo artists, including director, designer, writer, composer, musician, and dancer, as well as actor.
[CSU; UC]

THA92B. Solo Artist Project - Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Final rehearsal and preparation for presentation of solo art projects, including technical rehearsals, dress rehearsals and audience presentation.
[CSU; UC]

THA92C. Solo Artist Project - Execution and Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Final rehearsal and preparation for presentation of solo art projects, including technical rehearsals, dress rehearsals and audience presentation.
[CSU; UC]

THA100A. Introduction to Ensemble Play Production Concept/ Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Introduction to the production of the ensemble play with an emphasis on the concept and development of script, design elements, rehearsal and performance techniques, and the ensemble itself.

THA100B. Introduction to Ensemble Play Prod. - Implementation/ Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the ensemble play with emphasis on the implementation and practice of rehearsal and production techniques.
THA100C. Introduction to Ensemble Production: Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the modern play with an emphasis on the concept and development of script, design elements, and performance techniques.

THA101. Ensemble Theatre: Modern Plays in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the modern ensemble play, with an emphasis on performance and stage management.

THA102. Ensemble Theatre: Modern Plays In Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the modern ensemble play.

THA110A. Introduction to Modern Play Production: Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the modern play with an emphasis on the concept and development of script, design elements, and performance techniques.

THA110B. Introduction to Modern Play Production-Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the modern play with an emphasis on the implementation and practice of rehearsal and production techniques.

THA110C. Introduction to Modern Play Production: Execution and Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the modern play with an emphasis on the execution of a fully realized production.

THA120A. Introduction to Musical Theatre Prod.: Concept and Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical with an emphasis on the concept and development of script, design elements, and performance techniques. Students may enroll in any combination of Music 120A and Theatre Arts 120A a maximum of four times.

THA120B. Introduction to Musical Theatre Production: Implementation and Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical with an emphasis on the implementation and practice of rehearsal and production techniques. Students may enroll in any combination of Music 120B and Theatre Arts 120B a maximum of four times.

THA120C. Introduction to Musical Theatre Production: Execution and Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the musical with an emphasis on the execution of a fully realized production. Students may enroll in any combination of Music 120C and Theatre Arts 120C a maximum of four times.

THA121. Musical Theatre: Modern Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the modern musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 121 and Theatre Arts 121 a maximum of four times.

THA122. Musical Theatre: Modern Musicals In Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the modern musical play. Students may enroll in any combination of Music 122 and Theatre Arts 122 a maximum of four times.

THA123. Musical Theatre: The Ensemble Musical in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the ensemble musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 123 and Theatre Arts 123 a maximum of four times.

THA124. Musical Theatre: The Ensemble Musical in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the ensemble musical play. Students may enroll in any combination of Music 124 and Theatre Arts 124 a maximum of four times.

THA125. Musical Theatre - World Theatre Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the world theatre musical, with an emphasis on performance and stage management. Students may enroll in any combination of Music 125 and Theatre Arts 125 a maximum of four times.

THA126. Musical Theatre - World Theatre Musicals in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the world theatre musical. Students may enroll in any combination of Music 126 and Theatre Arts 126 a maximum of four times.

THA127. Musical Theatre - Revival Musicals in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the revival of a period musical with an emphasis on performance and stage management. Students may enroll in any combination of Music 127 and Theatre Arts 127 a maximum of four times.

THA128. Musical Theatre - Revival Musicals in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the revival musical play. Students may enroll in any combination of Music 128 and Theatre Arts 128 a maximum of four times.

THA130A. Introduction to World Theatre Production Concept/Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the world theatre play with an emphasis on directorial and design concepts and study of script, design elements, rehearsal and performance techniques relevant to world theatre.

THA130B. Intro. to World Theatre Production-Implementation/ Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the world theatre play with an emphasis on the implementation and practice of rehearsal and production techniques.
THA130C. Intro. to World Theatre Production-Execution/Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the presentation of the world theatre play with an emphasis on execution.

THA131. World Theatre: Modern Plays in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the modern world theatre play, with an emphasis on performance and stage management.

THA132. World Theatre: Modern Plays in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician with an emphasis on the literature of the modern world theatre play.

THA133. World Theatre: The Ensemble Play in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of an ensemble-oriented world theatre play, with an emphasis on performance and stage management.

THA134. World Theatre: The Ensemble Play in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the ensemble-oriented world theatre play.

THA135. World Theatre - Revival Plays in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the revival of a period world theatre play, with an emphasis on performance and stage management.

THA136. World Theatre - Revival Plays in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the world theatre revival play.

THA140A. Introduction to Revival Play Production-Concept/Development (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the revival play with an emphasis on period style, directorial and design concepts, and study of script, design elements, rehearsal and performance techniques relevant to the revival play.

THA140B. Introduction to Revival Play Production-Implementation/Practice (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the production of the revival play with an emphasis on the implementation and practice of rehearsal and production techniques.

THA140C. Introduction to Revival Play Production-Execution/Assessment (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
An introduction to the presentation of the revival play with an emphasis on execution.

THA141. The Modern Revival Play in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of the modern revival of a period play, with an emphasis on performance and stage management.

THA142. The Modern Revival Play in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the modern revival play.

THA143. The Ensemble Revival Play in Rehearsal (.5-4)
Credit/No Credit Only
Semesters Offered: Variable
Extensive practice in the development of an ensemble-oriented revival play with an emphasis on performance and stage management.

THA144. The Ensemble Revival Play in Performance (.5-3)
Credit/No Credit Only
Semesters Offered: Variable
Play presentation techniques for the performer, stage manager and theatre technician, with an emphasis on the literature of the ensemble-oriented revival play.

THA170. Proscenium Stage Scenic Construction (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate scenic construction execution for the proscenium stage.

THA172. Thrust and Three-Quarter Stage Scenic Const. (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate scenic construction execution for the thrust and three quarter stage.

THA173. Adv. Scenic Construction Mgt. for the Proscenium Thrust Stage (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Principles of costume shop management for the advanced scenic paint, props, and crafts student.

THA174. Proscenium Stage Scenic Painting and Properties Techniques (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate scenic painting and properties execution for the proscenium stage.

THA176. Thrust and Three-Quarter Stage Scenic Painting and Properties (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate scenic painting and properties execution for the thrust/three quarter stage.

THA177. Advanced Scenic Paint, Props and Crafts Management for the Proscenium and Thrust Stages (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Advanced scenic painting, properties, and crafts execution for the thrust/three quarter stage.

THA180. Proscenium Stage Costuming Techniques (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and Intermediate costume execution for the proscenium stage.

THA182. Thrust and Three-Quarter Stage Costuming Tech. (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate costume execution for the thrust-three quarter stage.
THA183. Advanced Costuming
Techniques Management for
the Proscenium & Thrust
Stages (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Principles of costume shop management
for the advanced costuming student.

THA184. Proscenium Stage - Make-
Up/Hair Tech. Beg/Int. (.5-.6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate makeup and
hair execution for the proscenium stage.

THA186. Thrust & 3/4 Stage - Make-
up/Hair Tech. Beg/Int. (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate makeup and
hair execution for the thrust and three-
quarter stage.

THA187. Advanced Makeup, Hair, Wig,
and Wardrobe Techniques Mgt.
for the Proscenium & Thrust
Stages (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Principles of makeup, wig, and hair, and
wardrobe management techniques for the
advanced makeup and wardrobe student.

THA190. Proscenium Stage Lighting,
Sound, and Rigging
Techniques (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate lighting, sound
and rigging execution for the proscenium
stage.

THA192. Thrust & Three-Quarter Stage
Light. Sound, & Rigging
Techniques (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Beginning and intermediate lighting, sound
and rigging execution for the thrust and
three quarter stage.

THA193. Adv. Lighting, Sound, and
Rigging Mgt. for Proscenium &
Thrust Stages (.5-6)
Credit/No Credit Only
Semesters Offered: Variable
Principles of lighting, sound, and rigging
management techniques for the advanced
electric student.
Transfer Studies is a major emphasizing preparation for transfer to the University of California (UC), California State University (CSU), or both at the same time. This major provides the student with the general education coursework articulated to California's UC or CSU colleges which fulfills the lower-division general education or breadth requirements for graduation from these institutions. This major also will allow a certification of completion for the receiving institution for verification that the General Education (GE) or Intersegmental General Education Transfer Curriculum (IGETC) has been completed. Many students are advised to additionally articulate their lower division major courses which must be reviewed on an individual basis with each student and his or her corresponding transfer institution. Strict grade point average requirements also exist at most transfer institutions and must be reviewed carefully with a counselor. The specific year CSU GE or IGETC may be found in the current year catalogue or in the Counseling Division offices.

**TRANSFER STUDIES**

**ASSOCIATE OF ARTS DEGREE**

Completion of the major requirements plus graduation requirements for the Associate Degree.

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>CSU GE Breadth Option</td>
<td>39.0</td>
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<tr>
<td>Completion of the California State University (CSU) General Education (GE) Breadth Requirements (see catalogue)</td>
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<tr>
<td>IGETC/UC Option</td>
<td>37.0 - 47.0</td>
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<tr>
<td>Completion of the Intersegmental General Education Transfer Curriculum (IGETC) Requirements for the University of California (UC) (see catalogue)</td>
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<tr>
<td>IGETC/CSU Option</td>
<td>39.0</td>
</tr>
<tr>
<td>Completion of the Intersegmental General Education Transfer Curriculum (IGETC) Requirements for the University of California State University (CSU) (see catalogue)</td>
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**REMAINING GENERAL EDUCATION REQUIREMENTS IN ADDITION TO THE COURSES LISTED ABOVE:**

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<th>REQUIREMENT</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
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</table>
The Water Technology program provides the training necessary to meet the certification requirements for being an operator in a water treatment plant and the minimum educational requirements of Grade I or II Wastewater Treatment Plant Operator examination. This program provides students with the information needed to operate and maintain wastewater collection systems.

WATER TECHNOLOGY
(Under revision-contact area office for details.)

ASSOCIATE OF SCIENCE DEGREE
Completion of the Certificate Program plus graduation requirements for the Associate Degree.

Remaining general education requirements in addition to the courses listed in the certificate program:

<table>
<thead>
<tr>
<th>AREAS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social and Behavioral Sciences</td>
<td>3.0</td>
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<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the U.S.</td>
<td>3.0</td>
</tr>
<tr>
<td>Written Composition - English 1A</td>
<td>3.0</td>
</tr>
<tr>
<td>Communication and Analytical Thinking*</td>
<td>3.0</td>
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</tbody>
</table>

*Completion of Math 151 (Technical Mathematics) or Math 121 (Elementary Algebra) will satisfy this requirement.

CERTIFICATE PROGRAM - Water Management
This certificate is designed for those interested in demonstrating special emphasis in water management.

REQUIRED COURSES

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 47**</td>
<td>Ecology</td>
<td>4.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 48</td>
<td>Environmental Science</td>
<td>(3.0)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 10</td>
<td>General Biology</td>
<td>(4.0)</td>
</tr>
<tr>
<td>CHM 150**</td>
<td>Water Treatment Chemistry</td>
<td>4.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAT 150**</td>
<td>Water Treatment Chemistry</td>
<td>(4.0)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM 60</td>
<td>Principles of Chemistry</td>
<td>(4.0)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM 22</td>
<td>The Science of Chemistry</td>
<td>(4.0)</td>
</tr>
<tr>
<td>ENG 101***</td>
<td>English Grammar &amp; Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>WAT 163</td>
<td>Intro. to Wastewater Treatment</td>
<td>3.0</td>
</tr>
<tr>
<td>WAT 164</td>
<td>Adv. Wastewater Treatment</td>
<td>4.0</td>
</tr>
<tr>
<td>WAT 165</td>
<td>Water/Waste Water Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>AND one communications course chosen from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 1A</td>
<td>Essentials of Public Speak</td>
<td>(3.0)</td>
</tr>
<tr>
<td>SPE 3</td>
<td>Introduction to Communication</td>
<td>(3.0)</td>
</tr>
<tr>
<td>CSS 43</td>
<td>Intro. to Comp. Applications</td>
<td>(3.0)</td>
</tr>
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<td></td>
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<td>22.0 - 23.0</td>
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</tbody>
</table>

*Preferred biology course, when available.
**Preferred chemistry course, when available
***Eligibility for English 1A may be substituted for the English 101 requirement

Electives (Recommended Related Courses)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAT 160</td>
<td>Intro. to Water Resources</td>
<td>2.0</td>
</tr>
<tr>
<td>WAT 167</td>
<td>Water Distribution Systems</td>
<td>3.0</td>
</tr>
<tr>
<td>WAT 168</td>
<td>Backflow Testing</td>
<td>1.5</td>
</tr>
<tr>
<td>WAT 269</td>
<td>Seminars in Water Tech.</td>
<td>.5-3.0</td>
</tr>
<tr>
<td>ET 101</td>
<td>Intro. to Environmental Hazardous Materials Tech.</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Additional information
A grade of "C" or better must be maintained in each required course of the Certificate Program.
WAT150. Water Treatment Chem. (4)  
Lec 3 Hrs; Lab 3 Hrs  
Semesters Offered: Variable  
An introductory survey of the fundamental concepts of chemistry with special emphasis on topics as they relate to water treatment. Completion of one year of high school algebra or Math 121 is recommended. This course is not open to students who have completed Chemistry 150 with a grade of C or better.

WAT160. Intro. to Water Resources (2)  
Credit/No Credit Option  
Lec 2 Hrs  
Semesters Offered: Variable  
Basic concepts in the development of water supplies. Covering development of water quality control practices, water sources, public health aspects of water supply, water chemistry, water treatment arithmetic, pump operation, valves and meters. The material covered in this course will be helpful to those preparing for the Grade I Water Treatment Operators Certification Examination given by the State of California.

WAT161. Intro. to Water Treatment (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
General characteristics of water plants and systems. Study for the applications of principles to the various regulations and standards which are established for the reasonable protection of beneficial uses of water. The material covered in this course will be helpful to those preparing for the Grade 2 Water Treatment Operator Certification examination given by the State of California.

WAT162. Adv. Water Treatment (4)  
Credit/No Credit Option  
Prerequisite: Water Technology 161.  
Lec 4 Hrs  
Semesters Offered: Variable  
A course in advanced water treatment with emphasis on the public health aspects of water supply, iron and manganese control, fluoridation, trihalomethanes, softening, operation and maintenance of water treatment facilities and appurtenances, and other related topics. The material covered in this course will be helpful to those preparing for the Grade 3 Water Treatment Operator Certification examination given by the State of California. Completion of Chemistry 150 or Water Technology 150 (Water Treatment Chemistry) and Math 121 (Elementary Algebra) are recommended.

WAT163. Wastewater Treatment (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
Fundamentals of treatment plants, including arithmetic, basic chemistry and biology, treatment and disposal methods and plant operations. Underlying principles, unit processes, available equipment and most commonly used current wastewater treatment processes. The material covered will be helpful to those preparing for the Grade 2 Wastewater Treatment Operator Certificate examination administered by the California Water Resources Board.

WAT164. Adv. Wastewater Treatment (4)  
Credit/No Credit Option  
Prerequisite: Water Technology 163 or equivalent knowledge from field experience.  
Lec 4 Hrs  
Semesters Offered: Variable  
This course will acquaint the treatment plant operator in depth with underlying principles, unit processes, equipment available, and operational considerations associated with the most common advanced wastewater treatment processes, and other processes will be covered. The material covered in this course will be helpful to those preparing for advanced wastewater treatment operator certificates administered by the California Water Resources Board. Completion of Chemistry 150 Water Treatment Chemistry and Math 121 are recommended.

WAT165. Water/Wastewater Math (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  
A review and practice of basic mathematical concepts required to solve water/wastewater treatment plant problems and prepare for State Certification tests.

WAT166. Backflow Testing (1.5)  
Credit/No Credit Option  
Lec 1 Hr; Lab 1.5 Hrs  
Semesters Offered: Variable  
Provide technical training in the proper procedures for the testing of backflow prevention devises in order to become a certified/licensed backflow prevention device tester.

WAT167. Water Distribution Sys. (3)  
Credit/No Credit Option  
Lec 3 Hrs  
Semesters Offered: Variable  

WAT269. Seminars in Water Tech. (.5-3)  
Credit/No Credit Option  
Semesters Offered: Variable  
Seminars of special topics of contemporary interest centered on current Water Technology topics, and important issues affecting the industry personnel. Seminars will be offered as requests are made by the industry professionals in the community.
The Welding curriculum is designed to provide students with the skills necessary for employment in the welding trade. An AWS Welding Certification program is available. Students may earn an Associate Degree and/or a certificate in Welding Technology.

### Welding Technology

#### Associate of Arts Degree

Completion of the major requirements plus graduation requirements for the Associate Degree.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD 150</td>
<td>Basic Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 151</td>
<td>Gas and TIG Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 52</td>
<td>Sheet Metal Fabrication</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 53</td>
<td>Welding Fabrication</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 54</td>
<td>Advanced Arc Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 155</td>
<td>Ornamental Ironwork</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 156</td>
<td>Toolmaking</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 57</td>
<td>Pipe Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 58</td>
<td>Hardfacing and Surfacing</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 59</td>
<td>Welding Metallurgy</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 145</td>
<td>Special Projects</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 52</td>
<td>Sheet Metal Fabrication</td>
<td>2.0</td>
</tr>
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<td>WLD 53</td>
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<td>2.0</td>
</tr>
<tr>
<td>WLD 54</td>
<td>Advanced Arc Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 155</td>
<td>Ornamental Ironwork</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 156</td>
<td>Toolmaking</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 57</td>
<td>Pipe Welding</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 58</td>
<td>Hardfacing and Surfacing</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 59</td>
<td>Welding Metallurgy</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Electives**

Select 12 units from the following:

- DRA 50 Intro. to Drafting Technology 3.0
- DRA 52 Intro. to AutoCAD 2.0
- ELE 57 Instruments and Controls 5.0
- EGN 4 Material Science 3.0
- ET 101 Introduction to Environmental Technology 3.0
- MEC 53 Industrial Electricity 3.0
- MEC 54 Mechanical Skills 3.0
- MEC 55 Applied Industrial Mechanics 2.0
- MEC 56 Hydraulics and Pneumatics 3.0
- MEC 57 Commercial Refrigeration 3.0
- WLD 99 Cooperative Work Experience Education 1-4.0
- WLD 145 Special Projects 1-2.0

**Remainder of General Education Requirements in Addition to the Courses Listed Above:**

<table>
<thead>
<tr>
<th>AREA</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>CHM 22, GEL 2, or PHY 10 recommended</td>
<td>3.0</td>
</tr>
<tr>
<td>Social &amp; Behavioral Science</td>
<td>3.0</td>
</tr>
<tr>
<td>ECO 5, PSY 41, or SOC 41 recommended</td>
<td>3.0</td>
</tr>
<tr>
<td>Humanities</td>
<td>3.0</td>
</tr>
<tr>
<td>ANT 2, ART 10, or PHL 2 recommended</td>
<td>3.0</td>
</tr>
<tr>
<td>English 1A, English Composition &amp; Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>3.0</td>
</tr>
<tr>
<td>Language &amp; Rationality Communication &amp; Analytical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1B or SPE 3 recommended</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Information**

- Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

### Welding Technology

#### Certificate Program

**Required Courses**

<table>
<thead>
<tr>
<th>COURSE #</th>
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<td>WLD 59</td>
<td>Welding Metallurgy</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD 145</td>
<td>Special Projects</td>
<td>2.0</td>
</tr>
<tr>
<td>DRA 64</td>
<td>Industrial Print Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 57*</td>
<td>College Reading &amp; Study Skills</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 101**</td>
<td>English Grammar &amp; Comp.</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151***</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>MEC 169</td>
<td>Hazardous Materials</td>
<td>1.0</td>
</tr>
<tr>
<td>MEC 59</td>
<td>Industrial Materials &amp; Processes</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT 151*</td>
<td>Technical Mathematics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Electives**

Select 6 units from the following:

- DRA 50 Intro. to Drafting Technology 3.0
- MEC 53 Industrial Electricity 3.0
- MEC 54 Mechanical Skills 3.0
- MEC 55 Applied Industrial Mechanics 2.0
- MEC 56 Hydraulics and Pneumatics 3.0
- MEC 57 Commercial Refrigeration 3.0

**Remainder of General Education Requirements in Addition to the Courses Listed Above:**

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<td>Language &amp; Rationality Communication &amp; Analytical Thinking</td>
<td>3.0</td>
</tr>
<tr>
<td>ENG 1B or SPE 3 recommended</td>
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</table>

**Additional Information**

- Completion of English 57 with a grade of C or better or a score of 15 or greater on the STAAR* Basic Skills Reading examination.
- Eligibility for English 1A may be substituted for the English 101 requirement.
- Completion of Math 24 (Trigonometry) or higher may be substituted for the Math 151 requirement.

A grade of "C" or better must be maintained in each course of the Certificate Program.
WLD52. Sheet Metal Fabrication (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50 or appropriate experience.
A thorough study of the practical applications and safety practices used in the fabrication of sheet metal and related equipment. Emphasis is on hardfacing and surfacing techniques. Students will develop basic skills in the use and application of sheet metal related equipment. Completion of Technical Math 151 is recommended. [CSU]

WLD53. Welding Fabrication (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50 or 51.
A course designed for those seeking to certify in a specific welding process. A service course for other technology majors. May be repeated for a maximum of six units. [CSU]

WLD54. Advanced Arc Welding (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50 or appropriate experience.
Advanced study in theory and practice of electric arc welding, MIG and flux cored welding, oxy-acetylene, air-arc and plasma cutting. A course designed for those seeking to certify in arc welding processes. Completion of Technical Math 151 is recommended. [CSU]

WLD55. Ornamental Ironwork (2)
Credit/No Credit Option
Advisory: Completion of WLD 150 (previously WLD 50) and WLD 151 (previously WLD 51).
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50, 55, or 51.
Introductory level study to the practical application of traditional and modern metal working techniques. Focus is on the history, development and present day practices used in the fabrication of architectural ornamental ironwork. Emphasis is on applied safety and process fundamentals including mig welding, oxy-fuel and plasma cutting, metal forming and traditional hot forging practices. [CSU]

WLD56. Toolmaking (2)
Credit/No Credit Option
Advisory: Completion of WLD 150 (previously WLD 50) and or WLD 151 (previously WLD 51).
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50 or 51.
Advisory: Completion of WLD 150 (previously WLD 50) and or WLD 151 (previously WLD 51).
A course designed for those seeking to certify in a specific welding process. A service course for other technology majors. May be repeated for a maximum of six units.

WLD57. Pipe Welding (2)
Credit/No Credit Option
Lec 1 Hr; Lab 3 Hrs
Semesters Offered: Variable
Prerequisite: Welding 50 or appropriate experience.
Advanced study in arc welding with full emphasis on pipe welding techniques. Main objective is to enable the student to certify in the 5G and 6G welding positions. [CSU]
Administration and Faculty

HARTNELL COLLEGE ADMINISTRATION

DR. EDWARD J. VALEAU, SUPERINTENDENT/PRESIDENT

VICE PRESIDENT FOR ADMINISTRATIVE SERVICES/ASSISTANT SUPERINTENDENT .......................................................................................................................... Larry Carrier
  Controller ................................................................................................................................................................................. Terry Buttle
  Director, Purchasing ......................................................................................................................................................... Peter Lucido
  Manager, Facilities & Planning .............................................................................................................................................. Brian Adair
  Manager, Food Services ......................................................................................................................................................... Mike Cunnane

VICE PRESIDENT FOR INSTRUCTION/ASSISTANT SUPERINTENDENT .................................................................................. Allan Hoffman
  Dean, Math/Science/Nursing/Animal Health Technology ........................................................................................................ Charlene Frontiera
  Director, ADN/LVN Programs .............................................................................................................................................. Debbie Denham
  Director, Regional Health Occupations Resource Center .................................................................................................... Kathleen Schrader
  Director, MESA Program Grant .............................................................................................................................................. Michael Kane
  Dean, Physical Education/Director of Athletics .......................................................................................................................... Vacant
  Dean, Social Science/Fine Arts/Language Arts ........................................................................................................................ Kathleen Rose
  Director, Western Stage ............................................................................................................................................................ Jon Selover
  Director, Academic Learning Center ........................................................................................................................................ Michael Kane
  Coordinator, Teacher Reading and Development Partnership ................................................................................................ Denise Cook
  Dean, Occupational Education .................................................................................................................................................. José L. Fernandez
  Director, Child Development Center ......................................................................................................................................... Linda Taylor
  Dean, Workforce & Community Development ......................................................................................................................... Mike Foudy
  Coordinator, Foster Care Education/Independent Living Program Grant ............................................................................... Linda Evans

VICE PRESIDENT FOR STUDENT SERVICES/COUNSELING/ADMISSIONS ...................................................................................... Celia Barberena
  Director, Enrollment Services ..................................................................................................................................................... Mary Dominguez
  Director, EOPS ............................................................................................................................................................................. Romero Jalomo
  Director, Financial Aid ................................................................................................................................................................. Mary Helen Dorado
  Coordinator, Outreach/Student Retention Grant (Gear Up Grant) .............................................................................................. Maria Ayon
  Director, Career & Workforce Development (CalWRKS/CWEE Grants) ................................................................................ Denise Harris
  Director, Counseling, Matriculation and Transfer Studies .................................................................................................... Ruth A. McMullen

ASSOCIATE VICE PRESIDENT OF EDUCATIONAL TECHNOLOGY AND LIBRARY SERVICES .......... Gary J. Hughes

DIRECTOR, HUMAN RESOURCES/EQUAL EMPLOYMENT OPPORTUNITY ................................................ Tamberly Petrovich
DIRECTOR, INSTITUTIONAL RESEARCH & PLANNING ................................................................................................. Chris Myers
DIRECTOR, DEVELOPMENT & SCHOLARSHIPS ............................................................................................................. Cicely McCreight
DIRECTOR, EDUCATION SERVICES SOUTH COUNTY ...................................................................................................... Paulette Bumbalough
ADAMS, PHILIP  
Business  
BS, MBA, San Jose State University

ALBERT, DIMAS  
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BA, MA, CSU Chico

AMERCUPAN, ALI  
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AWS Sr. Cert. Weld. Inspector  
BA, Wagner College  
MA, U S International  
PhD (C) Nova, Southeastern

ANDERSON, TONY  
Articulation Officer  
BS, MA, San Jose State University

ANDREWS, MARILYN  
Psychology  
BA, MA, CSU Sacramento

BARBERENA, CELIA  
Vice President, Student Services/  
Counseling/Admissions  
BS, Findlay College  
MA, PhD, Bowling Green  
State University

BATES, RONALD G.  
Mathematics  
BS, MS, Cal Poly SLO  
DA, Idaho State University

BEALS, CHARLES M.  
Mathematics  
BS, MS, Cal Poly SLO

BECK, JAMES C.  
English as a Second Language  
BA Cal Poly San Luis Obispo  
MA, San Jose State University

BERTOMEN, LINDSEY  
Administration of Justice  
BS, Roger Williams University

BEYMER, DAVID  
Physical Education  
BS, Central Washington University  
MS, University of Arizona

BOSLER, ERIC  
Photography, Art  
BFA, California College of Arts and Crafts  
MFA, UC Berkeley

BRAVO, GABRIEL  
Gear-Up, Counselor  
BA, UC Berkeley  
MA, San Jose State University

BREHENY, JESSICA  
English  
BA, San Francisco State University  
MA, SUNY Binghamton  
PhD, UC, Santa Cruz

BUTLER, JAMES  
Mathematics  
BS, San Diego State University  
MS, CSU Hayward

BUMBALOUGH, PAULETTE  
Director, Education Services, South County  
BA, San Jose State  
MED, Chapman University

CALVERT, PETER  
Business  
BA, University of Massachusetts/  
Boston State  
MBA, Golden Gate University

CARBAJAL, THERESA  
Learning Disability Specialist  
BS, San Francisco State University  
MS, CSU Sacramento

CARRIER, LARRY  
Vice President for Administrative Services/Assistant Superintendent  
BA, MBA, CSU Stanislaus

CASTILLO, MARIA  
Counselor  
BA, MS, San Jose State University

CHRISTENSEN, CARL  
Music  
BM, MM, DMA, University of Southern California

CONTRERAS, LETICIA  
Mathematics  
BA, CSU, Stanislaus  
MS, CalPoly San Luis Obispo

COOK, JACKALYN L.  
Counselor  
BA, Fresno Pacific University  
MS, University of LaVerne

COUSINEAU, MARY  
Nursing  
MS, UC San Francisco  
BSN, Duke University

CRANE, STANLEY  
Theater Arts, Speech  
BA, University of Redlands  
MA, CSU Fullerton  
PhD, University of Oregon

CUDE, JESSE L.  
Physics  
BS, MS, University of Arizona  
PhD, University of Colorado

DAVIS, WAYNE M.  
Counselor  
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Salinas, California
755-6700

East Campus
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Salinas, California
(3.4 miles East of Main Campus)
759-6093

Natividad Medical Center
Health Professions Center
1441 Constitution Boulevard
Building 400, 3rd Floor
Salinas, California
770-6146

King City Education Center
117 North Second Street
King City, California
386-7100
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Computer Systems</td>
<td>4</td>
</tr>
<tr>
<td>Academic Planning</td>
<td>17</td>
</tr>
<tr>
<td>Academic Policies</td>
<td>23</td>
</tr>
<tr>
<td>Academic Probation</td>
<td>26</td>
</tr>
<tr>
<td>Academic Renewal Procedures</td>
<td>25</td>
</tr>
<tr>
<td>Adaptive P.E. Classes</td>
<td>173</td>
</tr>
<tr>
<td>Add/Drop Period</td>
<td>11</td>
</tr>
<tr>
<td>Administration and Faculty</td>
<td>204</td>
</tr>
<tr>
<td>Administration of Justice</td>
<td>45</td>
</tr>
<tr>
<td>Administrative Computer Systems</td>
<td>4</td>
</tr>
<tr>
<td>Admission Requirements</td>
<td>8</td>
</tr>
<tr>
<td>Admissions &amp; Records</td>
<td>7</td>
</tr>
<tr>
<td>Admissions Procedures</td>
<td>7</td>
</tr>
<tr>
<td>Advanced Placement (CEEB)</td>
<td>10</td>
</tr>
<tr>
<td>Advisories</td>
<td>14</td>
</tr>
<tr>
<td>Agriculture</td>
<td>49</td>
</tr>
<tr>
<td>American Indian Services</td>
<td>20</td>
</tr>
<tr>
<td>Animal Health Technology</td>
<td>52</td>
</tr>
<tr>
<td>Anthropology</td>
<td>54</td>
</tr>
<tr>
<td>Application for Admission</td>
<td>7</td>
</tr>
<tr>
<td>Apprenticeship &amp; Journeyman Training</td>
<td>55</td>
</tr>
<tr>
<td>Art</td>
<td>56</td>
</tr>
<tr>
<td>Associate of Arts/Science Degree Requirements</td>
<td>34</td>
</tr>
<tr>
<td>Assessment</td>
<td>16</td>
</tr>
<tr>
<td>Associated Students of Hartnell College</td>
<td>21</td>
</tr>
<tr>
<td>Astronomy</td>
<td>60</td>
</tr>
<tr>
<td>Athletic Eligibility</td>
<td>18</td>
</tr>
<tr>
<td>Athletics and Sports</td>
<td>18</td>
</tr>
<tr>
<td>Attendance Policy</td>
<td>27</td>
</tr>
<tr>
<td>Auditing Classes</td>
<td>26</td>
</tr>
<tr>
<td>Auditing Procedures</td>
<td>26</td>
</tr>
<tr>
<td>Auto Collision Repair</td>
<td>61</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>63</td>
</tr>
<tr>
<td>Behavioral Sciences</td>
<td>67</td>
</tr>
<tr>
<td>Bilingual Education</td>
<td>68</td>
</tr>
<tr>
<td>Biology</td>
<td>69</td>
</tr>
<tr>
<td>Board of Governors Fee Waiver (BOGW)</td>
<td>18</td>
</tr>
<tr>
<td>Business</td>
<td>71</td>
</tr>
<tr>
<td>Cal Grants (A, B &amp; C)</td>
<td>18</td>
</tr>
<tr>
<td>California Articulation Numbering System (CAN)</td>
<td>39</td>
</tr>
<tr>
<td>California Mini-Corps Program</td>
<td>20</td>
</tr>
<tr>
<td>California Residents</td>
<td>7</td>
</tr>
<tr>
<td>California State University System Admission Requirements</td>
<td>40</td>
</tr>
<tr>
<td>CallWORKS</td>
<td>19</td>
</tr>
<tr>
<td>Campus Safety</td>
<td>20</td>
</tr>
<tr>
<td>Campus Security</td>
<td>20</td>
</tr>
<tr>
<td>Campus, The</td>
<td>3</td>
</tr>
<tr>
<td>Cancelled Classes</td>
<td>13</td>
</tr>
<tr>
<td>Career Center</td>
<td>20</td>
</tr>
<tr>
<td>Cars on Campus</td>
<td>3</td>
</tr>
<tr>
<td>Certificate &amp; Degree List</td>
<td>33</td>
</tr>
<tr>
<td>Challenging A Course</td>
<td>26</td>
</tr>
<tr>
<td>Cheating – Disciplinary Action</td>
<td>29</td>
</tr>
<tr>
<td>Cheating – Policy</td>
<td>28</td>
</tr>
<tr>
<td>Chemistry</td>
<td>79</td>
</tr>
<tr>
<td>Chicana/Chicano Studies</td>
<td>81</td>
</tr>
<tr>
<td>Child Development Center</td>
<td>5</td>
</tr>
<tr>
<td>Chinese</td>
<td>82</td>
</tr>
<tr>
<td>Class Scheduling</td>
<td>2</td>
</tr>
<tr>
<td>Code of Student Conduct</td>
<td>29</td>
</tr>
<tr>
<td>College Cafeteria</td>
<td>3</td>
</tr>
<tr>
<td>College Level Examination Program (CLEP)</td>
<td>10</td>
</tr>
<tr>
<td>College Store</td>
<td>3</td>
</tr>
<tr>
<td>College, The</td>
<td>1</td>
</tr>
<tr>
<td>Communications</td>
<td>21</td>
</tr>
<tr>
<td>Computer Science and Information Systems</td>
<td>83</td>
</tr>
<tr>
<td>Computing Facilities</td>
<td>4</td>
</tr>
<tr>
<td>Concurrent Enrollment</td>
<td>9</td>
</tr>
<tr>
<td>Confidentiality Statement</td>
<td>9</td>
</tr>
<tr>
<td>Construction</td>
<td>90</td>
</tr>
<tr>
<td>Cooperative Agencies Resources for Education (CARE)</td>
<td>19</td>
</tr>
<tr>
<td>Cooperative Work Experience Education</td>
<td>94</td>
</tr>
<tr>
<td>Corequisites</td>
<td>14</td>
</tr>
<tr>
<td>Counseling</td>
<td>95</td>
</tr>
<tr>
<td>Counseling and Guidance</td>
<td>15</td>
</tr>
<tr>
<td>Counseling Sports Center</td>
<td>18</td>
</tr>
<tr>
<td>Course Numbering</td>
<td>32</td>
</tr>
<tr>
<td>Courses</td>
<td>45</td>
</tr>
<tr>
<td>Credit By Examination</td>
<td>26</td>
</tr>
<tr>
<td>Credit/No Credit Options</td>
<td>23</td>
</tr>
<tr>
<td>Criteria for Admission</td>
<td>7</td>
</tr>
<tr>
<td>Cultural Programs</td>
<td>5</td>
</tr>
<tr>
<td>Dance</td>
<td>98</td>
</tr>
<tr>
<td>Day Classes</td>
<td>2</td>
</tr>
<tr>
<td>Definitions – Grading</td>
<td>24</td>
</tr>
<tr>
<td>Degree &amp; Certificate List</td>
<td>33</td>
</tr>
<tr>
<td>Digital Arts</td>
<td>99</td>
</tr>
<tr>
<td>Disabled Student Services</td>
<td>20</td>
</tr>
<tr>
<td>Dismissal</td>
<td>27</td>
</tr>
<tr>
<td>Distribution of Literature To and/or Soliciting Petition Signatures From Students on District Property</td>
<td>2</td>
</tr>
<tr>
<td>Drafting</td>
<td>100</td>
</tr>
<tr>
<td>Early Childhood Education</td>
<td>103</td>
</tr>
<tr>
<td>Earth Science</td>
<td>108</td>
</tr>
<tr>
<td>Economics</td>
<td>109</td>
</tr>
<tr>
<td>Education</td>
<td>110</td>
</tr>
<tr>
<td>Electronic Waitlist</td>
<td>11</td>
</tr>
<tr>
<td>Electronics</td>
<td>111</td>
</tr>
<tr>
<td>Emergency Communications</td>
<td>13</td>
</tr>
<tr>
<td>Enforcement</td>
<td>3</td>
</tr>
<tr>
<td>Engineering</td>
<td>113</td>
</tr>
<tr>
<td>Engineering Technology</td>
<td>113</td>
</tr>
<tr>
<td>English</td>
<td>115</td>
</tr>
<tr>
<td>English as a Second Language-STAAR*</td>
<td>16</td>
</tr>
<tr>
<td>English as a Second Language Courses</td>
<td>119</td>
</tr>
<tr>
<td>English Composition Placement Policy</td>
<td>10</td>
</tr>
<tr>
<td>English-Reading</td>
<td>118</td>
</tr>
<tr>
<td>Enrollment Fees</td>
<td>12</td>
</tr>
<tr>
<td>Enrollment in Courses</td>
<td>11</td>
</tr>
<tr>
<td>Environmental Technology</td>
<td>121</td>
</tr>
<tr>
<td>Ethnic Groups in the United States</td>
<td>122</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>122</td>
</tr>
<tr>
<td>Evening Classes</td>
<td>2</td>
</tr>
<tr>
<td>Examinations</td>
<td>25</td>
</tr>
<tr>
<td>Excess Units</td>
<td>25</td>
</tr>
<tr>
<td>Exemption from Orientation and Counseling Services</td>
<td>17</td>
</tr>
<tr>
<td>Exemptions from Assessment Services</td>
<td>16</td>
</tr>
<tr>
<td>Extended Opportunity Programs and Services (EOPS)</td>
<td>19</td>
</tr>
<tr>
<td>Faculty and Academic Management</td>
<td>205</td>
</tr>
<tr>
<td>Family and Consumer Studies</td>
<td>123</td>
</tr>
<tr>
<td>Federal Pell Grant</td>
<td>18</td>
</tr>
<tr>
<td>Federal Stafford Loan</td>
<td>18</td>
</tr>
<tr>
<td>Fees</td>
<td>12</td>
</tr>
<tr>
<td>Financial Aid Programs</td>
<td>18</td>
</tr>
<tr>
<td>Fire Science</td>
<td>124</td>
</tr>
<tr>
<td>Food Service Management</td>
<td>126</td>
</tr>
<tr>
<td>Foster and Kinship Care Education</td>
<td>5</td>
</tr>
<tr>
<td>French</td>
<td>127</td>
</tr>
<tr>
<td>F-1 Visa Status</td>
<td>8</td>
</tr>
<tr>
<td>General Education</td>
<td>35</td>
</tr>
<tr>
<td>General Studies</td>
<td>128</td>
</tr>
<tr>
<td>Geography</td>
<td>129</td>
</tr>
<tr>
<td>Geology</td>
<td>130</td>
</tr>
<tr>
<td>German</td>
<td>131</td>
</tr>
<tr>
<td>Grade Change Policy</td>
<td>24</td>
</tr>
<tr>
<td>Grade Reports</td>
<td>24</td>
</tr>
<tr>
<td>Grades and Grade Point Averages</td>
<td>23</td>
</tr>
<tr>
<td>Grades K-8</td>
<td>9</td>
</tr>
<tr>
<td>Graduation with Honors</td>
<td>34</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>34</td>
</tr>
<tr>
<td>Grants</td>
<td>18</td>
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</tbody>
</table>