d course

Course Number ——→

Prerequisite if any ——→

Advisory if any ——→
Weekly Hours ——→
Course
Description

Articulation:
CSU-CA State University
UC-University of California
Course-Identification (C-ID) ——→

MAT3A. Analytic Geometry and
       Calculus I (4)

1 S F S F RMAT-24 and MAT- 25 with a grade of
•CŽ or better or placement by Hartnell•s assessment.
0 G G F S F E
" E W J T P S Z
- F 4 Hrs
The first course in a three-course series. A study of limits, differentiation, differentials, integration, and applications of differentiation and integration. This course is primarily for students majoring in mathematics, physics, chemistry, biology, computer science, and engineering.
[CSU; UC; CSU-GE, AREA B4; IGETC, AREA 2]
[C-ID MATH 210]

Units
Course Grading
› If no grading system is specified for a course, a letter grade will be issued.
x If Pass/No Pass only is specified, a P or NP will be issued.
x If Pass/No Pass option is indicated, a letter grade will be issued unless the student files a petition to complete the course with the P/NP option.
x No grades will be issued for non-credit courses.

offerings will be limited.

Many factors influence course offerings, including state wide bu dgetary and policy making de cisions, industry trends, and other unpredictable factors. We are providing semesters and years of planned offering to th e best of our knowledge in support of educational planning, access, success and completion. Such annotations should not be seen as guarantees of course offerings sequences. Please check the schedule of classes for any given semester to confirm and finalize schedule planning and readjust education plans as needed.

DE/HYBRID ADVISORY:

Students taking web-based and hybrid courses must have basic computer skills for operating Microsoft Word and e-mail, including sending attachme nts and files. Students also need access to the Internet and must have adequate hardware and software capabilities. Access to computers is also available at the Hartnell College Library/LRC.

1 B H F

Course Identification Numbering System (C-ID)

ourse Identification Numbering System (C-ID) is a statewide numbering system used for transfer courses that is ndent of the actual course numbers assigned. Each C-ID number identifies a lower-division, transferable course nly articulated between the California community colleges and CSU and independent colleges/universities. The C-ber conveys that any course at another college bearing the same C-ID number will be accepted by that institution. r words the C-ID designation can be used to identify comparable courses at different institutions. Students should vith a counselor to determine how C-ID designated courses fit into their educational plans for transfer.

ts may consult the ASSIST database at www.assist.org for specific information on C-ID course designations and to how each course will be accepted at a particular four-year institution. Counselors can always help them interpret ain this information.

ampus retains its own course number prefix and number. An example of the C-ID numbering system is Hartnell •s English 1A (C-ID ENGL 100). The number 1A is Hartnell College•s number; C-ID ENGL 100 is the designation that to number the equivalent articulated course in the C-ID numbering system. Many of the C-ID numbered courses will d in the Associate Degree for Transfer (AA-T or AS-T) degrees.

C-ID Courses at Hartnell

Introduction to Agriculture	C-ID AG AB 104
Sales and Service in Agribusiness	C-ID AG AB 112
Agribusiness Economics	C-ID AG AB 124
Agriculture Computer Applications	C-ID AG AB 108
Soil Science	C-ID AG PS 128L
Plant Science	C-ID AG PS 106L
Introduction to Administration of Justice	C-ID AJ 110
Community Relations and the Justice System	C-ID AJ 160
Concepts of Criminal Law	C-ID AJ 120
Criminal Evidence	C-ID AJ 124
Criminal Court Process	C-ID AJ 122
Criminal Investigation	C-ID AJ 140
Juvenile Procedures	C-ID AJ 220
Introduction to Corrections	C-ID AJ 200
Control and Supervision in Corrections	C-ID SOCI 160
Introduction to Forensics	C-ID AJ 150
Physical Anthropology	C-ID ANTH 110
Introduction to Cultural Anthropology	C-ID ANTH 120
Art History Survey I	C-ID ARTH 110
	C-ID ARTH 120
Drawing and Composition	C-ID ARTS 110
Art Appreciation	C-ID ARTH 100

Course	Title	C-ID
CSS-44	Computer Science & Information Systems	C-ID ITIS 120
CSS-120A	Introduction to Networks	C-ID ITIS 120
CSS-124	Systems and Network Administration	C-ID ITIS 155
ECE-1	Principles and Practices of Teaching Young Children	C-ID ECE 120
ECE-2	Child, Family and Community Relations	C-ID CDEV 110
ECE-4	Introduction to Curriculum	C-ID ECE 130
ECE-10	Observation and Assessment	C-ID ECE 200
ECE-12A	Preschool Theory and Practicum	C-ID ECE 210
ECE-19	Nutrition in the Child Care Setting	C-ID ECE 220
ECE-53	Teaching in a Diverse Society	C-ID ECE 230
ECO-1	Principles of Macroeconomics	C-ID ECON 202
ECO-5	Principles of Microeconomics	C-ID ECON 201
EDU-1	Multicultural Perspective of Education	C-ID EDUC 200
EGN-1R	Introduction to Engineering	C-ID ENGR 110
EGN-2	Engineering Graphics and Design	C-ID ENGR 150
EGN-4	Materials Science and Engineering	C-ID ENGR 140B
EGN-5	Programming and Problem Solving in MATLAB	C-ID ENGR 220
EGN-6	Circuit Analysis	C-ID ENGR 260
EGN-6L	Circuit Analysis	C-ID ENGR 260L
EGN-7	Introduction to Programming Concepts and Methodologies for Engineers	C-ID ENGR 120
EGN-8	Statics	C-ID ENGR 130
EGN-11	Surveying	C-ID ENGR 180
ENG-1A	College Composition and Reading	C-ID ENGL 100
ENG-1AX	College Composition	C-ID ENG 100
ENG-1B	College Literature and Composition	C-ID ENGL 120
ENG-2	Critical Thinking and Writing	C-ID ENGL 105
ENG-31	Beginning Creative Writing	C-ID ENGL 200
ENG-44A	World Literature I	C-ID ENGL 140
ENG-44B	World Literature II	C-ID ENGL 145
ENG-46A	Survey of British Literature I	C-ID ENGL 160
ENG-46B	Survey of British Literature II	C-ID ENGL 165
ENG-47A	Survey of American Literature I	C-ID ENGL 130
ENG-47B	Survey of American Literature II	C-ID ENGL 135
ENG-48	Introduction to Children's Literature	C-ID ENGL 180
GEG-1	Geography Physical Elements	C-ID GEOG 110
GEG-10	Geography and World Affairs: A	

MUS-49	Music Theory and Musicianship III	C-ID MUS 150
MUS-49	Music Theory and Musicianship III	C-ID MUS 155
MUS-50A	Harmony I	C-ID MUS 120
MUS-51A	Musicianship I	C-ID MUS 125
MUS-52B	Harmony IV	C-ID MUS 150
MUS-53B	Musicianship IV	C-ID MUS 155
PETH-1	Introduction to Kinesiology	C-ID KIN 100
PHL-2	Introduction to Philosophy	C-ID PHIL 100
PHL-10	Ethics	C-ID PHIL 120
PHL-15	Logic and Critical Thinking	C-ID PHIL 110
PHY-2A + PHY-2B	College Physics I + College Physics II	C-ID PHYS 100S
PHY-2A	College Physics I	

AOD-9. Co-Occurring Disorders (3)

Credit: AOD-9UF

Advisory: Eligibility for ENG-1A; Completion of AOD-2 through AOD-5. AOD-5.

ADJ-4. Criminal Evidence (3)
   Pass/No Pass Option
   Fall Spring
   Lec 54 Hrs

An introduction to the legal system, the sources of law, the criminal court system, and the trial process. The course focuses in particular on the classifications and rules of evidence. Includes a thorough overview of legal issues in criminal evidence such as admissibility, constitutional protections including the Fourth Amendment, and the burden of proof. Also covered are general considerations in evidence such as inferences and presumptions, privilege, judicial notice, expert testimony, scientific, and demonstrative evidence.
[CSU] [C-ID AJ 124]

ADJ-5. Criminal Court Process (3)
   Pass/No Pass Option
   Fall Spring
   Lec 54 Hrs

An introduction to the sources of law, the legal system, the criminal court trial process, the purposes of punishment, and participants in the criminal justice 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.
[CSU] [C-ID AJ 122]

ADJ-8. Criminal Investigation (3)
   Pass/No Pass Option
   All Terms
   Lec 54 Hrs

A course designed to teach the fundamentals of investigation; crime scene preservation of evidence; scientific aids; modus operandi; sources of information, interviews and interrogation; ethical challenges; surveillance; follow-up and case preparation; constitutional issues; and the role of the investigator in the trial process.
[CSU] [C-ID AJ 140]

ADJ-10. Juvenile Procedures (3)
   All Terms
   Lec 54 Hrs

ADJ-33. Constitutional Law for Criminal Justice

ADVANCED AUTOMOTIVE TECHNOLOGY

AAT-100. Introduction to Automotive Repair (4)
  'B M M 4 Q S J O H
  - F 36 Hrs; - B 08 Hrs
An introduction to automotive mechanics and technology for students beginning study as an automotive technician or who desire in-depth knowledge regarding today's automobiles. Covers principles of operation and system servicing procedures for systems found on today's cars. Provides instruction in shop

ADVANCED DIESEL TECHNOLOGY

ADT-100. Diesel Engine Technology (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 4 Q S J O H
- F 8 6 Hrs; - B 0 3 Hrs

This course explores principles, systems service, and diagnosis procedures for today's heavy-duty diesel engines and equipment. The course will cover industry standards of personal and environmental safety practices, personal protective equipment (PPE), proper lifting practices, proper handling and usage of hand tools, engine theory, operating principles of a diesel engine, research engine data, and troubleshooting procedures, in print and electronic formats. Students will learn how to properly handle, store, and dispose of hazardous waste and materials in accordance with Federal, State, and local laws and regulations. Student will be required to have a work-shirt, safety glasses, pants and work-boots for safety reasons.

ADT-101. Diesel Engine Rebuild (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
4 Q S J O H 0 O M Z
- F 8 6 Hrs; - B 0 3 Hrs

This course will guide students through the comprehensive steps to assemble and disassemble a diesel engine. Students will also learn the theory of engine operating systems. Topics include the study of diesel engine construction; engine removal; disassembly; inspection; precision measuring; engine operation; diagnosing engine problems; and in-chassis repairs. Student will be required to have a work-shirt, safety glasses, pants and work-boots for safety reasons.

ADT-110. Electrical and Electronic Systems (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 4 Q S J O H
- F 8 6 Hrs; - B 0 3 Hrs

This course is designed to give students a strong foundation in the fundamental concepts of electricity and electronics as they relate to advanced diesel technology vehicles and equipment. Students will study basic theories of electricity, electrical components function and design, wiring and circuit diagrams, introduction to vehicle control modules and their role in the electronic controls, as well as vehicle communication networks and chassis controllers and accessory system.

ADT-111. Electrical Systems and Controls (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 0 O M Z
- F 8 6 Hrs; - B 0 3 Hrs

This course will cover electrical theories, electrical troubleshooting and service, wiring and circuit diagrams, electronic engine controls system diagnosis and service, computers and computer controlled engine systems, electronic diesel fuel injection diagnosis and service.

ADT-120. Climate Control (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 0 O M Z
- F 8 6 Hrs; - B 0 3 Hrs

This course is a study of heating, ventilation, and air conditioning (HVAC), which is designed to maintain a comfortable temperature in heavy duty vehicles and equipment.

ADT-121. Preventive Maintenance (4)
" E W J T ENG-101 or ESL-101 and MAT-121
4 Q S J O H 0 O M Z
- F 8 6 Hrs; - B 0 3 Hrs

This course will cover the full spectrum of systems found in diesel trucks and equipment, including the electrical, lubrication, heating, cooling, exhaust, and transmission systems. Students will learn essential maintenance and service tasks to be performed on heavy-duty diesel trucks and equipment. The tasks performed by students in this course correspond to guidelines set by the U.S. Department of Transportation, Rules and Regulations, Section 396. Student will be required to have a work-shirt, safety glasses, pants and work-boots for safety reasons.

ADT-130. Brake Systems (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 4 Q S J O H
- F 8 6 Hrs; - B 0 3 Hrs

This course is a study of brake systems in heavy-duty diesel vehicles and equipment. Students will examine air brake, hydraulic brake, and drum brake systems, as well as hydraulic and air brake parking systems, and anti-lock brake theory and maintenance. Students will learn to service and repair wheel bearing and seals.

ADT-131. Steering and Suspension Systems (4)
" E W J T P S Z ENG-101 or ESL-101 and MAT-121
' B M M 0 O M Z
- F 8 6 Hrs; - B 0 3 Hrs

This course is a comprehensive study of heavy-duty diesel steering and suspension systems. Students will examine alignment and service; suspension systems and service; chassis system and service; front wheel drive axles fundamentals and service; rear wheel drive shafts and axles fundamentals and service. Students will learn how to properly handle, store, and dispose of hazardous waste and materials by Federal, State, and local regulations. Student will be required to have a work-shirt, safety glasses, pants and work-boots for safety reasons.

ABT-58. Agriculture Laws & Regulations (3)
Fall Spring
Lec 54 Hrs

An introduction to the laws and regulations affecting the agriculture industry. Topics include government agencies and their functions, public and employee safety, insurance, agriculture organizations, labor and land issues, and water and air quality issues.
[CSU]

ABT-66. Introduction to Geographic Information
Systems (GIS) (3)
Fall Only
Lec 36 Hrs; Lab 54 Hrs

Introduction to the fundamentals of Geographic Information Systems including data collection and input, data management, spatial query and analysis. Defining of a problem to study, analyze and develop solutions using GIS Technology.
[CSU]

ABT-67. Intermediate GIS with Applications to
Agriculture (3)
Prerequisite ABT-66 with a grade of "C" or better.
Spring Only
Lec 36 Hrs; Lab 54 Hrs

Intermediate topics in GIS with application to agricultural problems. Students will have the opportunity to expand on the skills learned in previous GIS courses through instructor and student-led discussions, literature readings, and labs. Course content will cover intermediate topics on surface analysis, remote sensing, spatial database design, and building geoprocessing models. Project design, implementation and management.
[CSU]

ABT-80. Introduction to Sustainable Agriculture and
Food (3)
Spring Only
Lec 54 Hrs

This course introduces the topic of environmental and social sustainability in agriculture emphasizing a multi-disciplinary analysis of food and farming systems. Students will learn the history of agricultural development and the influence of agricultural technologies and land use practices on agro-ecosystem functioning, environmental quality, and human health. The course examines the ecology, environmental science, sociology and economics of agricultural systems. The course concludes with an assessment of the social, economic and political obstacles, opportunities and enabling environments for the widespread adoption of more environmentally sustainable and socially equitable food and farming systems.
[CSU]

ABT-81. Integrated Pest Management Principles in
Entomology (3)
Spring Only
Lec 36 Hrs; Lab 54 Hrs

Introduction to insects and mites of economic importance to agriculture. Covers the morphology, taxonomy, identification, life cycles, hosts, habitat relationships, and control methods of insects of economic importance. Collection and labeling of specimens will be required. Field trips required.
[CSU]

ABT-82. Integrated Pest Management Principles in
Weed Science (3)
Advisory BIO-10 or ABT-92 strongly advised.
Fall Only
Lec 36 Hrs; Lab 54 Hrs

Introduction to the classification, identification, and life cycle of common and poisonous weeds in California which are detrimental to cultivated crops, grasslands, animals, and humans. Management practices include: prevention, mechanical, biological, and chemical methods. Weed 48 324 728.7 Tm [(ABT)9ed.

ABT-101. Organic Vegetable Production (1.5)

'B M M 0 O M Z

- F 18 Hrs; - 27 Hrs

Intended for Agriculture Production majors and entrepreneurial students with interest in organic farming operations and organic production methods. Covers the practical aspects of developing a crop plan that meets USDA

ABT-132. Food Safety Management (1.5)
   1SFSFRVJTJUF: ABT-130 with a grade of "C" or better.
   'BMM 4QSJOH
   -FD 27 Hrs
Covers the creation and documentation of key elements in a food safety program including: evaluating current practices, creating and implementing key aspects within a food safety program, documentation, and recognition of pathogen behavior. Field trips may be required.

ABT-133. Facility Management for Food Safety (1.5)
   'BMM 4QSJOH 0EE :FBS
   -FD 27 Hrs
Covers food safety issues and concerns in the manufacturing facility including such: facility sanitation, recognizing potential hazards, analysis of problems in the cold chain, developing improved practices, HACCP principles, employee training, and the inspection process. Field trips may be required.

ABT-134. Environment Effects on Food Borne
          Pathogens (1.5)
   'BMM 4QSJOH
   -FD 27 Hrs
Potential environmental sources and transport mechanisms of food-borne pathogens. Students will learn how to make informed decisions about the potential effects of local site conditions on food safety. Covers the role of site conditions in pathogen transport such as: livestock proximity, wildlife behavior and habitat, rainfall and irrigation runoff, soil types, slope, aspect, climate, soil erosion and deposition by water and wind, flooding, vegetation and the behavior of pathogens in the environment. Field trips may be required.

ABT-135. Introduction to Food Microbiology (1.5)
   "EWJTPSZ: Introductory course in Biology.
   'BMM 0OMZ
   -FD 18 Hrs; -BC 27 Hrs
An introduction to the principles of food microbiology and food safety. Investigation of the beneficial and harmful effects of microorganisms on food. Survey of the types of microbes found in various types of food, as well as methods for their detection. Evaluation of methods of microbial control and mechanisms of disease of important food microorganisms, as well as sources of food contamination. Examination of implementation and effectiveness of food safety programs. Field trips may be required.

ABT-160. Introduction to Agriculture (3)
   'BMM 0OMZ
   -FD 54 Hrs
A survey of agriculture products and the businesses that produce, service, and supply those products. Focuses on Central Coast fresh vegetable, viticulture and berry production. A broad view of California, United States, and world production will also be covered. The skill sets required in those businesses will be discussed. Surveys some of the career choices in the agriculture specialty areas.

ABT-258. Agriculture Ambassadors (2)
   4QSJOH 0OMZ 0EE :FBS
   -FD 18 Hrs; -BC 54 Hrs
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.

AMERICAN SIGN LANGUAGE

ASL-1. American Sign Language I (5)
   'BMM 4QSJOH
   -FD 90 Hrs
Introduction to American Sign Language (ASL). Essentials of ASL structure, syntax, classifiers, and non-manual markers. Expressive and receptive signing ability including vocabulary, fingerspelling, use of space, application of size and shape specifiers (classifiers), and grammatical non-manual markers. Introduction to the history of Deaf culture, education, and ASL in the United States.
[CSU; UC; CSU-GE, AREA C2; IGETC AREA 6]

ASL-2. American Sign Language II (5)
   1SFSFRVJTJUF: ASL-1 with a grade of "C" or better.
   'BMM 0OMZ
   -FD 90 Hrs
Continuation of skill building towards effective communication in American Sign Language (ASL). Drill and exercises at the intermediate level of sign language structure, form, usages, and conversation. Continued exploration and understanding of Deaf history and culture, including the American Deaf perspective, social norms and current issues in the Deaf community. Participation in Deaf cultural event required.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 6]

ASL-3. American Sign Language III (5)

   Prerequisite: ASL-2 with a grade of C or better.

   Pass/No Pass Option

   Spring Only

   Lec 90 Hrs

Intermediate to advanced level syntax, grammar, history, and vocabulary of American Sign Language. Emphasis on increasing proficiency in conversational situations and increasing awareness of Deaf culture and its influence on language structures, conversation, context, and usage. Special emphasis on oral presentation. Participation in Deaf cultural event required.

[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 6]

ANTHROPOLOGY

ANT-1. Introduction to Biological Anthropology (3)

   Advisory: Eligibility for ENG 1A.

   All Terms

   Lec 54 Hrs

An introductory survey in biological or physical anthropology. The course provides an overview of the basic data, methodology and theories of the principal subdivision of the field--population genetics, primatology, paleoanthropology, and human variability and adaption--to understand the process of human evolution. It is designed to fit the needs and interests of both beginning anthropology majors and general education students.

[CSU; UC; CSU-GE, AREA B2, D; IGETC, AREA 5]

[C-ID ANTH 110]

ANT-2. Introduction to Cultural Anthropology (3)

   Advisory: Eligibility for ENG 1A.

   All Terms

   Lec 54 Hrs

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. Examples taken from a wide range of foraging, tribal, and complex state societies are employed to illustrate the methodology, concepts, and theories of anthropological science. It is intended for both beginning anthropology majors and general education students.

[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]

[C-ID ANTH 120]

ANT-10. Indigenous Cultures of California (3)

   Spring Only

   Lec 54 Hrs

A survey of the native societies of California through an overview of their cultural evolution from pre-contact to historic periods. It is designed to fit the needs and interests of both beginning anthropology majors and general education students.

[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]

ANT-20. Mesoamerica: Cultures and Civilizations of Mexico and Central America (3)

   Advisory: ENG-1A

   Fall Spring

   Lec 54 Hrs

This course offers a survey of the Mesoamerican cultures and civilizations of Mexico and Central America as presented by the archaeological, historical and ethnographic information of the area. Covering the periods from the early hunting and gathering societies through the development of farming villages and civilizations, this course provides an overview of the principal civilizations, the Aztec and Maya, at the time of European contact and the aftermath of the Spanish conquest to fully comprehend the stage of contemporary indigenous cultures of Mexico and Central America. It is intended for both beginning anthropology majors and general education students.

[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]

APPRENTICESHIP

APP-120. 1st Year Commercial Electrical Appr I (4)

   Advisory: Successful completion of full credit of high school algebra with a passing grade, or one post high school algebra course (e.g. Adult Education, Continuing Education, Community College, etc.) with a passing grade, or successful completion of the NJATC Online Tech Math Course.

   Other: Section 3074.3 of the State Labor Code authorizes limitation of this course to students who have been accepted into the Inside Apprenticeship program of the Tri-County Electrical JATC.

   Lec 72 Hrs

First semester of the first year in the five-year Commercial/Industrial Electrical Apprenticeship Program leading to Journeyman Electrician certification in the electrical construction industry.

APP-121. 1st Year Commercial Electrical Appr II (4)

   Prerequisite: APP-120 with a grade of "C" or better.

   Other: Section 3074.3 of the State Labor Code authorizes limitation of this course to students who have been accepted into the inside Apprenticeship program of the Tri-County Electrical.

   Lec 72 Hrs

Second semester of the first year in the five-year Commercial/Industrial Electrical Apprenticeship Program leading to Journeyman Electrician certification in the electrical construction industry.

APP-122. 2nd Year Commercial Electrical App I (4)

1 S F S F R AVPP-121 U With a grade of "C" or better and Student is a registered State indentured apprentice.

0 U I FSS ction 3074.3 of the State Labor Code authorizes limitation of this course to stdents who have been accepted into the Inside Apprenticeship program of the Tri-County Electrical JATC.

1 B T T / P 1 B T T 0 Q U J P O

- F7 2 Hrs

First semester of the second year in the five-year Commercial/Industrial Electrical Apprenticeship Program leading to Journeyman Electrician certification in the electrical construction industry.

APP-123. 2nd Year Commercial Electrical Apprentice II (4)

1 S F S F R AVPP-122 U With a grade of "C" or better and Student is a registered State indentured apprentice.

0 U I FSS ction 3074.3 of the State Labor Code authorizes limitation of this course to stdents who have been accepted into the Inside Apprenticeship program of the Tri-County Electrical JATC.

- F7 2 Hrs

Second semester of the second year in the five-year Commercial/Industrial Electrical Apprenticeship Program

APP-245. Special Projects (0.5 - 2)
1 B T T / P 1 B T T 0 Q U J P O
Supervised study and individualized instruction for apprentices entering a trade or transfering to a Hartnell College apprenticeship program at a time when regularly scheduled classes are not available.

ART

ART-1A. Art History Survey I (3)
" E W J T P S Z Completion of or concurrent enrollment in ENG-1A
' B M M 4 Q S J O H
- F 54 Hrs
A survey of the major monuments, styles, artists and historical periods of painting, sculpture and architecture from Mediterranean prehistory through Egypt, Mesopotamia, Greece, Rome and the Middle Ages of Western Europe.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3A]
[C-ID ARTH 110]

ART-1B. Art History Survey II (3)
" E W J T P S Z Completion of or concurrent enrollment in ENG-1A
' B M M 4 Q S J O H
- F 54 Hrs
A survey of the major monuments, styles, artists and historical periods of painting, sculpture and architecture of Western Europe and America from early Renaissance to the contemporary period.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3A]
[C-ID ARTH 120]

ART-3. Drawing and Composition (3)
' B M M 4 Q S J O H
- F 36 Hrs; - B 72 Hrs
Surveys and applies the fundamentals of observation, drawing, and composition through the study of contour, shape, line, perspective, value, basic rendering, and creative applications of the process.

ART-15B. Ceramics B (3)
Prereq: ART-15A with a grade of "C" or better.
All Terms
Lec 36 Hrs; Lab 72 Hrs
Further study of clay and ceramic materials and their use in the creation of art objects by slab and coil methods, the potter's wheel and the use and mixing of glazes and firing methods. Students will provide clay, clay tools, and optional materials (aprons, sponges, towels, etc.).
[CSU; UC]

ART-19. The Intersection of Creative and Critical Thinking: Aesthetics Designed (3)
Lec 36 Hrs; Lab 54 Hrs
Explores the relationship between creativity and critical thinking. Applying concepts such as beauty and originality, students will engage in problem solving activities across different disciplines. The approach will include both aesthetic theory and hands-on activities.

ART-52. Portfolio Development (3)
Advisory: Completion of at least two studio classes in one specific medium (for example, ART-15A and 15B)
Lec 36 Hrs; Lab 72 Hrs
Examines techniques and materials needed by art students planning on transferring to institutions for upper division study in the arts by portfolio admission. Students will develop appropriate written materials and a cohesive body of studio work in a single medium that emphasizes their level of technical skill and personal style. Aspiring artists develop a portfolio for presentation to a gallery to obtain professional representation.
[CSU]

ART-70. Introduction to Graphic Design and Computer Graphics (3)
Spring Only
Lec 36 Hrs; Lab 54 Hrs
The study and application of the fundamentals of graphic design including history, theory and practice. This course brings together a blend of the aesthetic principles of design and hands-on computer-based production skills. Structuring graphic design information from visual design concept through final product, students will utilize the computer graphic applications of Adobe Illustrator, Adobe InDesign, and Corel Painter on the Macintosh computer.
[CSU; UC]

ART-71. Introduction to 2D Digital Illustration (3)
Fall Only
Lec 36 Hrs; Lab 54 Hrs
This introductory course will examine the historic and artistic expressions of Western civilization art and translate the visual experience into a contemporary digital art medium. Students will study the aesthetic principles of drawing through two-dimensional digital vector and pixel-oriented illustration. Students will acquire hands-on experience with the illustration concepts of visual weight, solidity, depth, balance, eye flow, color theory, angle of view, composition placement, using tonal values to indicate a light source and 1, 2, and 3 point perspective.
[CSU; UC]

ART-72. Introduction to Digital Arts (3)
All Terms
Lec 36 Hrs; Lab 54 Hrs
An introduction to the fundamentals of digital arts, including history, social impact, career options and industry trends. Students will apply visual and aural aesthetic design principles in the hands-on exploration of the digital art tools of typography, graphics, digital imaging, animation, full motion video, and digital media interface design. Students will analyze the essential topics of interactivity, media development process, and the applications and future directions of the digital arts.
[CSU; UC] [C-ID ARTS 250]

ART-73. Introduction to Digital Illustration for Animation (3)
Lec 36 Hrs; Lab 54 Hrs
An introduction to the historic study of the visual representation of animated motion in both Eastern and Western civilization art and the translation into a contemporary digital art medium. Students will examine digital illustration with an emphasis on the preparation of visual imagery for animation. Concentration will be placed on illustrating gesture and movement, storyboarding, skeletal framework, and anatomical details. Students will have hands on experience with figure characters, object models and two-dimensional sequential movement illustration.
[CSU]

ART-74. Digital 3-D Design and Modeling (3)
Fall Only
Lec 36 Hrs; Lab 54 Hrs
A visual and hands-on analysis of historical and contemporary designs, primarily concerned with the visual dialogue between form and space in the three-dimensional composition. Students will develop the ability to process visual information into digital three-dimensional projects of both additive and subtractive sculptural methods using computer-based 3D applications. Line, plane, and volume are utilized in a problem-solving format in order to develop the ability to create expressive objects within the digital 3D art interface.
[CSU]

ART-76. Introduction to 3D Digital Animation (3)

Prereq: None

- F 36 Hrs; - B 54 Hrs

An introduction to the field of 3D animation, including history, aesthetic principles, social impact, career options and industry trends. Students will explore the use of 3D animation in both Eastern and Western civilization and the progression into contemporary digital applications. Students will develop an animation from original concept to the planning of a written and visual storyboard and into a finalized movie output. Students will utilize 3D computer-based applications for hands-on experience with digital key frame animation with an emphasis on the visual aesthetics of gesture and movement. Emphasis will also involve the exploration the visual representation of a 3D environment through the critical decisions of camera angle, lighting and surface qualities.
[CSU]

ART-77. Introduction to Digital Video and
        Video Editing (3)

Prereq: None

- F 36 Hrs; - B 54 Hrs

An introduction to the field of digital video and video editing, including the history and overview of analog and digital video, analysis of the social impact of commercial and fine art videos, exploration of digital video career options and industry trends and the application of non-linear video editing. Students will work hands-on on creating digital video.
[CSU]

ART-102. Ceramics: Japanese Traditions (3)
'B M M 0 O M Z
- F 36 Hrs; - B C

BIO-5. Human Anatomy (4)

1 S F S F R ENG1 LUAwith a grade of "C" or better.

" E W J T P S Z Completion of any college-level biology course, with a grade of "C" or better, is strongly recommended before attempting BIO-5.

" M M 5 F S N T

- F 54 Hrs; - 54 Hrs

A survey of the structure of the human body including the integumentary, skeletal, muscular, digestive, nervous, lymphatic, cardiovascular, endocrine, respiratory, urinary, and reproductive systems. The course is designed primarily for physical education/kinesiology and nursing majors but will benefit any student interested in

BIO-18. Introduction to Pathophysiology (3)
1 S F S F R BIO-11 with a grade of •CŽ or better or BIO-6,
BIO-6L, and BIO-5 with a grade of •CŽ or better.
' B M M 0 O M Z
- F 5 4 Hrs
Introduction to concepts and principles of disease processes of
the human body. The course will utilize the format of detection,
diagnosis, treatment, etiology, pathogenesis, and prevention
of diseases in all major body systems.
[CSU; UC; CSU-GE, AREA B2; IGETC, AREA 5]

BIO-20. Field Biology/Natural Science (4)
1 B T T / P 1 B T T 0 Q U J P O
' B M M 4 Q S J O H
- F 5 4 Hrs; - 5 4 C Hrs
An introduction to the natural history of bacteria, fungi,
protists, plants and animals. Identification, classification, life
histories, and ecological relationships will be investigated.
Recommended for students interested in outdoor biological
studies.
[CSU; UC; CSU-GE, AREA B2, B3; IGETC, AREA 5]

BIO-27. Principles of Microbiology (4)
1 S F S F R CHM-1A or CHM-22 or CHM-60 with a grade of
"C" or better.
" E W J T P S Z Completion of any college biology course with
a grade of "C" or better. For nursing students, completion of
coursework in human anatomy and physiology (i.e., BIO-5 and
BIO-6/6L) is strongly recommended.
' B M M 4 Q S J O H
- F 5 4 Hrs; - 5 4 C Hrs
A general introduction to the study of the microbial world,
including bacteria, viruses, fungi, algae, protozoa, and
helminths. Aspects of microbiology important in health,
sanitation, ecology, food processing and biotechnology are
emphasized in lecture and laboratory. This course is designed
for students majoring in biological sciences, nursing, and other
health science majors.
[CSU, UC; CSU-GE, AREA B2, B3; IGETC, AREA 5]

BIO-30. Marine Biology (4)
1 B T T / P 1 B T T 0 Q U J P O
' B M M 4 Q S J O H
- F 5 4 Hrs; - 5 4 C Hrs
An introduction to the study of marine life. Emphasis on the
fundamentals of biology, with a survey of the prokaryotes,
algae, invertebrates, vertebrates and their physiology and

BIO-59. Biological Research Methods (3)

Advisory MAT-121 or placement by Hartnell's assessment. Completion of a chemistry class at either the high school or college level

Spring Only

- Lec 27 Hrs; - Lab 81 Hrs

This course provides training in research methods in the biological sciences. It is intended to prepare students for work on independent projects in a professional laboratory

BUS-43. Business Information Systems and Information Literacy (4)
Prerequisite: Eligibility for ENG-101
Pass/No Pass Option
All Terms
Lec 54 Hrs; Lab 54 Hrs

Examination of business information systems and their role in business. Focus on business information systems, database management systems, networking, e-commerce, ethics and security, information processing cycle, and associated hardware and software. Skill development in the use of business application software and the use of technology tools for research. Application of these concepts and methods through hands-on projects developing computer-based solutions to business problems. Not open to students who have completed CSS-43 with a grade of "C" or better.
[CSU; UC] [C-ID BUS 140]

BUS-50. Introduction to PC Applications (4)
Advisory: Keyboarding speed of 25 words a minute recommended
Pass/No Pass Option
Fall Spring
Lec 63 Hrs; Lab 27 Hrs

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 computer applications. Not open to students who have completed BUS-109 or CSS-109 with a grade of "C" or better.
[CSU; UC]

BUS-100. Introduction to Basic Computer Applications (0.5 - 2)
Pass/No Pass Only
All Terms
Lab 24-108 Hrs

Provides instruction on computer application programs in a lab environment. Designed to develop and improve computer skills in word processing, spreadsheet, presentation software, and database management using Microsoft Office. Students will consult with an instructor regarding the scheduling of their hours and the computer application skills they wish to acquire and/or improve. This course may be taken for up to a total of 2 units.

BUS-110. Beginning Keyboarding and Document Formatting (3)
Pass/No Pass Option
All Terms
Lec 36 Hrs; Lab 54 Hrs

Introduction to keyboarding and basic techniques using the touch system on the computer as well as basic document processing. Emphasis on speed and accuracy on straight copy and proper formatting procedures in the preparation of business letters, memos, tables, and reports using a word processing program. Not open to students who have completed BUS 110A, 110B or 111.

BUS-110A. Beginning Keyboarding (1)
Pass/No Pass Only
All Terms
Lab 54 Hrs

Introduction to keyboarding and basic techniques using the touch system on the computer. Not open to students who have

BUS-129. Practical Customer Service Skills (2)
Pass / No Pass Option
Spring Only
- Lec 36 Hrs

Introduction to customer service skills and their applications as required in the workplace.

BUS-131. Business English (3)
Pass / No Pass Option
Fall Only
- Lec 54 Hrs

Study of grammar and application of word usage, punctuation, and syntax using the Standard Business English language model, as accepted in modern business office transactions, for use in preparing written business documents.

BUS-135 Professional Office Skills (4)
- Lec 72 Hrs;

Comprehensive introduction to modern office and personal skills; emphasis on communication, teamwork, problem solving, and professionalism; includes personal and professional finance management.

BUS-136 Introduction to Personal Management Software (2)
Pass / No Pass Option
- Lec 36 Hrs

This course introduces personal management software and use of features. Topics include management of e-mail, organization of contacts, creation and scheduling of events using the calendar, and creating and managing tasks for personal and business use

BUS-140A. Keyboarding Speed and Accuracy (0.5)
Advisory: BUS-110 and/or BUS-110A.
Pass / No Pass Option
All Terms
- Lab 27 Hrs

Emphasizes speed and accuracy improvement on straight-copy material. Students may enroll at any time during the first half of the semester. Students will progress at an individual pace.

BUS-140B. Keyboarding Speed and Accuracy (0.5)
Prerequisite: BUS-140A with a grade of "C" or better.
Pass / No Pass Option
All Terms
- Lab 27 Hrs

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.

BUS-150.15. Word Processing (3)
Advisory: Keyboarding speed of 25 words a minute recommended.
Pass / No Pass Option
Fall Only
- Lec 36 Hrs; - Lab 54 Hrs

The use of word processing software features and commands to create, design, and edit business documents using a computer.

BUS-150.25. Electronic Spreadsheets (3)
Advisory: Keyboarding speed of 25 words a minute recommended.
Pass / No Pass Option
Spring Only
- Lec 36 Hrs; - Lab 54 Hrs

Use of spreadsheet features/commands to create and edit electronic spreadsheets using a computer. Not open to students who have completed CSS 150.25.
[CSU]

BUS-151. Business Mathematics (3)
Pass / No Pass Option
Fall Only
- Lec 54 Hrs

Study of the principles of arithmetic and their business applications, including a review of whole numbers, fractions, decimals, and percents. Current business applications in the areas of interest, discounts, markup, and installment credit will be emphasized.

BUS-152. Introduction to Accounting (4)
Pass / No Pass Option
Fall Only
- Lec 63 Hrs; - Lab 27 Hrs

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.

BUS-154. Computerized Accounting (3)
Prerequisite: BUS-152 or BUS-152A with a grade of "C" or better.
Pass / No Pass Option
Spring Only
- Lec 36 Hrs; - Lab 54 Hrs

BUS-172. Business Machine Calculations
Microcomputer (1)
" E W J T P S Z   Completion of BUS-151 is strongly recommended.
1 B T T / P 1 B T T 0 Q U J P O
' B M M 4 Q S J O H
- B 64 Hrs
Use of the 10-key machine calculator to develop speed and
_ , • –Hp8Y; " T / P 1 B T T 0 Q U J P O Q

BUS-610. Introduction to the Internet and Email (0)

1 B T T / P 1 B T T 0 O M Z

" M M 5 F S N T

- B Ø7 Hrs

This introductory course provides the basic applications of the internet and electronic mail. Topics include browsing and researching on the World Wide Web using various search engines, popular websites, tips and techniques to obtain specific information. Email basics include the use of a web-based account, sending/receiving messages and attachments, email etiquette, and email management.

CHM-23. Organic and Biological Chemistry for Health
        Sciences (4)

 1 S F S F R CHM-22 (with a grade of "C" or better) or CHM-
1A (with a grade of "C" or better) or high school chemistry
(with a grade of "B" or better.)
 " E W J T P S Z One year of high school chemistry with a grade of "B"
or better.
 4 Q S J O H 0 O M Z
 - F 54 Hrs; - 54 Hrs

COM-5. Professional & Leadership Communication (3)
  " E W J T P S Z Eligibility for ENG-1A
  ' B M M 0 O M Z
  - F 54 Hrs
Introduction to communication in organizational, career, and leadership contexts. Areas of study include communication theory in dyads, small group, leadership styles, leaderless groups and business presentations. Topics also include: sexual harassment, meeting organization, problem solving and negotiations, interviewing, and cultural issues in the workplace. Not open to students who have completed SPE-5 with a grade of "C" or better.
[CSU; CSU-GE, AREA A1]

COM-8. Interpersonal Communication (3)
  " E W J T P S Z Eligibility for ENG-1A or ENG-1AX
  ' B M M 4 Q S J O H
  - F 54 Hrs
This course explores interpersonal communication elements including listening, perception, language usage, non-verbal communication, and conflict management. Students will learn new skills to overcome communication barriers and enhance their interpersonal relationships including friendships, family, romantic, small group and workplace. Not open to students who have completed SPE-8 with a grade of "C" or better.
[CSU; UC; CSU-GE AREA D; IGETC, AREA 4]
[C-ID COMM 130]

COM-10. Forensics (3)
  " E W J T P S Z Prior or concurrent enrollment in COM 1 or 3 is recommended.
  1 B T T / P 1 B T T 0 Q U J P O
  ' B M M 4 Q S J O H
  - F 36 Hrs; - B C 54 Hrs
Introduces students to Forensics competition including advanced research, delivery, criticism and writing techniques through preparation to compete in intercollegiate speech and debate tournaments and related events. Students will be required to attend at least one weekend tournament over the course of the semester. The course may be repeated 3 times.

COMPUTER SCIENCE AND INFORMATION SYSTEMS

CSS-1. Intro to Computer Science & Programming
        Fundamentals (4)
  1 S F S F R V J T J U F Eligibility for MAT-123 and Eligibility for ENG-1A.
  1 B T T / P 1 B T T 0 Q U J P O
  ' B M M 4 Q S J O H
  - F 54 Hrs; - B C 54 Hrs

CSS-3. Computer Architecture and Assembly Language Programming (4)

Prerequisite: CSS-1 with a grade of "C" or better.
Pass/No Pass Option
Fall Only
Lec 54 Hrs; Lab 54 Hrs

Introduces students to the organization and architecture of computer systems, and assembly language programming. Includes study and application of digital logic, data representation and Assembly level organization. Appropriate for computer science and computer engineering majors.
[CSU; UC] [C-ID COMP 142]

CSS-4. Programming for Scientists and Engineers (4)

Prerequisite: MAT-3 with a grade of "C" or better.
Advisory: CSS-1 and EGN-1
Spring Only
Lec 54 Hrs; Lab 54 Hrs

Essentials of software development for science, engineering, and mathematical applications using a high-level programming language. Introduction to interface of software with the physical world, including the use of sensors in hardware system development. CSS-4 is identical to EGN-7. Not open to students who have completed EGN-7 with a grade of "C" or better. It is recommended that students majoring in Engineering enroll in EGN-7. Students in other STEM majors should enroll in CSS-4.
[CSU; UC]

CSS-7. Discrete Structures (4)

Prerequisite: CSS-2 with a grade of "C" or better.
Advisory: MAT-25
Pass/No Pass Option
Spring Only
Lec 54 Hrs; Lab 54 Hrs

Introduction to the mathematical elements of computer science. Topics include propositional logic, predicate logic, sets, functions and relations, combinatorics, mathematical induction, recursion, algorithms, matrices, graphs, trees and Boolean logic. This course is recommended for students considering Computer Science and Computer/Software Engineering majors.
[CSU; UC] [C-ID COMP 152]

CSS-25. Multimedia Integration (3)

Pass/No Pass Option
Spring Only
Lec 36 Hrs; Lab 54 Hrs

A focus on the integration of various forms of media used to create a multimedia object. Basic concepts such as text, audio, video, and user interface will be examined. Technical and design principles will be covered. Students will develop the appropriate skill necessary to integrate and apply multiple applications to include online design, mobile devices, and multimedia projects.
[CSU]

CSS-26. Dreamweaver (4)

Pass/No Pass Option
Fall Only
Lec 54 Hrs; Lab 54 Hrs

A focus on the student's use of Dreamweaver, web authoring, and its accompanying components to construct complex web projects and its versatile uses for the Internet. Subjects to be covered are website design, content creation, and editing. Maintaining websites including JavaScript, image maps, mobile website design and other complex components of Dreamweaver and web authoring. Formerly CSS-126. Not open to students who have completed CSS-126 with a grade of "C" or better.
[CSU]

CSS-27. Project Management Using Microsoft Project (4)

Pass/No Pass Option
Fall Only
Lec 54 Hrs; Lab 54 Hrs

This course will teach students project management using a

CSS-44 Computer Science and Information Systems (4)
   " E W J T P S Z ENG-101 or ESL-101
   1 B T T / P 1 B T T 0 Q U J P O
   ' B M M 4 Q S J O H
   - F 5 4 Hrs; - 5 4 C Hrs

Examination of computer information systems and their role in computer science. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware, software development life cycle, algorithms, and elementary programming concepts. Application of these concepts and methods through hands-on projects developing computer-based solutions to computer systems problems.
[CSU; UC][C-ID ITIS 120]

CSS-64. HTML 5 and CSS 3 - Web Development (4)
   1 B T T / P 1 B T T 0 Q U J P O
   4 Q S J O H 0 O M Z
   - F 5 4 Hrs; - 5 4 C Hrs

Student will learn to leverage HTML 5 and CSS 3 to create modern, feature rich web content, by designing professional, eye-catching content. The student will develop and learn to enhance User Experience, UX, across all devices, from static websites, mobile devices and tablets. Students will apply best practices and use emerging standards for HTML markup language, CSS 3, and JavaScript programming to improve site performance, accessibility, and SEO. Students will use a variety of drag and drop, Canvas, SVG graphics, audio, and video to improve web content.
[CSU]

CSS-65. Introduction to IOS App Development (4)
   1 B T T / P 1 B T T 0 Q U J P O
   4 Q S J O H 0 O M Z
   - F 5 4 Hrs; - 5 4 C Hrs

Students will learn to build basic mobile iOS applications using the iOS development environment. This hands-on class will use step-by-step instruction to guide students through tasks with real-life examples. Using practical applications and a variety of assignments, students will reinforce their understanding of programming logic and tools used for the iOS environment. This is a beginning course designed to familiarize the student with the iOS development environment.
[CSU]

CSS-74. Wordpress for Websites (4)
   1 B T T / P 1 B T T 0 Q U J P O
   4 V N N F S 0 E E : F B S T
   - F 5 4 Hrs; - 5 4 C Hrs

Student will learn the tools and methods of web design and production using content management programs like Wordpress. Utilizing industry standard programs like Wordpress for web development, students will learn a variety of techniques: writing for the web, utilizing images, publicizing for the internet, tracking visitors, customizing the look and feel of websites, managing spam, and exploring ecommerce. Students will apply good design principles for content management while replacing older websites with new enhanced content designed to engage users will adhering to W3C standards.
[CSU]

CSS-76. Android App Development Using Java (4)
   1 B T T / P 1 B T T 0 Q U J P O
   ' B M M 0 O M Z 0 E E : F B S T
   - F 5 4 Hrs; - 5 4 C Hrs

Students will learn to build robust mobile Android applications using Java. This hands-on class will use step-by-step instruction to guide students through tasks with real-life examples. Using practical applications and variety of assignments students will reinforce their understanding of programming logic and Java tools for Android Studio. This is a beginning course designed to familiarize the student with the Android environment.
[CSU]

CSS-78. Mobile Game Design (4)
   1 B T T / P 1 B T T 0 Q U J P O
   - F 5 4 Hrs; - 5 4 C Hrs

Introduction to beginning game programming using mobile design. A brief history of game programming and its uses in today's society will be discussed. Students will learn the basic concepts and components of game programming to create fast, intense, 2D and 3D games for mobile platforms. They will also learn through a broadened landscape of social p D the web, uso
   - B C 54 Hrs

CSS-86. Flash Design (4)

Pass / No Pass Option

- F 54 Hrs; - 54 Hrs

CSS-123. Network Security Principles (4)
PASS / NO PASS OPTION
SPRING ONLY   ODD YEARS
LEC 54 Hrs; LAB 54 Hrs

Provides an in-depth exploration of the essentials of computer network security. Analyze security objectives and the role of policy deployment while defending against network attacks. Covers attacks and malware, E-mail, web components, software development, disaster recovery, risk, change and privilege management, forensics, and legal issues. Scenario-based curriculum describing a start-up company in which the students are employed with specific roles will also be incorporated in the class. Coverage of both CompTIA's Security+ certification exam and the (ISC) 2 SSCP certification, is integral to this course.
[CSU]

CSS-124. System and Network Administration (4)
ADVISORY: CSS-44
PASS / NO PASS OPTION
SPRING ONLY   EVEN YEARS
LEC 54 Hrs; LAB 54 Hrs

This course will provide a student with the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The student will be able to identify environmental issues, understand and comply with disaster recovery and physical / software security procedures; become familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment. Not open to students who have completed CSS-170B with a grade of "C" or better.
[CSU][C-ID IT IS 155]

CSS-125. Storage Management and Virtualization (4)
ADVISORY: CSS-120A
PASS / NO PASS OPTION
SPRING ONLY   EVEN YEARS
LEC 54 Hrs; LAB 54 Hrs

An overview of storage management and management concepts and administration, including tasks and operations involved in the daily management and ongoing support of a network. Additionally, characteristics and limitations of current storage architectures is presented, paired with discussion and implementation in a virtualized environment. Hands-on experience is provided for familiarization with networking and virtualization configurations. Not open to students who have completed CSS-170A with a grade of "C" or better.
[CSU]

CSS-169. Computer Maintenance and Repair (4)
PASS / NO PASS OPTION
FALL SPRING
LEC 54 Hrs; LAB 54 Hrs

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.

CONSTRUCTION MANAGEMENT AND ARCHITECTURE

CMA-51. Introduction to Construction Management and Architecture (3)
PASS / NO PASS OPTION
FALL ONLY
LEC 54 Hrs

Fundamental required core course for Construction Management and Architecture Program offers a comprehensive overview of the construction profession and summarizes areas within the industry. Course introduces specific essentials associated with the wide range of construction careers and technology, including construction processes, tools, skills, design, management, methods and materials, safety, required career education and training.
[CSU]

CMA-52. Construction Graphics (3)
FALL ONLY
LEC 54 Hrs

Introduction to fundamental interpretation and analysis of construction drawings, CAD prints, specifications, and digital building information models, including use of manual sketching and computer modeling techniques for construction communication. Students will perform basic scale, measurement, and dimensional calculations.
[CSU]

CMA-53. Sustainable Construction Materials and Methods (3)
PASS / NO PASS OPTION
SPRING ONLY
LEC 54 Hrs

Introduction to use of basic construction materials, methods, and systems incorporating current accepted construction industry principles for sustainability.
[CSU]

CMA-65. Plumbing and HVAC (3)

Pass / No Pass Option

Spring Only

- F 36 Hrs   - B 54 Hrs

Covers traditional plumbing and HVAC principles and skills
such as piping materials and joining methods as well as
ihCeAvatim ( )Tj /T1hsystnin0 (ems p)-6 (i)so ( )]Tar hot wnds - Âšè   ,   4 QÁð œ ˜TtV bQ öTv a„! ð À 2#@ HTr‡`ifVmÉ® Ì• , ™ –Hq
 - F D 36 Hrs

CMA-75. Engineering Drawing with Solidworks (3)
   " E W J T P S Z   CMA-74
   1 B T T   / P   1 B T T   0 Q U J P O
   ' B M M   0 O M Z
   - F 36 Hrs   - B 54 Hrs
Introduces students to essential features of the SolidWorks 3-D computer-aided design modeling application software. Students will construct parts, solid models, assemblies, as well as generate orthographic drawings, add dimensions and plot to produce engineering documentation packages. Formerly EGN-12 and DRA-55. Not open to students who have completed EGN-12 or DRA-55 with a grade of "C" or better.) [CSU; UC]

CMA-76. Computer-Aided Mechanical Drawing and
          Detailing (3)
   " E W J T P S Z   CMA-75
   1 B T T   / P   1 B T T   0 Q U J P O
   4 Q S J O H   0 O M Z
   - F 36 Hrs   - B 54 Hrs
An advanced study of orthographic projection with precision dimensioning. Includes tolerance and fit, geometric tolerance, different types of sectional views, and fastening devices for manufacturing industries. Emphasis is placed on modern and applied drafting and methods established by the American National Standard Institute (ANSI). Computer aided drafting and design tools such as SolidWorks, Autodesk's Inventor or similar will be used. Formerly DRA 58. Not open to students who have complete DRA-58 with a grade of "C" or better. [CSU]

CMA-81. Computer Aided Drafting and Design I (3)
   ' B M M   0 O M Z
   - F 36 Hrs   - B 54 Hrs
Introduces how to use AutoCAD to set up drawings and construct lines, circles, arcs, other objects, geometric shapes and constructions, and text.

CMA-91. Construction Management and Scheduling (3)

4 Q S J O H 0 O M Z

- F 5 4 Hrs

Course presents principles of construction project management, development and application of project control methods for compliance with construction contracts and specifications, general and supplementary conditions, and Construction Specifications Inistute (CSI) specifications, cost,

COU-30. Career Interest and Ability Assessment (1)
1 B T T / P 1 B T T 0 O M Z
' B M M 4 Q S J O H
- F 1 8 Hrs

ECO-10. Introduction to Economics (3)

   1 S F S F R Eligibility for ENG-1A;

   ' B M M 0 O M Z

   - F 54 Hrs

A broad survey of the development of economic ideas and theories in the context of economic schools of thought. Both microeconomic and macroeconomic topics are covered including scarcity, opportunity costs, supply and demand (both individual and aggregate), market structures, labor markets, the business cycle, government intervention including regulations, fiscal policy and monetary policy, and international issues such as international trade and global income distribution. Not open to students who have completed ECO-1 and ECO-5 with a "C" or better.

[CSU; UC; CSU-GE, AREA D2; IGETC, AREA 4]

EDUCATION

EDU-1.Introduction to Education in a Changing World (3)

   " E W J T P S Z ENG-1A

   ' B M M 0 O M Z

   - F 54 Hrs

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, particularly at the K-12 level, 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 an observation or service-learning component that requires 45 hours of supervised participation at a school site. There may be a few associated with TB and LifeScan reviews as required by a school site.

[CSU; UC; CSU-GE, AREA D; C-ID EDUC 200]

EDU-110. Foundations of Success (1.25)

   1 B T T / P 1 B T T 0 O M Z

   ' B M M 4 Q S J O H

   - F 9 Hrs; - B 40.5 Hrs

Introduction to professional behaviors, attitudes and values that lead to academic and professional success. Individual working and learning styles, communication methods, and stress reduction are key concepts. A learning environment is created to foster collaboration, curiosity, and successful student behaviors.

EDU-111. Team Self-Management (2)

   1 S F S F R V J T J U F

EGN-1L. Introduction to Engineering Lab (1)

Corequisite: EGN-1R
Fall, Spring
Lab 54 Hrs

Designed to allow students to explore engineering through hands-on design projects and problem-solving using computers. Students will acquire both technical skills and non-technical skills, in areas such as communication, teamwork, and project management. This course is designed for students who want to develop their engineering spreadsheet (e.g. Excel) skills and engineering majors who are transferring to San Jose State

EGN-7L. Computer Interface with the Physical World
Laboratory (1)

Prerequisite: MAT-3A with a grade of "C" or better.
Corequisite: CSS-2A
Advisory: EGN-1R or EGN-1
Lab 54 Hrs

Introduces the interface of software with the physical world (e.g., the use of sensors). This course is recommended for electrical, computer, and software engineering majors. Not open to students who have completed EGN-7 or CSS-4 with a grade of "C" or better.
[CSU] [C-ID ENGR 120 with CSS 2A]

EGN-8. Statics (3)

Prerequisite: PHY-4A and MAT-3B with a grade of "C" or better.
Advisory: EGN-1; EGN-2; Concurrent enrollment in EGN-4 is recommended.
Spring Only
Lec 54 Hrs

A first course in engineering mechanics: properties of forces, moments, couples and resultants; two- and three-dimensional force systems acting on engineering structures in equilibrium; analysis of trusses, and beams; distributed forces, shear and bending moment diagrams, center of gravity, centroids, friction, and area and mass moments of inertia.
[CSU; UC] [C-ID ENGR 130]

EGN-11. Surveying (3)

Prerequisite: MAT-24 or MAT-27 with a grade of "C" or better.
Advisory: EGN-1 and EGN-2
Spring Only
Lec 36 Hrs - Lab 54 Hrs

The course applies theory and principles of plane surveying: office computations and designs; operation of surveying field equipment; and production of engineering plans/maps. Topics include distances, angles, and directions; differential leveling; traversing; property/boundary surveys; topographic surveys/mapping; volume/earthwork; horizontal and vertical curves; land description techniques, and GPS. Extensive field work using tapes, levels, transit theodolites, total stations, and GPS.
[CSU; UC] [C-ID ENGR 180]

ENGLISH

ENG-1A. College Composition and Reading (3)

Prerequisite: ENG-100 or ESL-101 with a grade of "C" or better or placement by Hartnell's assessment.
All Terms
Lec 54 Hrs

Introduction to composition with emphasis on writing of exposition, and reading of selected works from a variety of

ENG-2. Critical Thinking and Writing (3)
Prerequisite: ENG-1A with a grade of "C" or better.
All Terms
Lecture 54 Hrs

Students will use critical reading, thinking, and writing skills beyond the level achieved in ENG-1A to develop argumentative essays in conjunction with predominantly nonfiction prose and discussion of readings. Students will write a total of 6,000 words comprised of short essays, a research paper, and homework assignments.
[CSU; UC; CSU-GE, AREA A3, IGETC, AREA 1]
[C-ID ENGL 105]

ENG-17. The Contemporary Shakespeare (3)
Prerequisite: Eligibility for ENG-1A.
Spring Only Even Years
Lecture 54 Hrs

An examination of Shakespeare's poetry and plays, involving close study of representative works. Focuses include the cultural context of Shakespeare's life and works, his lasting literary influence, and the interpretation of Shakespeare in performance on stage and in film adaptations.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]

ENG-22. Studies in Poetry (3)
Spring Only Odd Years
Lecture 54 Hrs

An introduction to poetry from a variety of cultures and historical periods to understand the genre as both artistic and cultural representation. Students read poems and poetic forms, watch poets read and discuss their work, write literary and cultural analyses of poems, and compose their own original poems.
[CSU; UC; CSU-GE, AREA C2; IGETC AREA 3]

ENG-24. The Short Story (3)
Prerequisite: ENG-1A with a grade of "C" or better.
Fall Only Even Years
Lecture 54 Hrs

Reading, discussing, and writing about a diverse selection of classics and contemporary short fiction. Analysis of a spectrum of voices, styles, formal structures, and themes.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]

ENG-26. Chicano Literature (3)
Prerequisite: ENG-1A with a grade of "C" or better.
Spring Only Odd Years
Lecture 54 Hrs

An introduction to the study of Chicano Literature from the oral tradition, "el cuento," to the written contemporary works of authors such as Valdez, Cisneros, Villasenor, and Soto.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]

ENG-31. Beginning Creative Writing (3)
Prerequisite: Eligibility for ENG-1A.
Fall Only Even Years
Lecture 54 Hrs

Designed to provide students with the opportunity to practice the art of creative writing. Emphasis is placed on writing and publishing fiction, poetry, and essays. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. Readings will focus on the critical analysis of short stories and literature in order to achieve a better understanding of the interrelationship between creative arts, humanities and the individual.
[CSU; UC; CSU-GE, AREA C2; C-ID ENGL 200]

ENG-32. Intermediate Creative Writing (3)
Prerequisite: ENG-31 with a grade of "C" or better.
Fall Only Even Years
Lecture 54 Hrs

The course focuses on continuing to apply the techniques and structures of writing fiction and poetry introduced in ENG 31. Emphasis is placed on writing and publishing fiction, poetry, and essays. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. Readings will focus on the critical analysis of short stories and literature in order to achieve a better understanding of the interrelationship between creative arts, humanities, and the individual.
[CSU; UC; CSU-GE, AREA C2]

ENG-33. Advanced Creative Writing (3)
Prerequisite: ENG-32 with a grade of "C" or better.
Fall Only Even Years
Lecture 54 Hrs

Focuses on continuing to apply the techniques and structures of writing fiction and poetry introduced in ENG 32. Emphasis is placed on writing and publishing fiction, poetry, and essays. Upon completion, students should be able to craft and critique their own writing and critique the writing of others. Readings will focus on the critical analysis of short stories and literature in order to achieve a better understanding of the interrelationship between creative arts, humanities, and the individual.
[CSU; UC; CSU-GE; AREA C2]

ENG-41. Art of Steinbeck (3)

ENG-44A. World Literature (3)

Prerequisite: ENG-1A with a grade of "C" or better.

Fall Only   Odd Years

54 Hrs

A study of world literature from ancient times through the Renaissance. Readings will include poetry and prose and the course will consider the literary, cultural, and historical significance of literature from Western and Non-Western traditions.

[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]

[C-ID ENGL 140]

ENG-44B. World Literature II (3)

Prerequisite: ENG-1A with a grade of "C" or better.

Spring Only   Even Years

54 Hrs

This course is a study of world literature from the Renaissance to the present time. Readings will include poetry and prose and the course will consider the literary, cultural, and historical significance of literature from Western and Non-Western traditions.

[CSU; UC; CSU-GE; AREA C2; IGETC, AREA 3]

[C-ID ENGL 145]

ENG-46A. Survey of British Literature I (3)

Prerequisite: ENG-1A with a grade of "C" or better.

Spring Only   Even Years

54 Hrs

A survey of English literature from early works in Old English to approximately 1785. Readings will include poetry, prose, drama, and religious writing of this period, chosen for their literary, historical, and cultural significance.

[CSU; UC; CSU-GE; AREA C2; IGETC, AREA 3]

[C-ID ENGL 160]

ENG-46B. Survey of British Literature II (3)

Prerequisite: ENG-1A with a grade of "C" or better.

Fall Only   Even Years

54 Hrs

A survey of English literature from Romanticism to the present. Readings will include poetry, prose, and dramatic works chosen for their literary, historical, and cultural significance.

[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]

[C-ID ENGL 165]

ENG-47A. Survey of American Literature I (3)

Prerequisite: ENG-1A with a grade of "C" or better.

ESL-225. Grammar and Writing I (6)

" E W J T P S Z   Students should be literate enough in their native language to write a note to a friend or read a newspaper in their native language. They should have enough English language competency to speak and/or write understandable simple

ESL-251. Early Childhood Education Contextualized (3)
  $PSFRVJTJUF ECE 2
  4QSJOH 0OMZ – 0EE :FBST
  -FDU 54 Hrs
Emphasizes grammar, vocabulary and reading comprehension skills specifically for intermediate-level ESL students who are in the Early Childhood Education degree program. Supports ESL students taking ECE 2 with reading and writing assignments.

ESL-252. English Pronunciation and Spelling (3)
  4QSJOH 4VNNFS
  -FDU 54 Hrs
Focuses on English pronunciation and spelling. Includes practice of the sounds, rhythm, and intonation of spoken English. Analyzes English spelling rules and sound-to-letter relationships. Appropriate for all language levels.

ESL-255. Grammar and Writing 4 (6)
  1SFSFRVJTJUF ESL-243 with a grade of "C" or better, or placement by Hartnell's Assessment.
  1BTT /P 1BTT 0QUJPO
  'BMM 4QSJOH
  -FDU 90 Hrs; -BC 54 Hrs
Emphasizes grammar and writing for high-intermediate level ESL students. Verb tenses, conditionals, complex sentences, and paragraph writing skills are stressed. Course includes three weekly hours of lab. Formerly ESL-155. Not open to students who have completed ESL-155 with a "C" or better.

ESL-258. Reading and Vocabulary 4 (4)
  "EWJTPSZ ESL 243: Grammar, Vocabulary, and Reading 3 or eligibility for ESL 255 through college placement
  "MM 5FSNT
  -FDU 72 Hrs
For high-intermediate ESL students. Uses current issues and nonfiction texts to develop critical reading skills, academic vocabulary, and discussion skills.

ESL-265. Academic Writing and Reading I for ESL (5)
  1SFSFRVJTJUF ESL-255 and ESL-258 with grades of "C" or better.
  'BMM 4QSJOH
  -FDU 90 Hrs
Introduction to college reading and composition for multilingual and ESL students. Emphasis on the paragraph and short essay. Prepares students for ESL 101 and English 101.

ESL-290A. English in the Lab A (1)
  1BTT /P 1BTT 0OMZ
  "MM 5FSNT
  -BC 54 Hrs
This self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Grammar reinforcement activities include reading, listening, and pronunciation exercises. Topics include simple present, present continuous, future, simple past tenses, imperatives, parts of speech, possessive forms, and count/noncount nouns.

ESL-290B. English in the Lab B (1)
  1BTT /P 1BTT 0OMZ
  "MM 5FSNT
  -BC 54 Hrs
This self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Topics include past tense sequences, the past continuous tense, gerunds and infinitives, comparatives and superlatives, definite and indefinite articles, and an introduction to the present perfect tense.

ESL-290C. English in the Lab C (1)
  1BTT /P 1BTT 0OMZ
  "MM 5FSNT
  -BC 54 Hrs
This self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Grammar reinforcement activities include reading, listening, and pronunciation exercises. Topics include the past continuous, present perfect and present perfect continuous tenses, modals of advice, ability, request, possibility, preference, permission and necessity, and future time clauses.

ESL-290D. English in the Lab D (1)
  1BTT /P 1BTT 0OMZ
  "MM 5FSNT
  -BC 54 Hrs
This self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Grammar reinforcement activities include reading, listening, and pronunciation exercises. Topics include the passive voice, the conditional, past perfect, reported speech, and adjective clauses.

ESL-610. Beginning ESL: Speaking & Listening (0)
Advisory: Placement into appropriate level through assessment.
Pass/No Pass Only
All Terms

This course develops English skills and provides basic orientation to college for beginning ESL students who are literate in their first language. Speaking and listening skills will be emphasized.

ESL-615. High-Beginning ESL: Speaking and Speaking (0)
Advisory: Placement into appropriate level through assessment. It is recommended that students take ESL-610A before 610B.
Pass/No Pass Only
All Terms

This course develops English skills and provides basic orientation to college for high beginning ESL students who are literate in their first language. Speaking and listening skills will be emphasized.

ESL-620. Beginning ESL: Reading and Writing (0)
Advisory: Placement into appropriate level through assessment.
Pass/No Pass Only
All Terms

This course develops English skills and provides basic orientation to college for beginning ESL students who are literate in their first language. Reading and writing skills will be emphasized.

ESL-625. High-Beginning ESL: Reading and Writing (0)
Advisory: It is recommended that students take ESL-620 before 625. Placement into appropriate level through assessment
Pass/No Pass Only
All Terms

This course develops English skills and provides basic orientation to college for high-beginning ESL students who are literate in their first language. Reading and writing skills will be emphasized.

ESL-690A. English in the Lab A (0)
Pass/No Pass Only
All Terms
- Lab 54 Hrs

This noncredit, self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Grammar reinforcement activities include reading, listening, and pronunciation exercises. Topics include simple present, present continuous, future, simple past tenses, imperatives, parts of speech possessive forms, and count/noncount nouns.

ESL-690B. English in the Lab B (0)
Pass/No Pass Only
All Terms
- Lab 54 Hrs

This noncredit, self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Topics include past tense sequences, the past continuous tense, gerunds and infinitives, comparatives and superlatives, definite and indefinite articles, and an introduction to the present perfect tense.

ESL-690C. English in the Lab C (0)
Pass/No Pass Only
All Terms
- Lab 54 Hrs

This noncredit, self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Topics include the past continuous, present perfect and present perfect continuous tenses, modals of advice, ability, request, possibility, preference, permission and necessity, and future time clauses.

ESL-690D. English in the Lab D (0)
Pass/No Pass Only
All Terms
- Lab 54 Hrs

This noncredit, self-paced lab course will provide students competency-based interactive whole-language assignments using multimedia and computers under the guidance of an instructor. Grammar reinforcement activities include reading, listening, and pronunciation exercises. Topics include the passive voice, the conditional, past perfect, reported speech, and adjective clauses.

ETHNIC STUDIES

ETH-1. Introduction to Ethnic Studies (3)
Advisory: Eligibility for ENG-1A.
All Terms
- Lec 54 Hrs

A historical and interdisciplinary approach to the study of ethnic and racial groups in the United States. African Americans, Asian Americans, Mexican/Latino Americans, and Native American experiences are examined.
[CSU; UC; CSU-GE, AREA D3; IGETC, AREA 4]

ETH-2. Chicano Leadership (3)
   ' B M M 0 O M Z
   - F 5 4 Hrs
Multidisciplinary survey of Chicano leadership by examining theories of Chicano leadership, how historical events have affected the development of Chicano leadership to an examination of local, state, and national political leaders and organizations. Local Chicano leadership formation is also examined.
[CSU; UC; CSU-GE, AREA D3; IGETC, AREA 4]

ETH-3. Chicanos in American Society (3)
   " E W J T P S Z   Eligibility for ENG-1A.
   4 Q S J O H 0 O M Z
   - F 5 4 Hrs
A multi-disciplinary approach designed to acquaint students with Chicano history and problems in contemporary society. The course considers social institutions in shaping the experiences of Chicanos. Topics include colonization, politics,

GEG-10. Geography and World Affairs: A Regional
          Approach (3)
    " E W J T P S Z   Eligibility for ENG-1A
    4 Q S J O H   0 O M Z
    - F 5 4 Hrs
Surveys the world's geographic regions as interpreted by
geographers, including physical, cultural, and economic
features. Emphasizes spatial and historical influences on
population growth, transformation networks, and natural
environments. Highlights environmental issues and significant
features of world regions.
[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]
[C-ID GEOG 125]

                    GEOLOGY

GEL-1. Physical Geology (4)
    ' B M M   0 O M Z
    - F 5 4 Hrs; - B 5 4 Hrs
The nature and structure of the materials composing the earth
and the various processes which have shaped or aorocesses which ho004c   hav14 Tw- 1 -6 (6a)-7 (rface. lysicac)-p hav1460 Td [(5[(T4 (Hr

HED-8. Weight Management through Fitness and
        Nutrition (3)
  ' B M M   0 O M Z
  - F 5 4 Hrs
Healthy weight management through understanding the
physical, emotional and psychological components for
establishing proper energy balances and the obstacles we face
as consumers in our current culture. The course emphasizes a
holistic approach with an assessment of personal goals and
values that will in turn strengthen and build improved lifestyle
choices for the future.
[CSU]

HED-55. Health Education-Advanced First Aid (3)
  ' B M M   4 Q S J O H
  - F 5 4 Hrs
Advanced fundamentals of first aid care that will include theory
and demonstration of adult, child and infant CPR/AED and the
first aid of the injured. Bandaging, splinting, and responding to
emergencies are included. Standard first aid, CPR and AED
certification will be granted upon successful completion of
requirements. (There is an additional fee for the American Red
Cross Professional Rescuer CPR card.)
[CSU; UC][C-ID KIN 101]

HEALTH SERVICES

HES-1. Introduction to Public Health (3)
  " E W J T P S Z   Eligibility for ENG-1A
  " M M   5 F S N T
  - F 5 4 Hrs
An introduction to the discipline of public health. An overview
of terminologies and basic concepts of public health, public
health professions, institutions, and public health disciplines
will be provided. Areas of public health such as epidemiology,
prevention and control of diseases in the community, analysis
of social determinants of health, health disparities, community
health promotion programming, environmental health and
safety, global health, and health, and healthcare policy will be
covered.
[CSU; UC; CSU-GE, AREA D, E; IGETC, AREA 4]

HIS-4B. Western Civilization B (3)

HIS-17B. United States History B (3)
    " M M   5 F S N T
    - F 54 Hrs
Historical survey of the United States from the end of the Civil
War to the present.
[CSU; UC; CSU-GE, AREA D, C2; IGETC, AREA 3]
[C-ID HIST 140]

HIS-40. History of Women in the U.S. (3)
    4 Q S J O H   0 O M Z
    - F 54 Hrs
A survey of women in American history from the Indigenous
period to the present in the entire area which is now the United
States with special emphasis on the roles of women in the
major ethnic and social groups.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3, 4]

HIS-46A. Race and Ethnicity in American History A (3)
    ' B M M   0 O M Z
    - F 54 Hrs
A survey of the historical, social, political, economic, and
cultural experiences of African Americans, Chicanos/Latinos,
Asian Americans, Pacific Islanders, and Native Americans in the
United States from the Indigenous period through the Civil
War.
[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]

INS-301. Supervised Tutoring (0)

" M M   5 F S N T

- B C Hrs

Provides tutoring support services and offers opportunities for study skills assessment and development, individual and group instruction under peer tutors, and other assistance to help students fulfill their course requirements for a variety of college courses. Counselor or instructor referral required.

INTERDISCIPLINARY STUDIES

IDS-1. Boronda Study Group (3)

1 B T T / P 1 B T T 0 O M Z

LSK-126. LearningStrategies (1.5)
   1 B T T / P 1 B T T 0 O M Z
   ' B M M 4 Q S J O H
   - F 27 Hrs
Assists students with disabilities to succeed in college through
a better understanding of their own individual learning styles,
aptitudes, and behaviors. Students gain exposure to a variety
of "best practice" study skills to succeed in college.
Identification and analysis of individual learning barriers such
as learning disabilities, emotional management, or physical
challenges.

LIBRARY INSTRUCTION

LIB-2. Introduction to the Academic Library and
        Information Competency (1)
   " E W J T P S Z Eligibility for ENG-1A
   1 B T T / P 1 B T T 0 Q U J P O
   ' B M M 4 Q S J O H
   - F 18 Hrs
An introduction to the college library, its resources, and
information competency skills necessary for student success
and lifelong learning.
[CSU; UC]

LIB-5. Information Competency in the Sciences and
        Applied Technology (1)
   " E W J T P S Z Eligibility for ENG-1A
   1 B T T / P 1 B T T 0 Q U J P O
   4 Q S J O H 0 O M Z
   - F 18 Hrs
An introduction to the information competency skills required
to locate, evaluate, and cite materials in the sciences and
applied technology.
[CSU; UC]

LIB-6.
      ^ 1 Í 0 Q U J @ ð
      4 Q S J O H 0 O M Z
      - F 18 Hrs introduction to the Tf 0inf 0 0 6 1 Tf , compe(toTJ -0 .029 Tw 13.ormati3.2113 0 T54 0029 Tl Td [ormati-6..ormat)-6 (o)-5 (mpet
        4 Q S J O H 0 O M Z
         AnFin18 H06 uction to the informatompetency ski2 1 Tf 0 Tc 0 Twmaterials in the scientudent success 6ning.

MFGT-131. Intermediate Metal Fabrication (3)
1 S F S F R MFGTJ130F with a grade of "C" or better.
'BMM 4QSJOH
- F27 Hrs; - B1CHrs

Second of three metal fabrication courses with a focus on: use of shop tools and equipment; principles of safe setups and use of welding equipment; planning, layout, and fabrication of projects; metal cutting processes; and preparation and coating of metals. Formerly AIT-131. Not open to students who have completed AIT-131 with a grade of "C" or better.

MFGT-132. Advanced Metal Fabrication (3)
1 S F S F R MFGTJ131F with a grade of "C" or better.
$ P S F R V J T J U F CMA-81 and WLD-151
4 Q S J O H 0 O M Z
- F27 Hrs; - B1CHrs

Third of three metal fabrication courses with a focus on: use of shop tools and equipment; principles of safe setups and use of welding and machining equipment; planning, layout, and fabrication of projects; and metal cutting and machining processes.

MFGT-140. Introduction to Industrial Hydraulics and Pneumatics (2)
4 Q S J O H 0 O M Z
- F27 Hrs; - B27Hrs

Introduction to hydraulic and pneumatic principles, fluid safety, system components and applications. The course will explore principles of physics as they pertain to fluid power, differences in hydraulics and pneumatics, as well as the characteristics of liquids and gases. Students will study schematics and blueprints, industrial standards, and the technical language of fluid power.

MFGT-141. Intermediate Industrial Hydraulics and Pneumatics (2)
1 S F S F R MFGTJ140F with a grade of "C" or better.
'BMM 0 O M Z
- F27 Hrs; - B27Hrs

Second course in industrial hydraulics and pneumatics stressing the installation and insulation of systems and components, planned maintenance, and basic troubleshooting in industrial settings. Topics include the selection of fluids and filters used in fluid power applications, diagnosing and repairing system failures, and determining maintenance requirements. The course will also include hands-on comprehensive group projects that showcase the design, building and troubleshooting of fluid power systems.

MFGT-150. Introduction to Industrial Electricity (2)
'BMM 0 O M Z
- F27 Hrs; - B27Hrs

A study of electrical maintenance in plant operations. Stresses safety, proper use of tools, principles of electricity, basic electrical circuits, electrical conductors, grounding techniques, wire practices and layouts.

MFGT-151. Intermediate Industrial Electricity (2)
1 S F S F R MFGTJ150F with a grade of "C" or better.
4 Q S J O H 0 O M Z
- F27 Hrs; - B27Hrs

The second course in electric maintenance within plant operations. Stresses application of electrical fundamentals in power distribution, systems applications, generators, inverters, motors, and motor controls.

MFGT-169. Hazardous Materials and Industrial Safety (2)
'BMM 4 Q S J O H
- F36 Hrs

An introductory course to all aspects of safety as it relates to industry. The course will cover the following topics: Hazardous materials as they pertain to the specific trades including 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. Student may have the opportunity to receive an OSHA 10 card. Formerly AGR-169, MEC-169, or AIT-169. Not open to students who have completed AGR-169, MEC-169, or AIT-169 with a grade of "C" or better

MFGT-180. Industrial Workplace Skills (1)
'BMM 4 Q S J O H
- F18 Hrs

Basic work and personal skills needed for success on the job in an industrial environment. Formerly AIT-180. Not open to students who have completed AIT-180 with a grade of "C" or better.

MATHEMATICS

MAT-2. Calculus for Managerial, Life, and Social
        Sciences (4)
  1 S F S F R MAT-123 with a grade of "C" or better or
  placement by Hartnell's assessment.
   " E W J T P S Z   MAT-25

MAT-10. Math for Liberal Arts (3)

1 S F S F R MAT-123 or MAT-123L4 with a grade of "C" or better or placement by Hartnell's assessment.

' B M M 0 O M Z 0 E E : F B S T

- F 5 4 Hrs

An overview of fundamental concepts of modern mathematics for liberal arts students. Introduces non-science majors to a variety of mathematical ideas, methods, and historical trends. Core topics are logic, set theory, numeration systems, number systems, number theory, axiomatic theories and models, and methods of proof. Additional topics may include: history of mathematics, geometry, counting techniques, probability and statistics, and calculus concepts.

[CSU; UC; CSU-GE, AREA B4; IGETC, AREA 2]

MAT-12. Number Systems (3)

1 S F S F R MAT-123 or MAT-123L4 with a grade of "C" or better or placement by Hartnell's assessment.

4 Q S J O H 0 O M Z

- F 5 4 Hrs

Intended primarily for prospective elementary school teachers. Focuses on the development of quantitative reasoning skills through in-depth, integrated explorations of topics in mathematics, including real number systems and subsystems. The emphasis is on problem solving strategies, comprehension and analysis of mathematical concepts and the ideas underlying the common arithmetic algorithms taught to children.

[CSU; UC; CSU-GE, AREA B4; IGETC, AREA 2]
[C-ID MATH 120]

MAT-13. Elementary Statistics (5)

1 S F S F R MAT-123 or MAT-123L4 with a grade of "C" or better or placement by Hartnell's assessment.

" E W J T P S Z Access to a graphing calculator similar to Ti-84 made by Texas Instruments.

" M M 5 F S N T

- F 9 0 Hrs

A study of the measures of central tendency, dispersion and position, graphic presentation, sampling, frequency distributions, discrete and continuous probability distributions, expected values, sampling distribution, Central Limit Theorem,

MAT-25. Pre-Calculus (4)

1 S F S F R MAT-123 or MAT-123L4 with a grade of "C" or better or placement by Hartnell's assessment.

" M M   5 F S N T

- F 72 Hrs

A study of polynomial functions, rational functions, exponential functions and logarithmic functions, graphing techniques, systems of equations, matrices, determinants, parametric equations.   This course is designed to prepare students for Calculus I.

[CSU; UC; CSU-GE, AREA B4; IGETC, AREA 2]

MAT-27. Pre-Calculus & Trigonometry (6)

1 S F S F R MAT-123 or MAT-123L4 with a grade of "C" or better or placement by Hartnell's assessment.

" E W J T P S Z   MAT-123 with a grade of "C" or better.

' B M M   4 Q S J O H

- F 108 Hrs

The study of functions, their properties, their graphs, and their applications: polynomial, absolute value, radical, rational, exponential, logarithmic, trigonometric, and trigonometric inverses. The course will also introduce students to the use of analytic geometry, trigonometric identities and proofs related to trigonometric expressions, solving equations involving the previously listed functions, solving right triangles and non-right triangles, and introduction to vectors and polar coordinates. This course includes the content of both MAT-25 (pre-calculus) and MAT-24 (trigonometry) and prepares a student for Calculus I. This course is considered an acceleration and is designed for science, technology, engineering, and mathematics (STEM) majors.

[CSU; UC; CSU-GE, AREA B4; IGETC 2A; for UC 4 units only]

MAT-106. Integrated Mathematics (3)

' B M M   4 Q S J O H

- F 54 Hrs

This developmental course is intended for non-STEM majors, in particular, for Career and Technical Education (CTE) students in Certificate and non-transferable Degree programs. An activity-based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential, and other mathematical models. Students will acquire conceptual and

MAT-121L2. Elementary Algebra Level 2 (1.25)
 1 S F S F R MAT-121L1 with a grade of "C" or better.
 " M M 5 F S N T
 - B 67.5 Hrs

The second course in a four-course sequence that is equivalent to MAT 121. A study of linear equations and inequalities in one variable, linear equations in two variables, and applications. Not open to students who have completed MAT-121 with a grade of "C" or better.

MAT-121L3. Elementary Algebra Level 3 (1.25)
 1 S F S F R MAT-121L2 with a grade of "C" or better.
 " M M 5 F S N T
 - B 67.5 Hrs

The third course in a four-course sequence that is equivalent to MAT 121. A study of exponents, polynomials, factoring, and applications. Not open to students who have completed MAT-121 with a grade of "C" or better.

MAT-121L4. Elementary Algebra Level 4 (1.25)
 1 S F S F R MAT-121L3 with a grade of "C" or better.
 " M M 5 F S N T
 - B 67.5 Hrs

The fourth course in a four-course sequence that is equivalent to MAT 121. A study of rational expressions, roots and radicals, and applications. The final examination covers the content from all levels (121L1-121L4). Not open to students who have completed MAT-121 with a grade of "C" or better.

MAT-123. Intermediate Algebra (5)
 1 S F S F R MAT-121 or MAT-121L4 with a grade of "C" or better or placement by Hartnell's assessment.
 " M M 5 F S N T
 - F 90 Hrs

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.

MAT-123L1. Intermediate Algebra Level 1 (1.25)
 1 S F S F R MAT-121 or MAT-121L4 with a grade of "C" or better or Placement test by Hartnell's Multiple Measures (such as placement test, transcripts...)
 " M M 5 F S N T
 - B 67.5 Hrs

The first course in a four-course sequence that is equivalent to MAT-123. Review of elementary algebra plus more advanced topics in graphing, systems of equations and inequalities, and applications. Not open to students who have completed MAT-123 with a grade of "C" or better.

MAT-123L2. Intermediate Algebra Level 2 (1.25)
 1 S F S F R MAT-123L1 with a grade of "C" or better.
 " M M 5 F S N T
 - B 67.5 Hrs

The second course in a four-course sequence that is equivalentJ -0.0006

MAT-201L2. Pre-Algebra Level 2 (1)

1 S F S F R MAT-201L1 with a grade of "C" or better.

" M M 5 F S N T

- B 64 Hrs

The second course in a three-course sequence that is equivalent to MAT-201. The arithmetic of integers and decimals, and the use of ratios, proportions, and percents. This course is designed for those students who do not meet the entrance requirements for MAT-121. Not open to students who have completed MAT-201.

MAT-201L3. Pre-Algebra Level 3 (1)

1 S F S F R MAT-201L2 with a grade of "C" or better.

" M M 5 F S N T

- B 64 Hrs

The third course in a three-course sequence that is equivalent to MAT-201. One-step and two-step equations, and calculations on basic geometrical figures. This course is designed for those students who do not meet the entrance requirements for MAT-121. Not open to students who have completed MAT-201.

MAT-213. Lab for Statistics (1)

$ P S F R W MAT-313 F

1 B T T / P 1 B T T 0 O M Z

- B 64 Hrs

A review of the core prerequisite skills, competencies, and concepts needed in statistics. Intended for students who are concurrently enrolled in 427r8l for 8is

MUS-2. Music Fundamentals (3)

" M M   5 F S N T
- F 54 Hrs

An introduction to the notation and primary elements of tonal music. Incorporates the following concepts: staff notation in treble and bass clefs, rhythm and meter; basic properties of sound; intervals; diatonic scales and triads; and diatonic chords. Development of skills in handwritten notation and aural identification of musical phenomena is expected.

MUS-14. Intermediate Piano (1)
   1 S F S F R MUS-13B with a grade of "C" or better.
   ' B M M   4 Q S J O H
   - F 18 Hrs; - B 36 C Hrs
Intermediate piano study covering the fundamentals of technique, style and interpretation.   Solo and ensemble performance from standard piano literature. Piano classes may be repeated at the appropriate level, but total piano enrollments are limited to four.
[CSU; UC]

MUS-15. Advanced Piano (1)
   1 S F S F R V J T J U F

MUS-23.4. Hartnell Chorale-20th Century "Pops" Emphasis (1)

Ρ Γ Ε Γ Ε Σ Χ υ b Τ i d r U Αudition required

" Ε W J T P S Z   Members selected from the Hartnell Choir by audition.

4 Q S J O H   0 O M Z

- Β 6 4 Hrs

A chorale group of mixed voices 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] [C-ID MUS 180]

MUS-23.5. Hartnell Chorale-21st Century Emphasis (1)

Ρ Γ Ε Γ Ε Σ Χ υ b Τ i d r U required.

" Ε W J T P S Z   Intended for persons with previous choral experience.

' Β M M   0 O M Z

- Β 6 4 Hrs

A chorale 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][C-ID MUS 180]

MUS-24. Estudiantina Hartnell (1)

Ρ Γ Ε Γ Ε Σ Χ υ b Τ i d r U s F required.

' Β M M   4 Q S J O H

- F 5 4 Hrs

A performance group in the manner of the Estudiantinas of Mexico and the Tunas of Spain. Open to all students. Instruction will be provided in singing and the playing of traditional Estudiantina instruments. Repertoi consists of traditional and contemporary music as performed by Estudiantinas/Tunas in the Spanish speaking world. Students will both sing in Spanish and play traditional instruments such as the guitar, bandurria, mandolin, violin, string bass and pandero. Some instruments are available for student use.
[CSU; UC][C-ID MUS 180]

MUS-25. Hartnell College Wind Ensemble (1)

Ρ Γ Ε Γ Ε Σ Χ υ b Τ i d r U s F required.

' Β M M   4 Q S J O H

- Β 6 4 Hrs

A performance group studying literature for the small wind ensemble. Performances include concerts and playing at college and community events. Open to all students who play a wind or percussion instrument. Music majors specializing in instrumental music are expected to participate for two years. May be repeated for credit to a maximum of 4 units. Audition is required

MUS-26. Jazz Ensemble (1)

Ρ Γ Ε Γ Ε Σ Χ υ b Τ i d r U s F required.

' Β M M   4 Q S J O H

- Β 6 4 Hrs

MUS-46. Music Theory and Musicianship I (4)

NRN-41.1. Nursing Clinical I (4)

1 S F S F R X dhTississ tion F to the Hartnell College Associate Degree RN Program.

$ P S F R V NRJN-41 U F, NRN-41.2, NRN-41.3 and NRN-30.

1 B T T / P 1 B T T 0 O M Z

' B M M 0 O M Z

- B 216 Hrs

Application of the nursing process using Doenges and Moorhouse Diagnostic Divisions while providing nursing care. Emphasis is on maintenance of health for adults with potential and actual non-life-threatening concerns in the acute care and community settings. The values of caring, curiosity, collaboration, and competence are conveyed.
[CSU]

NRN-41.2. Clinical Reasoning Seminar I (1)

1 S F S F R V dmT isssilon F into the Hartnell College Registered Nursing Program.

$ P S F R V NRJN-41 U F, NRN-41.1, NRN-41.3 and NRN-30

' B M M 0 O M Z

- F 18 Hrs

Application of nursing theory and clinical reasoning strategies utilizing a case study approach. The content focus is the development of plans of care for adults with potential and actual non-life-threatening health problems. The values of curiosity and collaboration are emphasized.
[CSU]

NRN-41.3. Nursing Skills Lab I (1)

1 S F S F R V dmT isssilon F to the Hartnell College Associate Degree RN Program

1 S F S F R NRJN-30U, NF RN-41, NRN-41.1 and NRN-41.2.

' B M M 0 O M Z

- B 54 Hrs

Application of the Nursing Process using Doenges and Moorhouse Diagnostic Divisions for the study of fundamental nursing skills necessary for health maintenance for adults. The value of competency in the acquisition of nursing skills is demonstrated.
[CSU]

NRN-42. Nursing Theory II (4)

1 S F S F R NRJN-41 U F with a grade of "C" or better.

$ P S F R V J T J U F NRN-42.1, NRN-42.2 and NRN-42.3.

4 Q S J O H 0 O M Z

- F 72 Hrs

Application of the Nursing Process using Doenges and Moorhouse Diagnostic Divisions for the study of nursing. Emphasis is on health promotion for the childbearing family, from preconception to middle adulthood. The values of curiosity, competency, and collaboration are integrated into the study of nursing.
[CSU]

NRN-43.1. Nursing Clinical III (4)

   1 S F S F R N R N F 4 2 U I with a grade of "C" or better.

   $ P S F R V N R N J 4 3 , NRN-43.2 and NRN-43.3.

   1 B T T / P 1 B T T 0 O M Z

   ' B M M 0 O M Z

   - B 216 Hrs

Application of the Nursing Process using Doenges and Moorhouse Diagnostic Divisions while providing nursing care in acute and community health care settings. Emphasis is on restoration of health for adults, older adults, and for those with mental health conditions. The values of caring, curiosity, collaboration, and competence are conveyed.
[CSU]

NRN-43.2. Clinical Reasoning Seminar III (0.5)

   1 S F S F R N R N F 4 2 U 2 F with a grade of "C" or better.

   $ P S F R V J T J U F NRN-43, NRN-43.1 and NRN-43.3.

   ' B M M 0 O M Z

   - B 27 Hrs

Application of the Nursing Process using Doenges and Moorhouse's Diagnostic Divisions utilizing a case study approach. Emphasis is on restoration of physiological and

NRN-50.43. Supervised Nursing Skills Practice III (0.5)

NRN-227. Success Strategies for 3rd Semester RN
        Students (0.5)
    $ P S F R V NRN-43 F
    1 B T T / P 1 B T T 0 O M Z
    ' B M M 4 Q S J O H
    - B C 27 Hrs
Designed for third semester registered nursing students
interested in reinforcing content and skills presented in NRN-
43 nursing courses with emphasis on complex physiological
and psychological conditions. Individualized for each student
based on identified learning needs. The values of curiosity,
collaboration, and competency in nursing practice are
reinforced.

NRN-228. Success Strategies for 4th Semester RN
        Students (0.5)
    $ P S F R V NRN-44 F
    1 B T T / P 1 B T T 0 O M Z
    ' B M M 0 O M Z
    - B C 27 Hrs
Designed for fourth semester registered nursing students
interested in reinforcing content presented in NRN-44 nursing
courses with emphasis on multi-system failure and leadership
concepts. Individualized for each student based on identified
learning needs. The values of curiosity, caring, collaboration,
competence, and comportment in nursing practice are
reinforced.

NUTRITION

NUTR-1. Nutrition (3)
    " E W J T P S Z Eligibility for ENG-1A; Completion of CHM-60 (or

NVN-119. Vocational Nursing Theory I: Fundamentals (4)

Corequisite: NVN-119.1A

Spring Only   Odd Years

Lec 72 Hrs

Fundamental nursing concepts specific to the role of the vocational nurse. Not open to students who have completed NVN 119A with a grade of "C" or better.

NVN-119.1. Vocational Nursing Clinical I: Fundamentals (4)

Prerequisite: Admission into the Vocational Nursing Program.

Corequisite: NVN-119

NVN-130C. Basic Pharmacology C (1)

1 S F S F R NVN-130B with a grade of "C" or better.

PHL-10. Ethics (3)
   Advisory: Eligibility for ENG-1A
   Fall Spring
   Lec 54 Hrs
Presents an in depth analysis of major ethical theories and their application to contemporary moral, social, and personal issues. Students will learn to analyze and differentiate the concepts, principles, and operational rules of major ethical theories. Analytically comparing and contrasting these theories, students will develop and use this analytic framework to evaluate contemporary moral issues.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3]
[C-ID PHIL 120]

PHL-15. Critical Thinking and Logic (3)
   Advisory: Eligibility for ENG-1A
   Pass/No Pass Option
   All Terms
   Lec 54 Hrs
Introduces principles of valid reasoning with emphasis on deductive logic. Includes a study of formal techniques of sentential logic and the use of inductive reasoning, language, and fallacies. The concepts of induction, deduction, validity, soundness, strength, and cogency are explored in detail.
[CSU; UC; CSU-GE, AREA A3; C-ID PHIL 110]

PHOTOGRAPHY

PHO-1. Introduction to Photography (3)
   All Terms
   Lec 54 Hrs
Introduces students to the technical knowledge, skill sets, and creative applications of all photographic media. A survey of the historic development of photography is included. Students will provide their own cameras.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3]

PHO-2. Beginning Black and White Photography (4)
   Fall Spring
   Lec 54 Hrs; Lab 54 Hrs
A course designed to teach the skills of Black and White photography through the production of prints of high technical and artistic value. It includes the study of film processing, contact printing, enlarging, composition, after-work, and mounting.
[CSU; UC]

PHO-3. Advanced Photography Lab (3)
   Prerequisite: PHO-2 with a grade of "C" or better.
   Fall Spring
   Lec 36 Hrs; Lab 72 Hrs
This course is an extension of PHO-2 with special emphasis on the study of photography as an art form and profession. Assignments are given in a wide variety of photographic topics, technologies, and methods in order to develop student skills and proficiencies in Black and White film as well as related issues in digital media.
[CSU]

PHO-4. Portfolio Photography (3)
   Prerequisite: PHO-3 with a grade of "C" or better.
   Fall Spring
   Lec 36 Hrs; Lab 72 Hrs
Emphasizes the development of a photographic portfolio in which the student establishes near professional level skills in their choice of photographic mediums.
[CSU]

PHYSICAL EDUCATION

PEAC-32. Core Strengthening and Flexibility (1 - 1.5)
   Pass/No Pass Option
   Fall Spring
   Lec 13.5 Hrs; Lab 90 Hrs
Designed to increase muscle flexibility and physical movement. Balance, core strengthening and muscle awareness will be emphasized through a series of exercise and routines. Formerly PE-1.243. Not open to students who have completed PE-1.243.
[CSU; UC]

PEAC-36. Yoga (1 - 1.5)
   Pass/No Pass Option
   All Terms
   Lec 13.5 Hrs; Lab 90 Hrs
Practice and philosophy of Yoga through Yoga poses. Yoga exercises linked to movement, mind, and breath to bring about a feeling of balance, relaxation, and harmony.
[CSU; UC]

PEAC-40. Speed Training ad Conditioning (1 - 1.5)
　1 B T T 　/ P 　1 B T T 　0 Q U J P O
　' B M M 　4 Q S J O H
　- F 1 3.5 Hrs; - 3 0 C 5 Hrs
The development of strategies and techniques to increase
speed and improve agility utilizing the fitness components of
cardiovascular/respiratory condioning, muscular strength
and endurance, and flexibility.
[CSU; UC]

PEAC-41. Beginning Futsal (1 - 1.5)
　' B M M 　4 Q S J O H
　- F 1 3.5 Hrs; - 3 0 C 5 Hrs
Provides instruction in skills an a Tw -1T .1047 -1.3 Td [0 Td [.0004u-1047 -ogiesc0.5155 Tw -10 0 9 64.15peed and impsoccer f
 - F 1 3.5 Hrs; - 3 0 C 5 Hrs

PEAC-52. Volleyball (1 - 1.5)
    " M M   5 F S N T
    - F 1 3.5 Hrs;   - 3 0 C 5 Hrs
Develop and improve fundamental volleyball skills including passing, setting, digging, serving, spiking, and blocking. Students practice offensive and defensive strategies and utilize these skills and strategies during game play. Formerly PE-1.186. Not open to students who have completed PE-1.186.
[CSU; UC]

PEAC-55. Soccer (1 - 1.5)
    " M M   5 F S N T
    - F 1 3.5 Hrs;   - 3 0 C 5 Hrs
Instruction in the fundamental skills of soccer including dribbling, heading, trapping, passing, and team play. Formerly PE-1.183. Not open to students who have completed PE-1.183.
[CSU; UC]

PEAC-56. Self-Defense/Martial Arts (1 - 1.5)
    ' B M M   4 Q S J O H
    - F 1 3.5 Hrs;   - 3 0 C 5 Hrs
Course will examine the various methods of self-defense/martial arts for men and women that will have an emphasis on the protection from assaults and use of defensive techniques and strategies. Students will learn Katas required for belt promotion.
[CSU; UC]

PEAC-58. Beginning Tennis (1 - 1.5)
    " M M   5 F S N T
    - F 1 3.5 Hrs;   - 3 0 C 5 Hrs
Develops basic skills necessary to play tennis. Emphasis is placed on the fundamental techniques, rules, scoring, history, and tennis etiquette. Students

PEAC-68. Swim Fitness (1 - 1.5)
    ＂ＭＭ ５ＦＳＮＴ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
Intermediate swimming techniques practiced while improving endurance and cardiovascular fitness. Formerly PE-1.134. Not open for credit to students who have completed PE-1.1.34 with a grade of "C" or better.
[CSU; UC]

PEAC-69. Introduction to Weight Training (1 - 1.5)
    １ＢＴＴ／Ｐ１ＢＴＴ０ＱＵＪＰＯ
    ＂ＭＭ ５ＦＳＮＴ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
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. Formerly PE-1.131. Students may only take four of the following courses: PEAC-43, PEAC-46, PEAC-47, PEAC-49, PEAC-50 or PEAC-69.
[CSU; UC]

PEAC-70. Basketball (1.5)
    ４ＱＳＪＯＨ ０ＯＭＺ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
A course designed to develop a thorough understanding of the game of basketball. Individual game 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. Formerly PE-1.110. Not open to students who have completed PE-1.110.
[CSU; UC]

PEAC-72. Intermediate Basketball (1 - 1.5)
    ４ＱＳＪＯＨ ０ＯＭＺ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
Designed to develop fundamental skills, techniques, and the physical conditioning necessary to play intermediate basketball. Students practice offensive and defensive strategies and use these skills and strategies during game play. Formerly PE-1.112. Not open to students who have completed PE-1.112 with a grade of "C" or better.
[CSU; UC]

PEAC-74. Advanced Volleyball (1 - 1.5)
    ＂ＥＷＪＴＰＳＺ Intermediate skill proficiency or completed PEAC-52, with a "C" or higher prior to enrolling in Advanced Volleyball.
    ＇ＢＭＭ ４ＱＳＪＯＨ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
Designed to give experienced volleyball players an opportunity to strengthen his/her skills. Emphasis will be placed on performance in competitive situations during class time as preparation for life-long fitness.
[CSU; UC]

PEAD-84. Adaptive Circuit Endurance Training (1 - 1.5)
    ＂ＭＭ ５ＦＳＮＴ
    - Ｆ１Ｃ３.５ Ｈｒｓ; - ３ＯＣ５Ｈｒｓ
Designed for the physically challenged students to enhance their strength and cardiovascular endurance by using progressive resistance machines to develop muscle strength, endurance flexibility, and heart health. 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; UC]

PEIN-17. Intercollegiate Basketball (1.5)
    ＇ＢＭＭ ４ＱＳＪＯＨ
    - Ｂ８１ Ｈｒｓ
Advanced techniques and strategies for competitive intercollegiate basketball competition. Approximately twenty-

PEIN-23. Intercollegiate Cross Country (3)
  ' B M M   0 O M Z
  - B 062 Hrs
Advanced course designed to develop techniques and strategies for intercollegiate cross country competition. Approximately ten intercollegiate meets are scheduled. Formerly PE-3.530. May be taken

PEIN-42. Nontraditional Season, Volleyball (1.5)
4 Q S J O H   0 O M Z
- F 1 3.5 Hrs;   - B 0 C 5 Hrs
Designed for the student who wishes to compete at the intercollegiate level and gives experienced volleyball players an opportunity to improve skills, fitness levels, and the tactical understanding of volleyball. Emphasis will be placed on performance in competitive situations during class and participation in California Community College Athletic Association's Nontraditional Season of Volleyball. Students must have a current medical physical on file to participate in nontraditional competitions. CCCAA ByLaw 3.17.1. May be taken up to 4 times.
[CSU; UC]

PEIN-43. Nontraditional Season, Baseball (1.5)
' B M M   0 O M Z
- F 1 3.5 Hrs;   - B 0 C 5 Hrs
Designed for the student who wishes to compete at the intercollegiate level and gives experienced baseball players an opportunity to improve skills, fitness levels and tactical understanding of baseball. Emphasis will be placed on performance in competitive situations during class and participation in California Community College Athletic Association's Nontraditional Season of baseball. Students must have a current medical physical on file to participate in nontraditional competitions. CCCAA ByLaw 3.17.1. May be taken up to 4 times.
[CSU; UC]

PEIN-44. Nontraditional Season, Softball (1.5)
' B M M   0 O M Z
- F 1 3.5 Hrs;   - B 0 C 5 Hrs
Designed for the student who wishes to compete at the intercollegiate level and gives experienced softball players an opportunity to improve skills, fitness levels and tactical understanding of softball. Emphasis will be placed on performance in competitive situations during class and participation in California Community College Athletic Association's Nontraditional Season of softball. Students must have a current medical physical on file to participate in nontraditional competitions. CCCAA Bylaw 3.17.1. May be taken up to 4 times.
[CSU; UC]

PEIN-45. Nontraditional Season, Track and Field (1.5)
' B M M   0 O M Z
- F 1 3.5 Hrs;   - B 0 C 5 Hrs
Designed for the student who wishes to compete at the intercollegiate level and gives experienced track and field participants an opportunity to improve skills, fitness levels and tactical understanding of track. Emphasis will be placed on performance in competitive situations during class and participants in California Community College Athletic Association's Nontraditional Season of Track and Field. Students must have a current medical physical on file to participate in nontraditional competitions. CCCAA Bylaw, 3.17.1. May be di (, T)-3e8.4[CSU; UC] 3.1(6-5 (l)2j /T1nrr46 (s) itiona)nF
- F 1 3.5 Hrs;   - B 0 C 5 Hrs H.0007 Tc 0.322 Tw -10.047 -1.3 Td [(Designed performance in competitive situations during cl

PETH-3. Concepts of Fitness and Wellness (3)
Spring Only
Lec 54 Hrs
Basic concepts of fitness, nutrition, health promotion and disease prevention. The students will gain knowledge to make appropriate choices that contribute to a healthy lifestyle. The course will incorporate both lecture and physical activity laboratory assignments.
[CSU]

PETH-4. Mental Skills for Sports Performance (3)
Spring Only
Lec 54 Hrs
Students will learn techniques for developing and refining psychological skills to enhance athletic growth and performance. In addition, they will improve their coaching skills and establish a culture of providing positive instruction. Course topics will assist students to maximize their athletic skill and development as well as addressing such issues as confidence, attention, goal setting, coping with injury and injury prevention.
[CSU; UC; CSU-GE, AREA E]

PETH-5. Sport in Society (3)
Fall Spring
Lec 54 Hrs
An overview of the historical development of sport and current roles of sport in society. Includes interaction of sport with societal values and ethics and outcomes affecting professional and collegiate sports.
[CSU; CSU-GE, AREA D; UC]

PETH-10A. Theory and Analysis of Football I (2)
Fall Only
Lec 36 Hrs
Beginning techniques and strategies of football as played at the intercollegiate and professional levels. Advanced skills, strategies and rules of the game are discussed and analyzed.
[CSU; UC]

PETH-10B. Theory and Analysis of Football II (2)
Fall Only
Lec 36 Hrs
Beginning and intermediate techniques and strategies of football as played at the intercollegiate and professional levels. Advanced skills, strategies, computer analysis, and rules of the game are discussed and analyzed.
[CSU; UC]

PHYSICS

PHY-2A. College Physics I (4)
Prerequisite: MAT-24 with a grade of "C" or better.
Fall Only
Lec 54 Hrs; Lab 54 Hrs
This is the first course in a two-semester sequence that satisfies the physics requirement for some majors. Core topics include: kinematics, dynamics, work and energy, momentum, rotational motion, fluid, and simple harmonic motion.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]
[C-ID PHYS 105][C-ID PHYS 100S with PHY-2B]

PHY-2B. College Physics II (4)
Prerequisite: PHY-2A with a grade of "C" or better.
Spring Only
Lec 54 Hrs; Lab 54 Hrs
This is the second course in a two-semester sequence that satisfies the physics requirement for some majors. Core topics include; mechanical waves and sound, electrostatics, magnetism, DC circuits, optics and modern physics.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]
[C-ID PHYS 110] [C-ID 100S with PHY 2A]

PHY-4A. General Physics I/ Mechanics (4)
Prerequisite: MAT-3A with a grade of "C" or better.
Fall Spring
Lec 54 Hrs; Lab 54 Hrs
Core topics include vectors and scalars, translational kinematics, Newton•s laws, gravitation, statics and dynamics, work and energy, momentum, rotational kinematics and dynamics, fluids, and simple harmonic motion. Part of a three-semester calculus-based physics sequence intended for students majoring in the sciences and engineering.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]
[C-ID PHYS 205]

PHY-4B. General Physics II/ Electricity and Magnetism (4)
Prerequisite: PHY-4A with a grade of "C" or better.
Corequisite: MAT-3B
Fall Only
Lec 54 Hrs; Lab 54 Hrs
Core topics include electrostatics, fields, potentials, Gauss•s Law, resistivity, capacitors, DC and AC circuits, magnetism, Faraday•s and Lenz•s Laws, Ampere•s Laws, and Maxwell•s equations. Part of a three-semester calculus-based physics sequence. It is intended for students majoring in the sciences and engineering.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]
[C-ID PHYS 210]

PHY-4C. General Physics III—Waves, Heat, Light, Sound
      and Modern Physics (4)
   1 S F S F R PHY-4A Uwfth a grade of "C" or better.
   $ P S F R V J T J U F MAT-3B
   4 Q S J O H 0 O M Z
   - F 54 Hrs; - 54 Hrs
Core   topics   include   mechanical   waves,   laws   of
thermodynamics, optics, and selected topics in modern
physics. Part of a three-semester calculus-based physics
sequence. It is intended for students majoring in the sciences
and engineering.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]
[C-ID PHYS 215]

PHY-10. Introduction to Physics (4)
   " E W J T P S Z MAT-121 or MAT-121L4 with a grade of •CŽ or better.
   ' B M M 0 O M Z
   - F 54 Hrs; - 54 Hrs
An overview of some of the more important and interesting
phenomena in physics including 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. Not open to students who are
concurrently enrolled in or who have completed Physics 2A, 2B,
4A, 4B, or 4C with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA B1, B3; IGETC, AREA 5]

PHY-32. Survey of Chemistry and Physics (4)
   1 S F S F R MAT-120 wfth a grade of "C" or better.
   4 Q S J O H 0 O M Z
   - F 54 Hrs; - 54 Hrs
An investigation of basic principles of physics and chemistry
including matter, physical and chemical properties, energy,
motion, light, atomic structure, bonding, solutions and
chemical reactions. The inter-dependence of chemistry and
physics will be emphasized. This course is intended for non-
science mcwo6c 0.00180ceg, solhem"C",46001B0t([C (()-37eS-s0.000ucion o4 (in or)-7 (who)-7 (evolhem"))

POL-5. Chicano Politics and the American Political
        System (3)
  " E W J T P S Z ENG-1A and POL-1
  ' B M M 0 O M Z
  - F 54 Hrs
A survey of U.S. and California political institutions, including
the U.S. Constitution as it relates to Chicanos. Chicano

PSY-14. Child Psychology (3)
    " E W J T P S Z   Eligibility for ENG-1A
    ' B M M   4 Q S J O H
    - F 5 4 Hrs
A survey of the psychological growth from conception through adolescence. Particular emphasis is given to physical, cognitive, and emotional development as well as biological and social influences. Topics will include an analysis of classic and contemporary theories and issues within the field of child psychology.
[CSU; UC; CSU-GE, AREA D, E; IGETC, AREA 4]

PSY-15. Human Sexuality (3)
    " M M   5 F S N T
    - F 5 4 Hrs
A current and comprehensive in

RCP-62. Cardiopulmonary Pathophysiology (2)
    1 S F S F R RCP-52 with a grade of "C" or better.
    $ P S F R V J T J U F RCP-63
    4 Q S J O H 0 O M Z
    - F 36 Hrs

Various cardiopulmonary disorders including; infection, cancer, obstructive conditions, restrictive conditions and pulmonary vascular disease. Patient care plans for specific disease processes are discussed for use in multiple health care settings. [CSU]

RCP-63. Beginning Clinical Experience (4)
    1 S F S F R RCP-53 with a grade of "C" or better.
    $ P S F R V J T J U F RCP-60, RCP-61, RCP-62 and RCP-64
    1 B T T / P 1 B T T 0 O M Z
    4 Q S J O H 0 O M Z

RCP-74. Supervised Practice: Intermediate (0.5)

Prerequisite: RCP-64 with a grade of "C" or better.
Corequisite: RCP-73
Pass/No Pass Only
Fall Only
Lab 27 Hrs

Application of the respiratory care process for the study of intermediate respiratory care skills required for bedside care. Emphasis is on pediatric and neonatal cardiopulmonary assessment, setting up a ventilator and ventilator monitoring that is necessary to provide care for the hospitalized patient. The value of competence in applying skills across the lifespan, and ventilator set up and monitoring is emphasized.
[CSU]

RCP-80. Advanced Life Support Responsibilities (1.5)

Prerequisite: RCP-70 and RCP-72 with a grade of "C" or better.
Corequisite: RCP-83
Pass/No Pass Only
Spring Only
Lec 18 Hrs; Lab 27 Hrs

Neonatal resuscitation, pediatric advanced life support, and advanced cardiac life support will be explained and demonstrated. Upon completion of each specialty class, the student will apply knowledge and skills to written and practical

RCP-110. Foundations for Success (1.5)
1 B T T / P 1 B T T 0 O M Z
' B M M 0 O M Z
- F 13.5 Hrs; - B 1C Hrs
Introduction to professional behaviors, attitudes, and values that lead to academic and professional success as a respiratory care practitioner. Historical trends that influenced the role of the respiratory care practitioner as a knowledge-worker and current educational preparation will be explored. Test taking strategies, study skills, individual learning styles, communication, and stress reduction are explored. The learning environment is created to foster collaboration and curiosity. Prerequisite: Admission to the Respiratory Care Practitioner Program

RCP-225. Success Strategies for 1st Semester RCP
Students (0.5)
1 B T T / P 1 B T T 0 O M Z
' B M M 4 Q S J O H
- B 27 Hrs
Designed for first semester respiratory care practitioner students interested in reinforcing content presented in RCP 50 series courses. The course is individualized for each student based on identified learning needs. The value of competency based education in respiratory care practice is emphasized. OTHER: Admission to the RCP program or permission of the Director of RCP program following withdrawal from a failure in any RCP 50 series course (RCP 50, 51, 52, 53, 54)

RCP-226. Success Strategies for 2nd Semester RCP
Students (0.5)
1 S F S F R RCP-110, RCP-50, RCP-51, RCP-52, RCP-53 and RCP-54 with a grade of "C" or better.
1 B T T / P 1 B T T 0 O M Z
' B M M 4 Q S J O H
- B 27 Hrs
Designed for second semester respiratory care practitioner students interested in reinforcing content presented in RCP 60 series courses. The course is individualized for each student based on identified learning needs. The value of competency based education in respiratory practice is emphasized.

RCP-227. Success Strategies for 3rd Semester RCP
Students (0.5)
$ P S F R VRCP-74 F
0 U I F P Srmission of the Director of RCP program following withdrawal or failure in RCP 70 series courses (RCP 70, 71, 72, 73, 74).
1 B T T / P 1 B T T 0 O M Z
' B M M 0 O M Z
- B 27 Hrs
Designed for respiratory care practitioner students interested in reinforcing content presented in RCP 70 series courses. The course is individualized for each student based on identified learning needs. The value of competency based education in respiratory practice is emphasized.

RCP-228. Success Strategies for 4th Semester RCP
Students (0.5)
$ P S F R VRCP-84 F
0 U I F P Srmission of the Director of RCP program following withdrawal or failure in RCP 80 series courses (RCP 80, 81, 82, 83, 84).
1 B T T / P 1 B T T 0 O M Z
4 Q S J O H 0 O M Z
- B 27 Hrs
Designed for respiratory care practitioner students interested in reinforcing content presented in RCP 80 series courses. The course is individualized for each student based on identified learning needs. The value of competency based education in respiratory practice is emphasized.

SCIENCE

SCI-124. Internship Preparation for Science,
Technology, Engineering and Mathematics (1)
4 Q S J O H 0 O M Z
- B 54 Hrs
This course provides assistance for students to develop knowledge, skills, and attitudes for success in Science, Technology, Engineering and Mathematics (STEM) internship

SOCIAL JUSTICE

SJS-20. Introduction to Social Justice (3)
   Advisory: ENG-101
   Fall Spring
   54 Hrs
Interdisciplinary study in race, class, gender, ethnicity, and marginalization in the United States. Examines social justice movements in relation to marginalized groups in the United States to provide a basis for a better understanding of the socio-economic, cultural and political conditions among key social groups.
[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4] [C-ID SJS 110]

SJS-22. Introduction to Women's Studies (3)
   Fall Spring
   54 Hrs
Introduction to the theoretical frameworks and concepts of women's studies and feminist perspectives on a range of social issues affecting women of diverse backgrounds. Study of gender and its intersections with race, class, sexuality, disability, age, religion, and other systems of difference.
[CSU; UC; CSU-GE, AREA D] [C-ID SJS 120]

SOCIOLOGY

SOC-1. Introduction to Sociology (3)
   Advisory: Eligibility for ENG-1A
   All Terms
   54 Hrs
Sociology is the scientific study of the relationship between the individual and society. Sociological concepts, theoretical approaches, and methods are examined. Topics include the analysis and explanation of social structure, group dynamics, socialization, inequality, social stratification, globalization, social change, demography and urbanization. Course objectives include the ability to make sociology relevant and applicable to students' everyday lives.
[CSU; UC; CSU-GE, AREA D; IGETC, AREA 4]
[C-ID SOCI 110]

SOC-5. Introduction to Social Problems (3)
   Advisory: Eligibility for ENG-1A SOC-1
   All Terms
   54 Hrs
This course is a sociological analysis of social problems in the United States. It analyzes how sociologists understand, identify, and address social problems. Social problems include racism, sexism, poverty, crime, immigration, health, aging, family, education, the environment or urbanization. Examination and evaluation of sociological perspectives are applied to improve student's understanding of social problems.
[CSU; UC; CSU-GE, AREA D, E; IGETC, AREA 4]
[C-ID SOCI 115]

SOC-15. Sociology of Immigration and Identity in the U.S. (3)
   Advisory: SOC-1, SOC-42 and Eligibility for ENG-1A
   Spring Only
   54 Hrs
An introduction to the sociolog

SOC-41. Marriage and the Family (3)

Spring Only

- 54 Hrs

SPA-2X. Elementary Spanish for Chicano Students (5)
Prereq: SPA-1 and SPA-1S or SPA-1X, or demonstration of language proficiency to level. This proficiency is determined according to Hartnell College's Prerequisite Clearance and Challenge processes. All prerequisites must be completed with a grade of "C" or better.
Pass / No Pass Option
Fall Spring
Lec 90 Hrs

A parallel SPA-2 and SPA-2S course designed for English dominant Chicano students whose home languages include Spanish. This course will serve any student whose first language is not Spanish, but who has an oral command of Spanish. This course is conducted primarily in Spanish with emphasis on speaking, reading, writing, and grammar. Not open to students who have completed SPA-2 or SPA-2S with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 6]
[C-ID SPAN 110]

SPA-3. Intermediate Spanish (5)
Prereq: SPA-2 and SPA-2S or SPA-2X, or demonstration of proficiency to level. This proficiency is determined according to Hartnell College's Prerequisite Clearance and Challenge processes. All prerequisites must be completed with a grade of "C" or better.
Pass / No Pass Option
Fall Only
Lec 90 Hrs

Course conducted totally in Spanish with further emphasis on grammar, reading, and writing, including a strong cultural and literary component. Not open to students who have completed SPA-3S with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3B, 6]
[C-ID SPAN 200]

SPA-3S. Intermediate Spanish for Spanish Speakers (5)
Prereq: SPA-2 and SPA-2S or SPA-2X, or demonstration of language proficiency to level. This proficiency is determined according to Hartnell College's Prerequisite Clearance and Challenge Processes. All prerequisites must be completed with a grade of "C" or better.
Pass / No Pass Option
Fall Spring
Lec 90 Hrs

A parallel SPA-3 course for Spanish speakers, conducted totally in Spanish with further emphasis on grammar, reading, and writing, including a strong cultural and literary component. Not open to students who have completed SPA-3 with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 3B, 6]
[C-ID SPAN 220]

SPA-4. Intermediate Spanish (5)
Prereq: SPA-3 and SPA-3S, or four years of high school Spanish, or demonstration of proficiency to level. This proficiency is determined according to Hartnell College's Prerequisite Clearance and Challenge Processes.
Pass / No Pass Option
Spring Only – Even Years
Lec 90 Hrs

Continuation of SPA-3. A course conducted totally in Spanish with further emphasis on oral proficiency, advanced grammar, reading and writing, including a strong cultural and literary component. Not open to students who have completed SPA-4S with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C2; IGETC, AREA 6]
[C-ID SPAN 210]

SPA-4S. Intermediate Spanish for Spanish Speakers (5)
Prereq: SPA-3S or SPA-3, or demonstration of proficiency to level. This proficiency is determined according to Hartnell College's Prerequisite Clearance and Challenge processes. All prerequisites must be completed with a grade of "C" or better.
Pass / No Pass Option
Fall Spring
Lec 90 Hrs

A parallel SPA-4 course for Spanish speakers conducted totally in Spanish with further emphasis on advanced grammar, intensive reading and writing, including a strong cultural and literary component. Not open to students who have completed SPA-4 with a grade of "C" or better.
[CSU; UC CSU-GE, AREA C2; IGETC, AREA 3B, 6]
[C-ID SPAN 230]

THEATRE ARTS AND CINEMA

TAC-1. Introduction to Theatre (3)
Fall Spring
Lec 54 Hrs

Provides the student with a basic definition of theatre, its historical foundations, genres, and current production practices leading to an appreciation of theatre. Students will be required to attend theatre performances for education and edification. Introduction to Theatre is required of all theatre arts majors. Formerly THA-1. Not open to students who have completed THA-1 with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3]
[C-ID THTR 111]

TAC-2. Script Analysis (3)
  Spring Only Odd Years
  - 54 Hrs

Introduces students to the essential elements of dramatic structure as manifest in the playscript. Students will learn how to read a play for its structure, scrutinizing the playwright's methods of creating theatre through plot, character and imagery, and understanding what scripts "mean" to the professional theatre artist and theatre-goer as distinct from other forms of literature. Students will undertake an in-depth study of dramatic play structure from both an historical and an aesthetic perspective, analyzing and understanding play scripts in a variety of genres and styles intended for production. Principles, theories and techniques of play script analysis for theatrical production will be the focus of the course. Not open to students who have completed THA-2 with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3]
[C-ID THTR 114]

TAC-3. History of the Theatre (3)
  Spring Only Odd Years
  - 54 Hrs

The study of the history of theatre from the Origins of Theatre through the 17th Century. The history and development of theatre and drama are studied in relationship to cultural, political and social conditions of the time. Plays are read for analysis of structure, plot, character and historical relevance. Formerly THA-3. Not open to students who have completed THA-3 with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA3]
[C-ID THTR 113]

TAC-7. Chicano Theatre (3)
  Advisory ENG-1A
  Pass/No Pass Option
  - 54 Hrs

Introduces students to Chicano Theatre of North and South America. The course examines the rich history and ongoing developments in the culture and identity of the Chicano through exploration of the historical and contemporary Chicano way of life illustrated in stage production. Not open to students who have completed ETH-7, Chicano Theatre with a grade of "C" or better.
[CSU; UC; CSU-GE AREA C1; IGETC AREA 3]

TAC-21. Introduction to Modern Play Production (3)
1 S F S F R X u d T i o n L h F e d e d.
1 B T T / P 1 B T T 0 Q U J P O
- F 1 8 Hrs; - B 0 8 Hrs

An introduction, for the actor, to the production of the modern play with attention to script analysis, design elements, rehearsal and performance techniques; culminating in participation in the performance itself in a fully realized theatrical production. Not open to students who have completed THA-21 with a grade of "C" or better.
[CSU; UC] C-ID THTR 191]

TAC-22. Introduction to Musical Theatre Production (3)
1 S F S F R X u d T i o n L h F e d e d.
1 B T T / P 1 B T T 0 Q U J P O
" M M 5 F S N T
- F 1 8 Hrs; - B 0 8 Hrs

An introduction to the production of the musical play with attention to directorial concept, script analysis, design elements, and performance techniques; culminating in participation in performance of a fully realized musical theatre production. Not open to students who have completed THA-23 with a grade of "C" or better.
[CSU; UC] C-ID THTR 191]

TAC-23. Introduction to Theatre for Social Change (3)
1 B T T / P 1 B T T 0 Q U J P O
4 Q S J O H 0 O M Z
- F 5 4 Hrs

Provides students with an understanding of the broad applications of theatre in the social sphere, as harbinger of change, justice, education, and civic engagement. Drawing from longstanding traditions in theatre and the arts, the course will survey a broad swath of artistic movements across time, culminating in the study of contemporary practices.

An introduction to the production of the musical play with attention to directorial concept, script analysis, design

TAC-28. Makeup/Hair Techniques for the Stage (3)
1BTT /P 1BTT 0QUJPO
"MM 5FSNT
- F 18 Hrs; - B 108 Hrs

Designed to teach the basic techniques for the effective application of theatrical makeup and hair at the beginning level for the stage. The student will gain a practical, working knowledge of the principles of highlighting, shadowing, and contouring the human face with makeup. Explorations into the basic techniques involved in working with crepe hair, and various three-dimensional processes shall also be undertaken as the character and/or design requires. The relationships between the makeup designer, costume designer, wardrobe mistress, and makeup/dressing crew member will be emphasized. Students will work on a series of projects which will culminate in finished make-up design for a play, musical or a series of the two. Not open to students who have completed THA-28 with a grade of "C" or better.
[CSU; UC] C-ID THTR 192]

TAC-29. Stage Lighting and Sound (3)
1BTT /P 1BTT 0QUJPO
"MM 5FSNT
- F 18 Hrs; - B 108 Hrs

Designed to teach the basic sks, concepts, and methods of beginning and intermediate lighting, sound and rigging execution for the stage, with emphasis on equipment, control, color and their relationship to design. Students will work on a series of projects which will culminate in finished lighting, as well as sound, and/or rigging requirements for a play, musical or series of the two. The relationships between the lighting and sound designers, master electrician, and lighting and sound crew and technical director will be discussed. Not open to students who have completed THA-29 with a grade of "C" or better.
[CSU; UC] [C-ID THTR 192]

TAC-30. Fundamentals of Theatre Design (3)
1BTT /P 1BTT 0QUJPO
4QSJOH 0OMZ o 0EE :FBST
- F 36 Hrs - B 54 Hrs

Students will be offered a survey and historical overview of scenery, lighting, sound, costumes, makeup, properties, theatrical equipment and construction techniques through demonstration, research, creative application and laboratory experience. Emphasis will be on contemporary developments in design and in formal theatrical applications. Not open to students who have completed THA-30 with a grade of "C" or better.
[CSU; UC] C-ID THTR 172]

TAC-31. Puppetry and Mask (3)
1BTT /P 1BTT 0QUJPO
4QSJOH 0OMZ o 0EE :FBST
- F 36 Hrs - B 54 Hrs

Explores puppetry and mask as dramatic mediums. Covers the history and development of puppetry and mask; puppet and mask design and creation; puppet manipulation and improvisation; and puppet and mask play production techniques and applications.
[CSU]

TAC-40. Stage Costuming Practicum (3)
1BTT /P 1BTT 0QUJPO
- F 18 Hrs; - B 108 Hrs

Designed to teach the basic sks, concepts, and methods of beginning and intermediate costume construction and execution, through costuming for a fully realized theatrical production. The course will cover the theater plant, theater personnel, costume construction, and related technical and aesthetic applications. Students will work on a series of projects which will culminate in finished costume design/s for a play, musical production or a series of the two. Not open to students who have completed THA-40 with a grade of "C" or better.
[CSU; UC] C-ID THTR 192]

TAC-50. Introduction to Film: History Up to the 1960'S (3)
1SFSFR Eligibility for ENG-101 or ESL-101.
'BMM 0OMZ o 0EE :FBST
- F 54 Hrs

This course introduces the history and close analysis of film and early television texts from 1849-1960. The course examines the broad questions of form and content, aesthetics and meaning, and history and culture within the context of film, cinematic, and television media. Students will explore the diverse possibilities presented by the cinematic art form through an examination of a wide variety of productions, national cinemas, and film movements. Topics include modes of production, narrative and non-narrative forms, acting styles, visual design, editing, sound, genre, ideology and critical analysis. Not open to students who have completed ENG-50 with a "C" or better.
[CSU; UC; CSU-GE, AREA C1; IGETC, AREA 3]

TAC-51. Beginning TV Studio Production (3)
1BTT /P 1BTT 0QUJPO
4QSJOH 0OMZ o &WFO :FBST
- F 36 Hrs - B 54 Hrs

This course introduces theory, terminology and operation of a multi-camera television studio and control room. Topics include studio signal flow, directing, theory and operation of camera and audio equipment, switcher operation, fundamentals of lighting, graphics, video control and video recording and real-time video production.
[CSU]

TAC-52. Introduction to Stop-Motion Animation (3)
Fall Only – Odd Years
Lec 36 Hrs - Lab 54 Hrs
Introduces students to the fundamentals of animation. Surveying the history of stop-frame theatre and cinema, the course will provide a brief overview of animation history and contemporary applications. Students will provide materials.
[CSU]

TAC-53. Playwriting and Screenwriting (3)
Advisory: Eligibility for ENG-1A
Pass/No Pass Option
Fall Only – Even Years
Lec 54 Hrs
An introduction to the fundamentals of the craft of dramatic writing. Elements of plot construction and character development are emphasized through writing exercises, superior models of drama, and drafting and revision of an original script for stage or screen. Attending an out-of-class live drama performance and viewing an original screenplay may be required. Formerly THA-52. Not open to students who have completed THA-52 with a grade of "C" or better.
[CSU; UC; CSU-GE, AREA C1]

TAC-54. Video Production Lab - Single Camera (3)
Prerequisite: Eligibility for ENG-1A
Advisory: TAC-30
Pass/No Pass Option
Fall Only – Odd Years
Lec 36 Hrs - Lab 54 Hrs
An introduction to the theory, terminology, and operation of single camera video production, including composition and editing techniques, camera operation, portable lighting, video recorder operation, audio control and basic editing. This course focuses on the aesthetics and fundamentals of scripting, producing, directing on location, post-production, and exhibition/distribution. Formerly THA-50. Not open to students who have completed THA-50 with a grade of "C" or better. Students will provide materials.
[CSU]

TAC-55. Directing (3)
Advisory: Eligibility for ENG-1A
Spring Only – Even Years
Lec 36 Hrs - Lab 54 Hrs
An introduction to theatrical directing. Includes the process of preparing and analyzing a script for production, casting the show, blocking and rehearsing actors, and dealing with technical and promotion needs. It also includes directing scenes and preparing a prompt book.
[CSU; UC]

TAC-58. Introduction to Media Writing (3)
Advisory: ENG-1A
Pass/No Pass Option
Fall Only – Odd Years
Lec 54 Hrs
Basic introductory course in writing for the film and electronic media. Emphasis on preparing scripts in proper formats, including fundamental technical, conceptual, and stylistic issues related to writing fiction and non-fiction scripts for informational and entertainment purposes in film and electronic media. Includes a writing evaluation component as a significant part of the course requirement.
[CSU]

TAC-90. Theatre Outreach Project (4)
Pass/No Pass Option
Lab 216 Hrs
Focuses on the initial stages of development of specific events, projects, and festivals; productions for youth (touring, on-campus, or in classroom residencies), senior adults, or other underserved groups; presentations for charity events, educational and social organizations; or programs that will assist other organizations with staging theatre events and festivals.
[CSU]

TAC-91. New Works Project: Implementation and Practice (4)
Pass/No Pass Option
Lab 216 Hrs
This course will guide a previously identified concept/text for a new theatrical work through additional stages of drafting, revision and preparation for presentation. Development may include adaptation of non-dramatic text into dramatic form, drafting of a play from an original idea; putting scenes from a dramatic text into workshops to determine the project's potential as a musical; improvisation to suggest new treatments, etc. Formerly THA-91B. Not open to students who have completed THA-91B with a grade of "C" or better.
[CSU; UC]

TAC-92. Children's Theatre (3)
Pass/No Pass Option
Lec 36 Hrs; Lab 54 Hrs
This course will involve students in theatrical production for young audiences. Participating in the production of a children's theatre performance, students will explore elements of design, technical theatre, performance, and stage management, as well as basic dramatic forms for the K-12 level student target audiences.
[CSU]

WELDING

WLD-99. Occupational Cooperative Work Experience
        Education (1 - 8)
   1 B T T / P 1 B T T 0 Q U J P O
   ' B M M   4 Q S J O H
Designed for students employed or volunteering in a field
related to their college major or career goals to assist them in
the development of skills and responsibilities related to their
career choice. Structured objectives are developed and agreed
upon by the student, college instructor, and employer.
Students are eligible to earn 1 unit for 60 hours of volunteer
work or for 75 hours of paid work. A maximum of four credit
hours per semester may be earned up to a total of 16 semester
credit hours in the Parallel Plan. A maximum of eight credit
hours may be earned during one enrollment period up to a
total of 16 semester credit hours for the Alternate Plan.
[CSU]

WLD-150. Introduction

WLD-157. Pipe Welding (3)
  Prerequisite: WLD-150 with a grade of "C" or better.
  Advisory: WLD-151
  Pass / No Pass Option
  Spring Only
  - Lec 27 Hrs; - Lab 81 Hrs
Advanced study in SMAW and GTAW with full emphasis on pipe welding techniques. Students practice welding in the 2G, 5G and 6G positions on pipe and tubing.

WLD-158. Hard Facing and Surfacing (2)
  Prerequisite: WLD-150 with a grade of "C" or better.
  Pass / No Pass Option
  Spring Only
  - Lec 18 Hrs; - Lab 54 Hrs
Advanced study in arc welding methods with full emphasis on the practice of hardfacing and surfacing techniques used in the agricultural and construction industries. Students will practice applying surfacing with a variety of hardfacing electrodes using SMAW, OFW, FCAW, and spray surfacing methods.

SOUTH BAY REGIONAL PUBLIC SAFETY TRAINING CONSORTIUM

As a member of the South Bay Regional Public Safety Training Consortium, Hartnell College offers courses for students who are interested in Correctional officer, Law Enforcement, Reserve Police Officer, Dispatcher, Fire Technology, Probation Officer, or Juvenile Hall Counselor careers. The Consortium is funded by member colleges to provide vocational specific training which may require special facilities, special training conditions, or is presented outside of the regular schedule of college classes.

The application and registration process is completed at the South Bay Regional Public Safety Training Consortium Center campus. Although open to the public, the majority of these courses are intended to serve those who are already employed in these fields. If you have questions about these courses, or if you would like information about a career in any of these areas, please call
 (408) 270-6458 or visit the South Bay webpage at www.theacademy.ca.gov

JFA and JFS courses do not follow the Hartnell College numbering pattern. All courses are degree applicable; courses followed by a [CSU] notation transfer to CSU

JAJ-1. PC 832 Laws of Arrest (1)
 1 S F S F R Required. Each applicant not sponsored by a local or other law enforcement agency, or not a peace officer employed by a state or local agency, department, or district, submit written certification from the Department of Justice (Penal Code section 1311.5) that he/she has no criminal history background that would disqualify him/her from owning, possessing, or having a firm under his/her control.
 - F 0.47 Hrs; - B.68 Hrs

This 40-hour course covers professional orientation, laws of arrest, search, seizure, evidence, preliminary investigations, communications, and arrest techniques. May be offered as a component of the Correctional Officer Core course or as part of an 18-unit approved certificate for Reserve Police Officer. Necessary for students to meet a legally mandated training requirement as a condition of continued paid or volunteer employment.
[CSU]

JAJ-001. Dispatch Field Training Program (2 - 24)
This course is designed to provide a training continuum which integrates the acquired knowledge and skill from the Dispatcher Academy with the practical application of dispatch services. The Dispatch Training Program introduces newly assigned dispatchers to the personnel, procedures, policies and purposes of the individual agency and provides training specific to the agency. Students work one-on-one with a certified Communications Training Officer during daily duties required of the dispatcher. The Field Training Programs emphasis shall be on both training and evaluation of trainees.

JAJ-2. Basic Police Academy, Re-Qualification (3)
 1 S F S F R Required. Each applicant not sponsored by a local or other law enforcement agency, or not a peace officer employed by a state or local agency, department, or district, submit written certification from the Department of Justice (Penal Code section 1311.5) that he/she has no criminal history background that would disqualify him/her from owning, possessing, or having a firm under his/her control. Proof of completion of POST basic course or modular level.
 1 B T T / P 1 B T T 0 O M Z
 - F 0.24 Hrs; - B.60 Hrs

This 136-hour course is certified by POST guidelines for Regular Basic course requalification requirements. Required for individuals who have successfully completed the Regular Basic Course (e.g. Basic Course, Basic Academy Modular, or the State Investigators Basic course) and who have not been hired nor experienced a three-year break in service. Also required for applicants who are seeking appointment or reappointment

JAJ-6. Basic Police Academy, Modular I (13)
     - F 380 Hrs;   - 260 Hrs
This course is certified by the Commission on Peace Officer
Standards and Training (POST) and meets the content and hour
requirements established by POST for Level I Reserve Peace
Officers. This course combined with Level III and Level II
certificates meets the regular basic academy requirements.
Prerequisite: Successful completion of POST Level I course
entry requirements; POST entryreading and writing exam;
Academy physical agility test; Medical insurance; Valid

JAJ-16. Gang Training (0.5)
" E W J TCR 8pZetion of basic English Writing
1 aᴐᴇᴅ Rᴇ ᴀᴅᴜᴏ g (ji7Y s'p U~ ÊÞ• 3Hp8 1 B T T / P
1 S F S F R ᴠOᴊᴛᴊ Baᴊᴊic Certificate or equivalent.
1 B T T / P 1 B T T 0 O M Z
- Fᴑᴅ40 Hrs
This course is directed from a regional point of view to students
in the identification and investigative techniques involved in
gang activity and prosecution.The material presented is
consistent with other informaᴛion on gang activity throughout
the state. The instructors areᴊubject matter experts who meet
with others to address gang problems in the region.

JAJ-17. Accident Investigation (1)
1 S F S F R V J T J U F: POST Basic Certificate or Equivalent Valid
California Driver's License
1 B T T / P 1 B T T 0 O M Z
- Fᴑᴅ47 Hrs; - ᴃ.ᴄ1 Hrs
Designed to provide students with necessary investigative
skills that will enable them to properly conduct thorough
preliminary and follow-up investigaᴛions of vehicular collisions.
The course is structured to augment training in vehicle accident
investigation which studentshave already received, and to
provide specialized, advanced training in more sophisticated
concepts and techniques of vehicle collision investigation
which are applicable to follow-up investigations.
[CSU]

JAJ-22. Law Enforcement Seminar/Conference (0.5 - 1)
1 B T T / P 1 B T T 0 O M Z
This 8-40 hour variable course is designed as a symposium in
Law Enforcement. Topics are designed for the in-service
education and training requiring annual training to maintain
employment.

JAJ-24. Perishable Skills Program (0.5)
1 B T T / P 1 B T T 0 O M Z
1 S F S F R ᴠOᴊᴛᴊ baᴊic Certificaᴛeᴅ compliance with Penal
code section 13511.5.
This variable-unit 8-24 hour couᴙe is designed to meet POST
requirements for the Perishable Skills Program. In-service peace
officers receive training in courses such as Driver Training,
Arrest and Control, Tacticaᴌ Communication, and Firearms.
[CSU]

JAJ-25. Crime Prevention Through Environmental
Design (0.5)
0 O M Z 1 B T T / P 1 B T T 0 O M Z
This ᴃᴑᴅ47 hᴅᴜᴩ; vᴊ ᴘ.ᴌ8ᴄᴊᴅo is designed r pur En ar7 (c2Ftu)-0.0a 0 0 9
This 24-40 hour course addresseᴊthe theory, history and basic
concepts of crime prevention through environmental design.
Topics include crime prevention design strategies for public
areas and various residential developments and as the
influence of law enforcement agencies on the archiT1_2Ftu eno6iu d varᴉ

JAJ-32. Organizational Leadership (0.5 - 4)
   1 B T T / P 1 B T T 0 O M Z
   - F 0094 Hrs; - B 360 Hrs
This course provides the participant with an opportunity to explore the leadership process within organizational settings. The student will gain an understanding of the components and processes of a learning organization and gain insights into the concept of defensive reasoning within organizations.

JAJ-33. Ethics and the Challenge of Leadership (1)
   1 B T T / P 1 B T T 0 O M Z
   - F 0047 Hrs; - B 368 Hrs
Participation in case study examination, video analysis, and critical thinking to explore diversity and ethical dilemmas. Presentation and class dialogue define the challenges of a leader in today's diverse and dynamic organizations.

JAJ-34. Motorcycle Instructor (2)
This course is designed to develop instructors for both basic and in-service motorcycle training. Prepares students to become Motorcycle Course Instructors and to teach students to safely and effectively operate a police motorcycle while performing a variety of law enforcement duties. Prerequisite: Possession of valid driver's license with a motorcycle endorsement POST certification of completion from 80 hour Basic Motorcycle Course At least one year of current enforcement riding experience

JAJ-35. Homicide Investigation (0.5 - 1)
   - F 0047 Hrs; - B 368 Hrs
Provides training in the highly specialized field of Homicide Investigation to law enforcement investigators. Topics include the legal aspects of death investigation, homicide crime scene procedures, autopsy, psychological profiling, criminal psychology, laboratory work, gunshots, asphyxia, drowning, burning, cutting, stabbing, and interviewing techniques.
[CSU]

JAJ-99. Basic Motorcycle (2)
   1 S F S F R V J T J U F: 1. Commission on Police Officer Standards & Training (POST) certified local law enforcement academy diploma or equivalent as determined by the Dean of Academy Instruction. NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. 2 in Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the skills listed below. These will not be taught in the course; rather, they will be the starting point for advanced officer training that builds upon them. These minimum knowledge and skill levels are regarding: Officer Safety.
   Proper and safe arrest and control technique. Proper and safe ground fighting technique
   1 B T T / P 1 B T T 0 O M Z
Provides basic skills for motorcycle traffic patrol duties. Course includes Car Stop, Safety, Cone patterns, inspection and skill review.[CSU]

JAJ-103. Field Training Officer (1)
   1 S F S F R Must complete POST Basic Course or equivalent.
   1 B T T / P 1 B T T 0 O M Z
   - F D

JAJ-164. Crime Scene Investigation (1)

JAJ-215. Police Supervisor (2)

1 S F S F R POST Certificate or Equivalent

" E W J T P S Z POST Approved Pre-entry English Skills, Assessment Exam given by Academy

1 B T T / P 1 B T T 0 O M Z

- B C Hrs

This 80 hour course is designed for new sergeants emphasizing the basic elements of supervision, teacher training. Conference leadership, and related law enforcement subjects as outlined by the Commission on Peace Officer Standards and Training (POST).

JAJ-216. Basic Fire Dispatcher (1 - 2)

1 S F S F R Commission on Police Officer Standards & Training (POST) certified basic public safety dispatch academy diploma or equivalent as determined by the Dean of Academy Instruction. NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the skills listed below. These will not be taught in the course; rather, they will be the starting point for advanced dispatch training that builds upon them. These minimum knowledge and skill levels are regarding: Familiarity with Communication Center Radio Equipment, Familiarity with Penal, Vehicle, Welfare & Institutions, Health & Safety, Business & Professions, Government Code, and Municipal / County code books, Familiarity with types of critical incidents, Ability to read maps and street guides, knowledge of telephone answering procedures and technology, knowledge of interview techniques and call types.

1 B T T / P 1 B T T 0 O M Z

This 80-hour course is designed to familiarize public safety dispatchers with field operations and provide them with the necessary skills to effectively receive and dispatch emergency calls for service.

JAJ-220. Advanced Officer Training (0.5 - 2)

1 S F S F R V 1 J Commission on Police Officer Standards & Training (POST) certified basic law enforcement academy diploma or equivalent as determined by the Dean of Academy Instruction. NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. 2. Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the skills listed below. These will not be taught in the course; rather, they will be the starting point for advanced officer training that builds upon them. These minimum knowledge and skill levels are regarding: Familiarity with Active Shooters, Knowledge of Vehicle Operations, Familiarity with Pursuit, Knowledge of First Aid, Familiarity with Defensive

JAJ-225. Bicycle Patrol (0.5)

1 S F S F R Required Verbiage from CCCCO: POST Certified basic law enforcement academy or equivalent as determined by the Dean of Academy Instruction. Note: Approval of equivalent training is not a grantee of equivalency for state regulatory or licensing agencies who also grant equivalency. Prior to beginning this course, students must already be familiar

JFS-5. Fire Investigation 1A - Fire Cause & Origin
       Determination (1)

1 S F S F R V J State Fire Marshall certified basic firefighting
academy diploma or equivalent as determined by the Dean of
Academy Instruction. NOTE: Approval of equivalent training is
not a guarantee state regulatory or licensing agencies will also
grant equivalency. 2. Prior to beginning this course students
must already be familiar with, and be able to demonstrate all
of the skills listed below. These will not be taught in the course;
rather, they will be the starting point for advanced officer
training that builds upon them. These minimum knowledge
and skill levels are regarding: Familiarity with penal codes,
Familiarity with health codes, Familiarity with structural fires,
Familiarity with vehicular fires, and Familiarity with wildland
fires.
   - F 047 Hrs; - B 3.68 Hrs
This 40-hour course provides an introduction and basic
overview of fire scene investigation and investigative tools
required to collect, document, and preserve evidence. The
focus of this course will be on providing information about fire
scene indicators and determining the fire's origin.
[CSU]

JFS-6A. Fire Apparatus Driver/Operator 1A (1)
   1 B T T / P 1 B T T 0 O M Z
   - F 024 Hrs; - B 2.00 Hrs
Designed to provide students with information on driver
techniques for emergency vehicles and techniques of basic
inspection and maintenance of emergency vehicles, including
actual driving exercises under simulated emergency
conditions.
[CSU]

JFS-6B. Fire Apparatus Driver/Operator 1B-Pump
       Operations (1)
   - F 024 Hrs; - B 2.00 Hrs
Provides students with information, theory, methods, and
techniques for operating fire service pumps. Includes types of
pumps, engine and pump gauges, maintenance, unsafe
pumping conditions, pressure relief devices, cooling systems,
water supplies, drafting, field hydraulics, and pumping
operations.
[CSU]

JFS-8. Fire Fighter I Academy (14)
This course provides the skills and knowledge needed for the
entry level professional fire fighter to perform his/her duties
safely, effectively, and competently. Prerequisite: Physical
Agility Exam

JFS-9A. Fire Instructor 1A (1)
   - F 047 Hrs; - B 3.68 Hrs
This 40-hour course is the first of a two-course series. Includes
occupational analysis, course outline, concepts of learning,
levels of instruction, behavioral objectives, lesson plan
development, psychology of learning, and instructor
evaluation. Designed for company officers and personnel
preparing for a Training Officer position.
[CSU]

JFS-10. Rescue Systems I - Fundamentals of Heavy
       Rescue (1)
   - F 047 Hrs; - B 3.68 Hrs
This 40-hour course is designed for all emergency personnel.
Includes team organization, rescue and environmental
considerations, use of ropes, knots, rigging and pulley systems,
descending, repelling, and belaying tools and techniques,
subsurface rescue techniques, use of cribbing, wedges,
cutting/prying and hydraulic tools, use of fire service ladders in
specialized rescue situation, and day- and night- simulated
rescue exercises.

JFS-14. Fire CDF Academy (2 - 4)
   - F 9040 Hrs; - B 3.60 Hrs
This 80-160 hour course provides a basic firefighter course
oriented toward the equipment utilized on CDF engines.
Fundamentals of wildland fire control pumping skills, incident
command and techniques of controlling other emergency
incidents are covered with a strong ab24l4p-n8 Tc 0Fand -0.0

JFS-201. Auto Extrication (0.5)
 1 B T T / P 1 B T T 0 O M Z
 - F 0 24 Hrs; - B C 1 Hrs
Familiarization and knowledge of automobile construction technology and the equipment used at auto accidents to free trapped patients are essential factors in the safe performance of basic firefighter duties. It is the responsibility of the firefighter to operate tools and equipment in the most efficient and safe manner possible on the emergency scene.

JFS-202. Hazardous Materials 1A Basic Chemistry of
 Hazardous Materials (1)
 1 B T T / P 1 B T T 0 O M Z
 - F 0 47 Hrs; - B C 8 Hrs
Designed to provide students with a basic foundation in chemistry and physics as they relate to hazardous materials incidents. Topics include an overview of chemical and physical properties, chemical structures and formulas, covalent and ionic bonding, different types of chemical compounds, DOT hazard classes, and the combustion process as it relates to hazardous materials.

JFS-203. Hazardous Materials 1B-APPLIED Chemistry
 Field ID of Chemicals (1)
 1 S F S F R V J T J U F: JFS-202 with a grade of "C" or better
Designed for hazardous materials emergency responders. Emphasizes application of topics learned in Hazardous Materials 1A. Includes the use of field monitoring and detection devices, sample collection of equipment, and field identification procedures for verifying, identifying, and classifying unknown chemicals.

JFS-204. Hazardous Materials 1C - Incident
 Consideration (1)
 1 S F S F R V JFS-203 with a grade of "C" or better.
 - F 0 47 Hrs; - B C 8 Hrs
Designed for hazardous materials emergency responders. Provides an introduction to the Haz Mat Incident Command System, concepts associated with haz mat response activities, and an in-depth study of incident-specific considerations influencing haz mat emergencies. Introduction to site planning, contingency planning, protective action options, and meteorological considerations.

JFS-205. Hazardous Materials 1D - Tactical Field
 Operation (1)
 1 S F S F R V JFS-204 with a grade of "C" or better.
 - F 0 47 Hrs; - B C 8 Hrs
Designed for hazardous materials emergency responders. Provides "hands-on" training in haz mat confinement and control operations, including diking dams, absorbent materials, methods and procedures of plugging, patching, sampling, and over packing. Use of chemical protective equipment and decontamination methods and procedures. Information on other tactical considerations, such as haz mat triage, sabotage, preservation of evidence, and EMS considerations is also provided.

JFS-206. Hazardous Materials 1F- Special
 Mitigation Techniques (1)
 1 S F S F R V JFS-205 with a grade of "C" or better.
 - F 0 47 Hrs; - B C 8 Hrs
Intensive "hands-on" introduction to specialized mitigation techniques employed by the Hazardous Materials Specialist. Instruction includes plugging, patching, and repairing railroad cars, intermodel tanks, and highway cargo tank cars, advanced chemical field identification testing procedures, and fixed facility repair considerations.

JFS-207. Hazardous Materials 1G - Advanced Field
 Operations (1)
 1 S F S F R V JFS-206: Hazardous Materials 1F - Special Mitigation Techniques with a grade of "C" or better.
 - F 0 47 Hrs; - B C 8 Hrs
Culmination of Modules 1A-1F in an environment of "hands-on" full-scale exercises. Includes evaluation of performance as a member of a haz mat team in a series of simulated haz mat incidents.

JFS-208. Fire Officer Supervisor (2)
 1 S F S F R V Employment with a Fire Department as a full time first line officer.
 1 B T T / P 1 B T T 0 O M Z
 - F 0 47 Hrs; - B C 20 Hrs
This is an 80-hour management program designed to teach supervision and management skills to current first-line officers in the fire service. Candidates are chosen from amongst eligible supervisors by department administrators.
[CSU]

JFS-210. First Aid/CPR Instructor (1)
 1 B T T / P 1 B T T 0 O M Z
This course prepares students to present instruction and certify physical skills in accordance with Title 22, California Code of Regulations. At the conclusion of the course, students will be prepared to develop a POST-certified First Aid/CPR/AED course compliant with Title 22 regula

JFS-212. Hazardous Materials-Incident Commander
        Training (0.5)
    - F006 Hrs; - B 3.5 Hrs
Designed to provide the Incident Commander with the skills
and competency necessary to mitigate an emergency incident,
initiate action, and ensure the restoration of normal services
with a comprehensive resource-management approach.

JFS-214. Wildland Fire Chain Saws (0.5)
    1 S F S F R Firefighter 1 Academy certificate or equivalent.
    1 B T T / P 1 B T T 0 O M Z
This course provides introductory level training for firefighters
on the use of chainsaws in wild land fire management, tactical
fireline application.

JFS-216. Fire Continued Professional Training (3)
    1 S F S F R Fire Fighter 1 Academy or equivalent
    1 B T T / P 1 B T T 0 O M Z
This course is designed to update, improve, and assess the
professional skills required by municipal and wildland
firefighters. Topics covered include structure firefighting,
emergency medical skills, first responder operations, firefighter
rescue and survival techniques, and required updates on sexual

JFS-272. Wildland Fire Origin and Cause Determination

FI-210 (0.5)

1 S F S F R V J T J U F