Fresno City College

2010-2012
Catalog Addendum

August 2010

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TRANSFER REQUIREMENTS

Changes to Pages 36-50

California State University Transfer Course List (CSU)

Change: new
Graphic Communications 51 ***effective Spring 2011***

Change: delete
Honors 1B ***effective Fall 2010***
Psychology 14 ***effective Spring 2011***
Welding 19 ***effective Spring 2011***

DIVISIONS

Changes to Pages 84-94

APPLIED TECHNOLOGY

Maintenance Mechanic (Major #806V) ***revised program, effective Fall 2010***
A Certificate of Completion will be awarded for successful completion of each CTC programs with a minimum "C" grade.

Student Learning Outcomes::

1. Demonstrate satisfactory knowledge of electricity fundamentals, motors, circuit types, Variable Frequency Drives, schematics, symbols, electrical test instruments and vocabulary.
2. Demonstrate satisfactory knowledge of hydraulics/pneumatics fundamentals, schematics, pumps, actuators, valves, pipes and fittings, oils and lubrication.
3. Demonstrate satisfactory knowledge of oxyacetylene and arc welding processes, common hand tools, threads and fasteners, parts and operation of engine lathes, milling machines, drill presses and precision measuring tools.

ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS

Changes to Pages 97-172

BUSINESS & TECHNOLOGY

BUSINESS OFFICE ASSISTANT – MAJOR #2201 ***revised program, Fall 2010***

This certificate option is designed to meet the training needs for qualified entry level employment. Students are required to earn grades of "C" or better in all courses.

Certificate of Achievement

Student Learning Outcomes:

1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.
2. Type a minimum of 40 words per minute.
3. Key a minimum of 110 correct strokes per minute on a ten-key calculator.

Courses		Units
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 9	Computer Applications I	4
BT 19	Work Experience (Cooperation), Occupational	3
BT 23	Job Search and Workplace Skills	3
BT 29	Microsoft Word II	2
BT 116	Spelling and Vocabulary Building	2
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1
BT 270	Business Math and Ten Key	2
BT 271	Business Grammar Fundamentals	2
BT 280	Basic Office Procedures	2
		Total 30

Note: Students are required to earn grades of "C" or better in all classes; demonstrate the ability to type 40 words per minute with 97% accuracy on three five-minute timed writings; and key 110 correct strokes per minute on three five-minute timed writings using the ten-key calculator.

CLERICAL TRAINING – MAJOR #247V ***revised program, Fall 2010***

This option will develop and improve skills for those desiring office employment and leads to a certificate. Emphasis on records management, keyboarding, grammar, 10-key, MS Word, MS Excel, human relations, telephone techniques, resume/interview, and computer literacy. Students are required to perform at 70 percent or better for successful completion of the program.

Certificate

Student Learning Outcomes:

1. Use technology effectively in an office environment.
2. Type a minimum of 40 words per minute.
3. Key a minimum of 110 correct strokes per minute on a ten-key calculator.

COMPUTER APPLICATIONS SOFTWARE – MAJOR #2202 ***revised program, Fall 2010***

This certificate option prepares students for Microsoft applications certification. Students are required to earn grades of "C" or better.

Certificate

Student Learning Outcomes:

1. Demonstrate proficiency in office applications software.

LEGAL OFFICE PROFESSIONAL, FORMERLY LEGAL ADMIN ASST EMPH – MAJOR #2102 ***revised program, Fall 2010***

Training is designed to prepare students for employment in a legal office environment. Students may earn more than one certificate in addition to the Associate in Science degree and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Associate in Science Degree

Student Learning Outcomes:
1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		**Units**
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4
BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis Area Units		
BT 19	Work Experience (Cooperation), Occupational	2
BT 28	Microsoft Word I	2
BT 29	Microsoft Word II	2
BT 140	Legal Office Administration *or*	3
PLEGAL 156	Legal Office Administration	3
PLEGAL 7	Law Offices Practices	3
PLEGAL 14	Law Office Computing	3
	Total	**46**

Note: Requires additional general education units for AS degree.

LEGAL OFFICE PROFESSIONAL, FORMERLY LEGAL ADMIN ASST EMPH – MAJOR #2102 ***revised program, Fall 2010***
Training is designed to prepare students for employment in a legal office environment. Students may earn more than one certificate and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Certificate of Achievement

Student Learning Outcomes:
1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		**Units**
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4
BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis Area Units		
BT 19	Work Experience (Cooperation), Occupational	2
BT 28	Microsoft Word I	2
BT 29	Microsoft Word II	2
BT 140	Legal Office Administration *or*	3
PLEGAL 156	Legal Office Administration	3
PLEGAL 7	Law Offices Practices	3
PLEGAL 14	Law Office Computing	3
	Total	**46**

MEDICAL BILLING ASSISTANT – MAJOR #2242 ***revised program, Fall 2010***
This certificate option is designed to meet the training needs for qualified entry level employment. Students are required to earn grades of "C" or better in all courses.

Certificate of Achievement

Student Learning Outcomes:
1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

2. Type a minimum of 30 words per minute.
3. Key a minimum of 110 correct strokes per minute on a ten-key calculator.

Courses		**Units**
BT 1	Typing/Document Processing I	4
BT 19	Work Experience (Cooperation), Occupational	3
BT 23	Job Search and Workplace Skills	3
BT 27	Microsoft Outlook	1
BT 43	Medical Office Vocabulary	1
BT 116	Spelling and Vocabulary Building	2
BT 147	Medical Management Software	2
BT 148	Medical Insurance Forms	3
BT 240	Legal Issues in Medical Billing	1
BT 270	Business Math and Ten Key	2
BT 271	Business Grammar Fundamentals	2
BT 280	Basic Office Procedures	2
		Total 26

Note: Students are required to earn grades of "C" or better in all classes; demonstrate the ability to type 30 words per minute with 97% accuracy; and key 110 correct strokes per minute on the ten-key calculator .

MEDICAL OFFICE PROFESSIONAL, FORMERLY MED ADMIN ASST EMPH – MAJOR #2381 ***revised program, Fall 2010***

Training is designed to prepare students for employment in a medical office environment. Students may earn more than one certificate in addition to the Associate in Science degree and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Associate in Science Degree

Student Learning Outcomes:
1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		**Units**
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4
BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis Area		**Units**
BT 10	Computer Applications II	4
BT 19	Work Experience (Cooperation), Occupational	2
BT 43	Medical Office Vocabulary	1
BT 144	Medical Administrative Assistant	3
BT 148	Medical Insurance Forms	3
		Total 44

Note: Requires additional general education units for AS degree.

MEDICAL OFFICE PROFESSIONAL, FORMERLY MED ADMIN ASST – MAJOR #2381 ***revised program, Fall 2010***

Training is designed to prepare students for employment in a medical office environment. Students may earn more than one certificate and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Certificate of Achievement

Student Learning Outcomes:
1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		Units
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4

BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis area		Units
BT 10	Computer Applications II	4
BT 19	Work Experience (Cooperation), Occupational	2
BT 43	Medical Office Vocabulary	1
BT 144	Medical Administrative Assistant	3
BT 148	Medical Insurance Forms	3
	Total	**44**

MICROSOFT WORD – MAJOR #2323 ***revised program, Fall 2010***

This option is designed to assist students pursuing Microsoft Word certification. Students are required to earn grades of "C" or better in all courses.

Certificate

Student Learning Outcomes:

1. Demonstrate the advanced features of Microsoft Word.

OFFICE PROFESSIONAL I, FORMERLY CLERICAL EMPH – MAJOR #2061 ***correction***

Training is designed to provide skills for employment in a variety of professional office environments. Students may earn more than one certificate in addition to the Associate in Science degree and are required to earn grades of "C" or better in the Office Professional I courses.

Associate in Science Degree

OFFICE PROFESSIONAL I, FORMERLY CLERICAL EMPH – MAJOR #2061 ***correction***

Training is designed to provide skills for employment in a variety of professional environments. Students are required to earn grades of "C" or better in the Office Professional I courses.

Certificate of Achievement

OFFICE PROFESSIONAL II, FORMERLY ADMIN ASSIST EMPH – MAJOR #2212 ***revised program, Fall 2010***

Training is designed to provide advanced skills for employment in a variety of professional office environments. Students may earn more than one certificate in addition to the Associate in Science degree and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Associate in Science

Student Learning Outcomes:

1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		**Units**
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4
BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis Area		**Units**
BT 10	Computer Applications II	4
BT 13	Applied Business Correspondence	2
BT 14	Windows	2
BT 19	Work Experience (Cooperation), Occupational	2
BT 131	Applied Accounting	4
	Total	**45**

Note: Requires additional general education units for AS degree.

OFFICE PROFESSIONAL II, FORMERLY ADMIN ASSIST EMPH – MAJOR #2212 ***revised program, Fall 2010***

Training is designed to provide advanced skills for employment in a variety of professional office environments. Students may earn more than one certificate and are required to earn grades of "C" or better in the Office Professional I and emphasis courses.

Certificate of Achievement

Student Learning Outcomes:

1. Achieve a satisfactory evaluation from a supervisor in a work experience setting.

Required Core Courses (Office Professional I)		**Units**
BT 1	Typing/Document Processing I	4
BT 2	Typing/Document Processing II	4
BT 4	Ten-Key Calculation	2
BT 6	Records Management	3
BT 9	Computer Applications I	4
BT 11	Today's Office	3
BT 23	Job Search and Workplace Skills	3
BT 112	Business English	3
BT 115	Refresher Math	3
BT 122	Typing Skillbuilding	1
BT 123	Ten-Key Skillbuilding	1

Emphasis Area		**Units**
BT 10	Computer Applications II	4
BT 13	Applied Business Correspondence	2
BT 14	Windows	2
BT 19	Work Experience (Cooperation), Occupational	2
BT 131	Applied Accounting	4
		Total 45

COMMUNICATION

COMMUNICATION FORMERLY SPEECH – Major #5430 ***revised program, Spring 2011***

Student Learning Outcomes:

1. Upon successful completion of the Communication major students will demonstrate understanding of core communication theories and principles.
2. Upon successful completion of the Communication major students will be able to organize, develop, and deliver an effective presentation.
3. Upon successful completion of the Communication major students will be able to critically evaluate various communication situations.

DANCE

DANCE – Major #5390 (Non Transfer) ***revised program, Fall 2010***

The associate degree in dance provides a base of training in dance technique and practical experience in concert performance and production work as well as theoretical background in dance composition. Possible careers include choreographer+, dance director, dance historian+, dancer, dance teacher+, dance therapist+, fitness/aerobic instructor, movement notator, performer, reconstructor, and recreation leader.

+Bachelor degree or higher required

Associate in Arts Degree

Student Learning Outcomes:

1. Participate in a public dance performance.
2. Describe characteristic elements and form of various dance choreography.

TOTAL UNITS REQUIRED.....36-39

CORE COURSES		**Units**
DANCE 10	Beginning Modern Dance Technique	1
DANCE 12A	Beginning Ballet Part 1, *or*	
DANCE 12B	Beginning Ballet Part 2	1
DANCE 13 *	Intermediate Ballet	1
DANCE 14	Beginning Jazz Dance Technique, *or*	
DANCE 15 *	Intermediate Jazz Dance Technique	1
DANCE 20A	Beginning Modern Dance Composition	3
DANCE 20B	Intermediate Modern Dance Composition	3

DANCE 21	Dance Workshop Performance	2 - 4
DANCE 22	Dance Theatre Performance	2 - 3
DANCE 28	Intermediate Modern Dance Technique	1
DANCE 30	Dance Appreciation	3
MUS 3	Music Fundamentals	3
PE 17	Hatha Yoga, *or*	
DANCE 9	Dance Conditioning	1

**Class level dependent on entry-level experience.*

NONTRANSFER (PROFESSIONAL) PROGRAM
Students planning a career in dance upon leaving Fresno City College are urged to complete additional courses in physical education, music and theatre arts.

REQUIRED COURSES		**Units**
MUS 12	Music Appreciation	3
PE 20	Care and Prevention of Athletic Injuries	4

At least one of the following courses:		**Units**
TA 12	Fundamentals of Interpretation	3
TA 41	Beginning Acting	3

At least four units from:		**Units**
TA 26	Theatre Crafts II	3
TA 27B	Introduction to Lighting Design	3
TA 28	Introduction to Stage Makeup	2
TA 35	Costume Crafts	3

Note: The associate degree additionally requires the completing of the requirements listed on page 35 with a 2.0 or better GPA .

DANCE – Major #5390 (Transfer) ***revised program, Fall 2010***
The associate degree in dance provides a base of training in dance technique and practical experience in concert performance and production work as well as theoretical background in dance composition. Possible careers include choreographer+, dance director, dance historian+, dancer, dance teacher+, dance therapist+, fitness/aerobic instructor, movement notator, performer, reconstructor, and recreation leader.

+Bachelor degree or higher required.

Associate in Arts Degree

Student Learning Outcomes:
1. Participate in a public dance performance.
2. Describe characteristic elements and form of various dance choreography.

TOTAL UNITS REQUIRED.....35-38

REQUIRED CORE COURSES		**Units**
DANCE 10	Beginning Modern Dance Technique	1
DANCE 12A	Beginning Ballet Part, *or*	
DANCE 12B	Beginning Ballet Part 2	1
DANCE 13 *	Intermediate Ballet	1
DANCE 14	Beginning Jazz Dance Technique, *or*	
DANCE 15 *	Intermediate Jazz Dance Technique	1
DANCE 20A	Beginning Modern Dance Composition	3
DANCE 20B	Intermediate Modern Dance Composition	3
DANCE 21	Dance Workshop Performance	2 - 4
DANCE 22	Dance Theatre Performance	2 - 3
DANCE 28	Intermediate Modern Dance Technique	1
DANCE 30	Dance Appreciation	3
MUS 3	Music Fundamentals	3
PE 17	Hatha Yoga, *or*	
DANCE 9	Dance Conditioning	1

**Class level dependent on entry-level experience.*

TRANSFER PROGRAM

Most four-year colleges and universities will require a dance audition to determine level of placement upon transfer. An effective program of study can best be obtained by consulting directly with the department of the target institution as early as possible.

COURSE OPTIONS: Select 13 Units		**Units**
ART 2	Art Appreciation	3
ART 3	Two-Dimensional Design	3
ART 4	Three-Dimensional Design	3
BIOL 20	Human Anatomy	4
DANCE 9	Dance Conditioning	1
DANCE 10	Beginning Modern Dance Technique	1
DANCE 11	Introduction to Social Dance	1
DANCE 12A	Beginning Ballet Part 1	1
DANCE 13	Intermediate Ballet	1
DANCE 14	Beginning Jazz Dance Technique	1
DANCE 15	Intermediate Jazz Dance Technique	1
DANCE 16	Beginning Tap Dance	1
DANCE 17	Beginning Mexican Folklorico Dance	4
DANCE 18	Intermediate Tap Dance	1
DANCE 21	Dance Workshop Performance	2 - 4
DANCE 22	Dance Theatre Performance	2 - 3
DANCE 27	Advanced Mexican Folklorico Dance	4
MUS 12	Music Appreciation	3
PE 17	Hatha Yoga	1
PE 20	Care and Prevention of Athletic Injuries	4

ELECTRICAL SYSTEMS TECHNOLOGY

AUTOMATION CONTROL TECHNICIAN – MAJOR #8179 ***revised program, Spring 2011***

Training is designed to prepare the student for employment as an industrial and/or building automation technician.

Certificate of Achievement

Student Learning Outcomes:

1. Develop and implement a strategy utilizing HVAC controls.
2. Design and implement a network topology for a solution to a proposed communication problem.
3. Configure the I/O for a PLC project using PLC software.
4. Specify, install, and calibrate an instrumentation circuit for the solution of a problem.
5. Identify the role of a supervisory controller within a DDC network.

FIRST YEAR

First Semester		**Units**
AT 10	Technical Computer Applications	2
EST 51	Direct Current Fundamentals of Electronics	3
EST 55B	Facility Automation	3
EST 57C	Voice and Data Cabling	3

Second Semester		**Units**
AC 57	System Configuration and Control	2
EST 55A	Digital Concepts	3
EST 58	Programmable Logic Controllers	3

SECOND YEAR

First Semester		**Units**
AC 250	Digital Unitary Controls	2
EST 55C	SCADA Systems	2
EST 59	Instrumentation Systems	3

Second Semester		**Units**
AC 251	Digital VAV Controls	1
AC 252	DDC Network Controllers	2
		Total 29

CISCO CCNA PREPARATION, FORMERLY CISCO CERTIFICATION – MAJOR #8174 ***revised program, Spring 2011***

This option is to prepare students for the CISCO Certified Network Associate (CCNA) certification test. By completing this option, a student will have basic knowledge of networking hardware, including routers.

Certificate of Achievement

Student Learning Outcomes::

1. Construct and apply an IP addressing scheme for a simple network problem.
2. Configure a router for either static and/or dynamic IP routing for a given scenario.
3. Configure a switch for implementing the VLAN protocols.
4. Construct a WAN network utilizing the requested protocol over multiple routers and WAN service providers.

Required Course Sequence		**Units**
EST 61	Networking Fundamentals	3
EST 62	Routing Protocols and Concepts	3
EST 63	Advanced Routing and Switching	3
EST 64	Advanced Networking and Management	3
	Total	**12**

CISCO CCNP PREPARATION – MAJOR #8165 ***revised program, Spring 2011***

This option is to prepare students for the CISCO Certified Networking Professional (CCNP) certification test. By completing this option, a student will have advanced knowledge of networking hardware, including routers and switches.

Certificate of Achievement

Student Learning Outcomes::

1. Implement appropriate technologies to build a scalable routed network using multilayer switching technologies.
2. Construct a network for multilayer switching, and configure the network devices accordingly.
3. Describe and configure a site-to-site IPSec VPN.
4. Design and implement an IP QoS strategy in a network.

Required Course Sequence		**Units**
EST 65	Building Scalable Internetworks	3
EST 66	Building Multilayer Switched Networks	3
EST 67	Implementing Secure Converged WANs	3
EST 68	Optimizing Converged Networks	3
	Total	**12**

COMMUNICATIONS TECHNOLOGY – MAJOR #8175 ***revised program, Spring 2011***

Training is designed to prepare the student for employment as a communication technician.

Certificate of Achievement

Student Learning Outcomes:

1. Describe the basic parameters when working on electronic circuits
2. Demonstrate a comprehension of the basic operation of communication systems for analog signals.
3. Demonstrate a comprehension of the basic operation of communication systems for digital signals.
4. Design and implement a network topology for a solution to a proposed communication problem.

Suggested sequence of courses

First Semester		**Units**
EST 52	Alternating Current Fundamentals	3
EST 53	Lab Safety Practices	2
EST 54	Integrated Devices	3

Second Semester		**Units**
EST 57A	Analog Communications	3
EST 57B	Digital Communications	3
EST 57C	Voice and Data Cabling	3
	Total	**17**

CONTROL SYSTEMS – MAJOR #8176 ***revised program, Spring 2011***

Training in this specialized field is designed to prepare the student for employment as a control and instrument technician.

Certificate of Achievement

Student Learning Outcomes:

1. Define and apply formulas (Ohm's and Kirchoff's Laws) for electrical circuit solution.

2. Create a digital logic circuit using appropriate logic gates.
3. Contrast the different parts of a Supervisory Control and Data Acquisition System (SCADA).
4. Understand the purpose, functions, and operations of a PLC.
5. Specify, install, and calibrate an instrumentation circuit for the solution of a problem.

Suggested course sequence

First Semester		**Units**
EST 51	Direct Current Fundamentals of Electronics	3
EST 55A	Digital Concepts	3
EST 57C	Voice and Data Cabling	3

Second Semester		**Units**
EST 58	Programmable Logic Controllers	3
EST 59	Instrumentation Systems	3
EST 55C	SCADA Systems	2
		Total 17

ELECTRICAL LINE/UTILITY WORKER – MAJOR #8181 ***revised program, Spring 2011***

This option is to prepare students for entry level employment as an electrical lineman or utility worker. By completing this option students will also be better prepared for the pre-employment testing process used by utility companies

Certificate of Achievement

Student Learning Outcomes:

1. Analyze and evaluate potential employment opportunities.
2. Recognize, analyze and compute circuit values using the fundamental laws and rules.
3. Demonstrate safe and appropriate application of electrical instruments for circuit simulations.

Courses		**Units**
AT 40	Preparing for Employment Opportunities	3
EST 271	Electrical Line/Utility Worker	12
		Total 15

ELECTRICAL SYSTEMS TECHNOLOGY, FORMERLY ELECT TECHNOLOGY – MAJOR #8171 ***revised program, Spring 2011***

Electrical Systems Technology provides an opportunity for students to prepare for employment in the electronics/electrical industry. Specific occupational preparation is provided in the following program.

Associate in Science Degree and Certificate of Achievement

Student Learning Outcomes:

1. Define and apply various numbering systems (i.e. Binary, hexadecimal and Octal).
2. Develop a motor logic control solution to using the define parameters given.
3. Demonstrate a comprehension of the basic operation of communication systems for digital signals.
4. Design and configure a control application using a PLC and PLC software.
5. Specify, install, and calibrate an instrumentation circuit for the solution of a problem.

RECOMMENDED COURSE SEQUENCE

FIRST YEAR

First Semester		**Units**
AT 10	Technical Computer Applications	2
EST 51	Direct Current Fundamentals of Electronics	3
EST 52	Alternating Current Fundamentals	3
EST 54	Integrated Devices	3

Second Semester Units		
EST 53	Lab Safety Practices	2
EST 55A	Digital Concepts	3
EST 55B	Facility Automation	3
EST 57C	Voice and Data Cabling	3
EST 96A	National Electrical Code Part 1, or	
EST 96B	National Electrical Code Part 2, or	
EST 96C	National Electrical Code Part 3	3

SECOND YEAR

First Semester		**Units**
EST 55C	SCADA Systems	2
EST 57A	Analog Communications	3

EST 57B	Digital Communications	3
EST 58	Programmable Logic Controllers	3

Second Semester		**Units**
AT 40	Preparing for Employment Opportunities	3
EST 56A	Wiring Methods	3
EST 56B	Motor Controls	3
EST 56C	Industrial Electronics	3
EST 59	Instrumentation Systems	3
	Total	**51**

INDUSTRIAL CONTROLS – MAJOR #8180 ***revised program, Spring 2011***

This option is to prepare students for the Industrial Controls Certificate. By completing this option, a student will have training that emphasizes industrial control systems.

Certificate

Student Learning Outcomes:

1. Define and apply digital numbering systems (i.e. Binary, hexadecimal and Octal).
2. Specify, install, and calibrate an instrumentation circuit for the solution of a problem.
3. Write programs in ladder logic, store and troubleshoot and operate system to perform instructor determined tasks.

REQUIRED COURSE SEQUENCE		**Units**
EST 50	Introduction to Electronics, *or*	
MMCTC 371	Fundamentals of Hydraulics and Pneumatics	0-2.5
EST 55A	Digital Concepts	3
EST 58	Programmable Logic Controllers	3
EST 59	Instrumentation Systems	3
	Total	**9-11.5**

NETWORK SECURITY – MAJOR #8177 ***revised program, Spring 2011***

Training is designed to prepare the student for employment as a networking technician emphasizing network security.

Certificate of Achievement

Student Learning Outcomes:

1. Configure a router for communication on both Ethernet and serial ports with given instructions or scenarios.
2. Configure a switch for implementing the VLAN protocols.
3. Construct a WAN network utilizing the requested protocol over multiple routers and WAN providers.
4. Create and implement (through the configuration of network devices) a security policy per a scenario.

Required Course Sequence		**Units**
EST 61	Networking Fundamentals	3
EST 62	Routing Protocols and Concepts	3
EST 63	Advanced Routing and Switching	3
EST 64	Advanced Networking and Management	3
EST 269A	Fundamentals of Network Security – Firewalls	3
	Total	**15**

NETWORKING/COMPUTER TECHNICIAN – MAJOR #8172 ***revised program, Spring 2011***

This option is designed to meet the training needs for qualified entry-level microcomputer and networking technicians.

Associate in Science and Certificate of Achievement

Student Learning Outcomes:

1. Construct and apply an IP addressing scheme for a simple network problem.
2. Configure a router for communication on both Ethernet and serial ports with given instructions or scenarios.
3. Define and apply digital numbering systems.
4. Explain how networks are interconnected and understand how operating system software affects the hardware.
5. Install and configure the network server operating system software, and manage servers, users, and resources with a server manager utility, and monitor network system performance.

REQUIRED CORE COURSES		**Units**
BT 23 *	Job Search and Workplace Skills	3
BT 112	Business English, *or*	
ENGL 159	Business English	2-3
CIT 15	Computer Concepts	3
CIT 40	Computer Operating Systems	4
CIT 45 **	Data Communications	3

CIT 50	Fundamentals of Networking	4
EST 19	Work Experience (Cooperative), Occupational, *or*	
CIT 19	Work Experience (Cooperative), Occupational	2
EST 55A	Digital Concepts	3
EST 60	A+PC Maintenance	3
EST 61	Networking Fundamentals	3
EST 62	Routing Protocols and Concepts	3

Suggested sequence of courses:

First Semester		**Units**
CIT 15	Computer Concepts	3
CIT 45 **	Data Communications	3
EST 55A	Digital Concepts	3
EST 60	A+PC Maintenance	3
EST 61	Networking Fundamentals	3

Second Semester		**Units**
BT 23 *	Job Search and Workplace Skills	3
BT 112	Business English, *or*	
ENGL 159	Business English	2-3
CIT 40	Computer Operating Systems	4
CIT 50	Fundamentals of Networking	4
EST 19	Work Experience (Cooperative), Occupational, *or*	
CIT 19	Work Experience (Cooperative), Occupational	2
EST 62	Routing Protocols and Concepts	3
	Total	**33-34**

**AT 40 can be substituted for BT 23.*
***EST 57A and EST 57B may be substituted for CIT 45.*

Note: Associate degree requirements are listed on page 33.

WIND TURBINE TECHNOLOGY – MAJOR #8601 ***revised program, Spring 2011***

This curriculum is designed to prepare the student for entry into the field of utility scale Wind Power Generation.

Certificate of Achievement

Student Learning Outcomes:

1. Identify and list the hazards of working around electrical generation equipment.
2. Illustrate the accepted safety practices in the use of electrical measuring devices (i.e. multimeters, amp meters, infrared testers, etc.)
3. Explain the importance and inter-relationship between turbine maintenance and turbine performance.

SUGGESTED SEQUENCE OF COURSES:

FIRST YEAR

FIRST SEMESTER		**Units**
EST 80	Introduction to Energy Systems of Past, Present and Future	2
EST 51	Direct Current Fundamentals of Electronics	3
HLTH 2	First Aid and Safety	2

SECOND SEMESTER		**Units**
WTT 1	Introduction to Safety in the Utility Wind Turbine Industry	2.5
EST 52	Alternating Current Fundamentals	3
EST 96D	National Electrical Code-Electrical Safety	3

SECOND YEAR

FIRST SEMESTER		**Units**
WTT 2	Wind Generation and Electrical Circuits	2.5
EST 58	Programmable Logic Controllers	3

SECOND SEMESTER Units		
WTT 3	Wind Turbine System Maintenance and Repair	2.5
EST 55C	SCADA Systems	2
	Total	**25.5**

WIRELESS NETWORKS – MAJOR #8178 ***revised program, Spring 2011***

Training is designed to prepare the student for employment as a networking technician emphasizing Wireless Local Area Networks.

Certificate

Student Learning Outcomes:

1. Identify network devices, and at which level of the OSI model they are applicable to.
2. Configure a router for communication on both Ethernet and serial ports with given instructions or scenarios.
3. Recognize and apply Wireless LAN topologies for a scenario or set of parameters.

Required Course Sequence:

First Semester		**Units**
EST 61	Networking Fundamentals	3

Second Semester		**Units**
EST 62	Router Protocols and Concepts	3
EST 269B	Fundamentals of Wireless LANs	3
		Total 9

ENGINEERING

ENGINEERING – MAJOR #3010 ***revised program, Spring 2011***

Recommended Transfer Program

The following curriculum satisfies the lower division requirements of most colleges and universities that offer degrees in engineering. Depending upon the engineering field selected, students may be required to complete additional prerequisite classes. The student is strongly advised to consult with an advisor and compare his/her planned program with that listed in the catalog of the senior institution to which he/she expects to transfer. Fresno City College offers courses that fulfill prerequisites which have not been completed in high school.

Associate in Science Degree

Student Learning Outcomes:

1. Identify the broad context of engineering problems, including describing the problem conditions, identifying possible contributing factors, and generating alternative solution strategies.
2. Design the fundamental elements of engineering systems, system components and processes, with a good understanding of associated safety, quality, schedule and cost considerations.
3. Undertake laboratory, field and other data collection efforts using commonly used measurement techniques to support the study and solution of engineering problems.
4. Employ mathematics, science, and computing techniques in a systematic, comprehensive, and rigorous manner to support the study and solution of engineering problems.
5. Exhibit good teamwork skills and serve as effective members of multidisciplinary project teams and articulate and justify technical solutions to diverse audiences through oral, written, and graphical communication.
6. Understand the importance of professional and ethical responsibilities of engineers, and be aware of codes of conduct and other sources of guidance for professionally ethical decision-making.

Engineering: select a minimum of nine units from the following.		**Units**
ENGR 1A	Elementary Plane Surveying 1	4
ENGR 1B	Elementary Plane Surveying 2	4
ENGR 2	Graphics	4
ENGR 4	Engineering Materials	3
ENGR 6	Circuits with Lab	4
ENGR 8	Statics	3
ENGR 10	Introduction to Engineering	2
ENGR 11	Manufacturing Processes	3

Physics: select two or three courses from the list depending on your engineering major.		**Units**
PHYS 4A	Physics for Scientists and Engineers	4
PHYS 4B	Physics for Scientists and Engineers	4
PHYS 4C	Physics for Scientists and Engineers	4

Chemistry: select one set of chemistry courses listed.		**Units**
CHEM 1A	General Chemistry	5
	and	
CHEM 1B	General Chemistry and Qualitative Analysis	5
	or	
CHEM 3A	Introductory General Chemistry	4
	and	

CHEM 3B	Introductory Organic & Biological Chemistry	3

Mathematics: 5A, 5B, and 6 are required. Math 7 may be required depending on your Engineering major. Units

MATH 5A	Mathematics Analysis I	5
MATH 5B	Mathematical Analysis II	4
MATH 6	Mathematical Analysis III	4
MATH 7 *	Introduction to Differential Equations	4

Programming courses: Two programming courses listed below.		**Units**
CSCI 40	Programming Concepts & Methodology I	4
CSCI 41	Programming Concepts & Methodology II	4
		Total 45 – 56

*****Math 7 not required for Geomatics Engineers.

FIRE TECHNOLOGY

BASIC FIRE ACADEMY – MAJOR #883B ***revised program, Spring 2011***

Preparation of students for entry-level employment as a firefighter; provides students with entry-level skills in fire suppression, hazardous materials mitigation, fire prevention, fire investigation, vehicle extrication, urban search and rescue, fire chemistry, fire apparatus operation, confined space rescue operations, incident command, and an intensive physical fitness training program; course is offered on an intensive daytime format or an extended evening and weekend format.

Certificate of Achievement

Student Learning Outcomes:

1. 70% of the students who successfully complete the California State Fire Marshal Fire Fighter One training requirements will become eligible for entry level employment with most fire agencies.

Emergency Medical Technician I – Major #8842 ***revised program, Spring 2011***

Designed to prepare personnel in the fire, life safety and related fields to render care to the ill and injured in the prehospital environment, in accordance with all federal, state and local Emergency Medical Services authorities.

Certificate

Student Learning Outcomes:

1. Upon successful completion of the class the student will be eligible to take the National Registered Emergency Medical Technical (NREMT)/California State certification examination.

Course		**Units**
FIRET 131	Emergency Medical Technician I	8
		Total 8

Emergency Medical Technician I Refresher – Major #8843 ***revised program, Spring 2011***

Designed for the student needing to complete the "continuing education" (CE) requirements necessary to maintain their EMT-B certification status.

Certificate

Student Learning Outcomes:

1. Upon successful completion of the program the student will have satisfied all the required, Continuing Education (CE) hours for Emergency Medical Technician-B recertification.

Course		**Units**
FIRET 261	Emergency Medical Technician 1 Refresher	1
		Total 1

FIRE TECHNOLOGY – #883A ***revised program, Spring 2011***

This program is designed to provide the student with updated skills and knowledge necessary to complete and successfully apply for fire service careers. The curriculum serves as an in-service program as well as a pre-employment program for students seeking employment or advancement in the profession of fire fighting and fire technology.

Associate in Science and Certificate of Achievement

Student Learning Outcomes:

1. Within the Fresno City College Fire Academy service area students who successfully complete the requirements for graduation will be eligible to apply for entry level employment or meet requirements for advancement in the profession of Fire Protection.

REQUIRED CORE COURSES		**Units**
AT 10	Technical Computer Applications	2
AT 120	Industrial Science	3
AT 130	Industrial Mathematics	3
FIRET 1	Fire Protection Organization	3
FIRET 2	Fire Prevention Technology	3
FIRET 3	Fire Protection Equipment and Systems	3
FIRET 4	Building Construction for Fire Protection	3
FIRET 5	Fire Behavior and Combustion	3

Course Options: Select 12 Units		**Units**
FIRET 6	Hazardous Materials	3
FIRET 8	Fire Hydraulics	3
FIRET 9	Fire Fighting Practices	3
FIRET 13	Arson and Fire Investigation Technology	3
FIRET 130 *	Basic Fire Academy	6
FIRET 131	Emergency Medical Technician I	8
FIRET 135 **	Emergency Medical Technician-Paramedic-Field Internship	9
		Total 35

It is recommended that students establish eligibility for English 125 and 126 or ESL 67 and 68. Note: The certificate of achievement requires completion of the major (23 units) and 12 units of the recommended course options with a grade of "C" or better in each course.

Suggested Sequence of Courses

FIRST YEAR

First Semester		**Units**
AT 120	Industrial Science	3
AT 130	Industrial Mathematics	3

Second Semester		**Units**
FIRET 1	Fire Protection Organization	3
FIRET 2	Fire Prevention Technology	3
FIRET 5	Fire Behavior and Combustion	3
Options		6

SECOND YEAR

First Semester		**Units**
AT 10	Technical Computer Applications	2

Second Semester		**Units**
FIRET 3	Fire Protection Equipment and Systems	3
FIRET 4	Building Construction for Fire Protection	3
Options		6
		Total 35

*****FIRET 130 carries a value of up to 27 units; however, only 6 units can be applied to the associate in science degree and certificate of achievement.
******FIRET 135 is the final course of three required to successfully complete the paramedic program.

<u>Prehospital Paramedic Care</u> – Major #8845 ***revised program, Spring 2011***

Designed to prepare personnel in the fire, life safety and related fields to render advanced emergency medical care to the ill and injured in the pre-hospital environment, in accordance with all federal, state and local emergency medical services authorities.

Certificate of Achievement

Student Learning Outcomes:

1. Upon successful completion of the class, the student will be eligible to take the National Registered Emergency Medical Technician (NREMT)/ California State licensure examination necessary to become a licensed paramedic.

Courses		**Units**
FIRET 131	Emergency Medical Technician I	8
FIRET 133	Emergency Medical Technician-Paramedic-Didactic	22
FIRET 134	Emergency Medical Technician-Paramedic-Clinical	4
FIRET 135	Emergency Medical Technician-Paramedic-Field Internship	9
		Total 43

GRAPHIC COMMUNICATIONS

DIGITAL VIDEO OPTION – Major #8506 ***revised program, Fall 2010***

This certificate prepares the student for entry level work in digital video production.

Certificate

Student Learning Outcomes:

1. The student will be able to successfully operate a digital video camera to capture footage in a variety of lighting conditions.
2. The student will capture audio using a digital recorder and compile it with existing audio tracks while maintaining synchronization.

Course		Units
GRC 27	Digital Video Production	4
GRC 32	Video Techniques	4
GRC 41	Visual Communications	3
	Total	**11**

HEALTH INFORMATION TECHNOLOGY

HEALTH INFORMATION TECHNOLOGY – Major #4621 ***revised program. Spring 2011***

The Health Information Technology (HIT) Program prepares students for a profession that combines healthcare with information technology. Health information technicians perform the essential functions of maintaining digital and traditional medical information in acute, long-term, and ambulatory healthcare settings. Job responsibilities may include coding, data collection, documentation analysis, quality improvement, access and release of information, or supervision.

The HIT Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in cooperation with the American Health Information Management Association (AHIMA). Successful completion of the Health Information Technology Program qualifies the graduate for an Associate in Science degree and eligibility to take the Registered Health Information Technician (RHIT) exam administered by AHIMA.

Student Learning Outcomes:

1. Students perform health information technician skills and competencies required for employment in a health information management department.
2. Students pass the Registered Health Information Technician examination.

HONORS

LEON S. PETERS HONORS PROGRAM – Major #5331 ***revised program, Spring 2011***

A Leon S. Peters Certificate in Honors will be awarded to Honors students who successfully complete a minimum of 17 credits of Honors courses including 2 colloquium units with an overall GPA of 3.2 or better.

Certificate

Student Learning Outcomes:

Because this is a comprehensive general education program, students who complete the Honors Certificate program will be able to:

1. Demonstrate an understanding and appreciation of social, political, and economic institutions within a historical perspective.
2. Express an understanding of the relationships between science and other human activities.
3. Articulate an understanding of the relationships between the arts, the humanities and themselves.
4. Write clear, logically organized essays using expository and argumentative modes and applying conventions of documentation when appropriate.
5. Apply logical reasoning to make decisions, solve problems, explain conclusions, and evaluate evidence.

REQUIRED COURSE		**Units**
ENGL 1AH *****	Honors Reading and Composition	4

ELECTIVE COURSES: Select 11 Units		**Units**
ACCTG 4AH	Honors Financial Accounting	4
	or	
ACCTG 4BH	Honors Managerial Accounting	4
ANTHRO 2H	Honors Cultural Anthropology	3
ART 5H	Honors Art History 1, *or*	
ART 6H	Honors Art History 2	3
BA 10H	Honors Introduction to Business	3
BIOL 11AH	Honors Biology for Science Majors I, *or*	
BIOL 1H	Honors Principles of Biology	4-5

ECON 1AH	Honors Introduction to Macroeconomics, or	
ECON 1BH	Honors Introduction to Microeconomics	3
ENGL 1BH	Honors Introduction to the Study of Literature	3
ENGL 3H	Honors Critical Reading & Writing	3
HIST 1H	Honors Western Civilization to 1648, *or*	
HIST 2H	Honors Western Civilization since 1648	3
HUMAN 10H	Honors Classical Humanities, *or*	
HUMAN 11H	Honors Modern Humanities	3
PHIL 1AH	Honors Theories of Knowledge and Reality	3
POLSCI 2H	Honors American Government	3
PSY 2H	Honors General Psychology	3
SOC 1AH	Honors Introduction to Sociology	3

COLLOQUIA: Select a minimum of 2 units		**Units**
HONORS 1A	Honors Science Colloquium: Biological Science through Scholarly Research	1
HONORS 1C	Honors Humanities Colloquium: Humanities through the Ages	1
HONORS 1D	Honors Business and Economics Colloquium: The Local Economy and Agribusiness	1
HONORS 1E	Honors Social Science Colloquium: Contemporary Issues in Social Science	1
HONORS 1F	Honors Phi Theta Kappa Colloquium: Phi Theta Kappa Study Topics	1

*****An exception can be made if the student has successfully completed ENGL 1A prior to entering the Honors program.

HUMANITIES

HUMANITIES – Major #5330 ***revised program, Spring 2011***

A Humanities major is ideal for students seeking an integrated liberal arts education, either as a pre-professional major or as a self-enrichment program. The program is designed to help students develop a diverse understanding and appreciation of world cultures past and present. The Humanities major requirements provide a curriculum that allows for the development of critical thinking, reading, and writing, as well as the development of a creative imagination. A Humanities major is valuable to a student planning to transfer to a four-year institution, whether as a major in humanities or some other field, and will enhance preparation for a wide range of career opportunities.

Associate in Arts Degree

Student Learning Outcomes:

1. Recognize the significance of the interrelationships between cultures and their art forms.
2. Discern a sense of continuity in the history of ideas.
3. Critically read literature, philosophy, and drama in translation.

Requirements within program (18 Units)

Courses		**Units**
HUMAN 10	Classical Humanities, *or*	
HUMAN 10H	Honors Classical Humanities	3
HUMAN 11	Modern Humanities, *or*	
HUMAN 11H	Honors Modern Humanities	3
ENGL 12	The Bible as Literature, *or*	
ENGL 42	Classic Myths, *or*	
PHIL 1D	World Religions	3
ENGL 1B	Introduction to the Study of Literature, or	
ENGL 1BH	Honors Introduction to the Study of Literature, *or*	
ENGL 44A	World Literature to the Renaissance, *or*	
ENGL 44B	World Literature Since the Renaissance, *or*	
ENGL 45	Contemporary World Literature, *or*	
ENGL 46A	English Literature to 1800, *or*	
ENGL 46B	English Literature from 1800 to the Present, *or*	
ENGL 48A	Introduction to American Literature to World War I, *or*	
ENGL 48B	Introduction to American Literature World War I to the Present	3
PHIL 1A	Theories of Knowledge and Reality, *or*	
PHIL 1AH Honors	Theories of Knowledge and Reality, *or*	
PHIL 1B	Social and Political Philosophy, *or*	
PHIL 1C	Ethics, *or*	
PHIL 5	Philosophy of Religion	3
CLS 21	Chicano Literature, *or*	
TA 30	Theatre Appreciation, *or*	
TA 31	Theatre History and Dramatic Literature I, *or*	
TA 32	Theatre History and Dramatic Literature II, *or*	
ART 6	Art History 2, *or*	
ART 6H	Honors Art History 2, *or*	

ART 55	Introduction to Asian Art, *or*
ART 60	Pre-Columbian Art, *or*
ART 65	Introduction to Pacific Art, *or*
MUS 12	Music Appreciation, *or*
MUS 13	History of Music, *or*
MUS 14	Opera Appreciation, *or*
MUS 16	Jazz History and Appreciation.....3

Note: An Associate in Arts Degree in Humanities will be awarded to students who successfully complete a total of 60 units, which include the Associate Degree requirements and a minimum of 18 units of major course work listed above. Students seeking an associate degree may apply for an evaluation after they have completed 30-40 units and are within one year of graduation.

LIBERAL ARTS

LIBERAL ARTS DEGREE WITH EMPHASIS IN PHILOSOPHY/HUMANITIES – Major #5161T ***correction***

A Liberal Arts Degree with an emphasis in Philosophy/Humanities is designed for students seeking an integrated Liberal Arts education and will aide in the development of critical thinking and critical reasoning skills. The courses offered will fulfill requirements towards the AA degree and for GE transfer certification for the state university system.

The goal of the Liberal Arts emphasis in Philosophy/Humanities is to offer a course of study for students interested in an interdisciplinary education. In a structured environment, students will learn to apply techniques of critical thinking and critical reasoning to a broad social, cultural context. The program will enhance students' ability to read and understand complex material, and will improve communication skills. Those preparing to transfer to a California State University or a University of California should refer to the transfer requirements in the FCC catalog and consult a counselor.

Student Learning Outcomes:

At the completion of a degree in Philosophy/Humanities:

1. Students will be prepared to transfer to a four-year college as a Philosophy or Humanities major.
2. Students will have a foundational background in the historical development of cultures and societies.
3. Students will demonstrate skills in critical reasoning and thinking that enable them to succeed in pursuing an advanced degree or in employment in good-paying jobs.
4. In appropriate contexts, students will demonstrate the benefits of an interdisciplinary education of the kind provided in this major.

Students should select one of the following options to prepare for transfer to a 4-year college. Please refer to www.ASSIST.org for transfer details or see a counselor for additional details.

CSU/GE: Students intending to transfer to a CSU should complete this option. Students selecting this option must complete all of the required courses for CSU GE Certification.

IGETC: Students who intend to transfer to a UC should complete this option. Students selecting this option must complete all of the required courses for IGETC Certification.

*List of Courses: 18 units selected from the lists below**

Associate in Arts Degree

Philosophy (any three):		Units
PHIL 1A	Theories of Knowledge and Reality, *or*	
PHIL 1AH	Honors Theories of Knowledge and Reality	3
PHIL 1B	Social and Political Philosophy	3
PHIL 1C	Ethics	3
PHIL 1D	World Religions	3
PHIL 4	Critical Reasoning	3
PHIL 5	Philosophy of Religion	3
PHIL 6	Introduction to Logic	3
Humanities (any three):		
ENGL 12	The Bible as Literature	3
ENGL 42	Classic Myths	3
ENGL 44A	World Literature to the Renaissance, or	
ENGL 44B	World Literature since the Renaissance	3
HUMAN7	Introduction to British Culture, or	
HUMAN 7H	Honors Introduction to British Culture	3
HUMAN 10	Classical Humanities, or	
HUMAN 10H	Honors Classical Humanities	3
HUMAN 11	Modern Humanities, or	
HUMAN11H	Honors Modern Humanities	3

**Note: An Associate in Arts Degree in Liberal Arts with an emphasis in Philosophy/Humanities will be awarded to students who successfully complete a total of 60 units, which include the Associate Degree requirements and a minimum of 18 units*

of major course work listed above. Students seeking an associate degree may apply for an evaluation after they have completed 30-40 units and are within one year of graduation.

LIBRARY TECHNOLOGY

LIBRARY TECHNOLOGY – Major #5171 ***program revised, effective Spring 2011***

Requires completion of the minimum (22 units) with a 2.0 or better in all required course work. Additionally requires completion of the associate degree requirements found in the Fresno City College Catalog. Students seeking an associate degree may apply for an evaluation at Admissions and Records after they have completed 30-40 units and are within a year of graduation.

Associate in Science Degree

Student Learning Outcomes:

1. Given an aspect of library service, describe the purpose of the library paraprofessional.
2. Given a specific type of library, describe the structure and staff function within it.

REQUIRED COURSE WORK		**Units**
LIBSKL 2	Information and Computer Literacy	3
LITEC 51	Introduction to Library Service	3
LITEC 52	Library Technical Services	3
LITEC 54	Literature and Services for Youth	3
LITEC 55	Library Public Service	3
LITEC 56	Information Technology	3
LITEC 57	Reference: Print and Online Sources	3

One course from the list below:		**Units**
BT 23	Job Search and Workplace Skills	3
WKEXP 19	Work Experience (Cooperative), General	1–3
		Total 22-24

Note: Associate degree requirements are listed on page ___.

LIBRARY TECHNOLOGY – Major #5171 ***revised program, effective Spring 2011***

Requires completion of the major (22 units). All required courses must be completed with a grade of "C" or better. Students interested in a Certificate of Achievement are urged to consult a counselor or faculty advisor regarding this program.

Certificate of Achievement

Student Learning Outcomes:

1. Given an aspect of library service, describe the purpose of the library paraprofessional.
2. Given a specific type of library, describe the structure and staff function within it.

REQUIRED COURSE WORK		**Units**
LIBSKL 2	Information and Computer Literacy	3
LITEC 51	Introduction to Library Service	3
LITEC 52	Library Technical Services	3
LITEC 54	Literature and Services for Youth	3
LITEC 55	Library Public Service	3
LITEC 56	Information Technology	3
LITEC 57	Reference: Print and Online Sources	3

One course from the list below:		**Units**
BT 23	Job Search and Workplace Skills	3
WKEXP 19	Work Experience (Cooperative), General	1-3
		Total 22-24

LIFE SCIENCE

LIFE SCIENCE – Major #6080 ***revised program, effective Spring 2011***

Student Learning Outcomes:

1. Evaluate scientific literature and apply the scientific method to obtain and interpret data.
2. Describe the classes of organic molecules found in organisms and discuss their importance in biological systems.
3. Understand cellular processes and relate organelle structure to function.
4. Understand the structure and function of genetic material and apply the principles of genetics as they relate to organisms.
5. Appreciate biodiversity and understand the impact of human activity on ecological systems.
6. Explain the mechanisms of evolution and evaluate the scientific evidence to support it.

MEDICAL ASSISTING – CLINICIAN

MEDICAL ASSISTING – CLINICIAN – Major #2120 ***revised program, Spring 2011***

Student Learning Outcomes:

1. Identify common medical conditions and diseases and demonstrate knowledge in assisting in the physician office.

NURSING

NURSING, REGISTERED – Major #4520 ***revised program, Spring 2011***

Student Learning Outcomes:

1. Students completing the Registered Nursing Program, who have their names forwarded by the college to the California Board of Registered Nursing, will pass the NCLEX-RN at 85% for first-time takers.

PSYCHOLOGY

PSYCHOLOGY – Major #7501 ***revised program, Spring 2011***

The Psychology AA Program is designed to provide a strong academic foundation for students planning to major in Psychology at a four-year institution. Psychology is the scientific study of human behavior and mental processes. Two of the field's key features reflect the highly valuable approach psychology takes to gain knowledge about human behavior. First, psychology emphasizes the use of critical thinking and the scientific method to ask questions, acquire and evaluate information, and solve problems. Second, the field recognizes the complexity of human behavior, and is guided by the idea that a complete understanding of human behaviors, emotions, and thoughts must include an analysis of factors as diverse as biological, interpersonal, and sociocultural influences. Thus, psychology represents a method of inquiry that can be a useful tool for students with a variety of interests and career goals. Earning an Associates of Arts degree in Psychology may be beneficial for individuals whose vocational plans include working in human or social services (e.g., law enforcement, education, sales, social welfare, and nursing). Students are encouraged to follow the CSU General Education-Breadth or IGETC pattern with the assistance of a counselor.

Associate in Arts Degree

Student Learning Outcomes:

1. Students will apply their knowledge of psychology's major theoretical perspectives (psychodynamic, behavioral, biological, humanistic, cognitive, evolutionary, and sociocultura) and its scientific research process when studying topics of interest, including methodologies and ethical concerns within the field's subdisciplines.
2. Students will recognize and analyze the application of psychological concepts and theories to human experiences across the lifespan and within the context of various social and cultural constructs.
3. When presented with information and claims about human behavior and mental processes, students critically evaluate them within a framework that views humans as continually developing physiological, social, and psychological organisms.

Required Core Courses		**Units**
PSY 2	General Psychology, *or*	
PSY 2H	Honors General Psychology	3
PSY 36	Biological Psychology	3
PSY 42	Statistics for the Behavioral Sciences	4

Depth: Choose two of the following:		**Units**
PSY 5	Social Psychology	3
PSY 12	Child Abuse	3
PSY 15	Psychology of Religion	3
PSY 16	Abnormal Psychology	3

Lifespan: Choose one of the following:		**Units**
PSY 25	Human Sexuality	3
PSY 33	Personal and Social Adjustment	3
PSY 38	Lifespan Development	3
PSY 39	Child Growth and Development	3

Diversity: Choose one of the following:		**Units**
AFRAM 1	African-American Culture	3
AMIND 31	American Indian Culture	3
AMST 10	American Pluralism: A Search for Common Ground in a Multicultural Society	3
ANTHRO 2	Cultural Anthropology	3
ASAMER 15	Introduction to Asian-Americans	3
CLS 11	Introduction to Chicano-Latino Studies	3
SOC 2	American Minority Groups	3
WSTS 10	Changing Roles of Women	3
		Total 22

RADIOLOGIC TECHNOLOGY

RADIOLOGIC TECHNOLOGY – Major #4570 ***program revised, Spring 2011***

Student Learning Outcomes:

1. Students will pass the ARRT National Registry Examination on the first attempt.

RECREATION

RECREATION – Major #4300 ***program revised, Spring 2011***

Student Learning Outcomes:

1. List and define the programs and services of the recreation programs in the community.
2. Identify and apply the skills needed to be a recreational leader in a community setting.

RESPIRATORY CARE

RESPIRATORY CARE – Major #4610 ***program revised, Spring 2011***

The respiratory care practitioner (RCP) is a health care specialist involved in managing, diagnostically evaluating, and providing care to patients with deficiencies and abnormalities affecting their cardiopulmonary system. Respiratory care practitioners comprise a critical sector of the allied health care workforce. A recent survey for the American Association for Respiratory Care (AARC) estimated that there are 111,700 RCPs employed in the United States. Currently there are 13,660 active licensed RCPs in California.

Respiratory care practitioners work under the direction of physicians. The scope of their practice ranges from delivering temporary relief to persons with asthma, pulmonary edema, chronic obstructive pulmonary disease (COPD) and emphysema, to providing emergency treatment for asphyxiation, heart failure, stroke, drowning, and shock. The diagnostic and therapeutic responsibilities include the administration of medical gases, aerosols, environmental control systems, life sustaining mechanical ventilation, medication, chest physical therapy, pulmonary functions testing, and specialized cardiopulmonary procedures. The respiratory care practitioner works closely with the physician in assessing the patient and planning the proper respiratory care protocol. Most RCPs (75%) work in a hospital setting and are key staff in critical care units and emergency rooms. Next to nurses, RCPs are the most frequently seen health care provider at the patient bedside. In addition, RCPs are present in the emergency room for resuscitation and are always a member of response teams that rush to the aid of patients who experience sudden cardiac arrest. The respiratory care program is designed to prepare the student for employment in the health care delivery system, and to participate as a member of the health care team. Clinical work experiences in respiratory care are provided in selected local hospitals where students practice their skills under the supervision of the Fresno City College faculty. Essential function and general job description utilizes the application of scientific principles for the identification, prevention, remediation, research, and rehabilitation of acute or chronic cardiopulmonary dysfunction. Reviews existing data, collects additional data, and recommends obtaining data to evaluate the respiratory status of patients, develops the respiratory care plan, and determines if the prescribed therapy is appropriate. Initiates, conducts, and modifies prescribed therapeutic and diagnostic procedures such as: administering medical gases, humidification and aerosols, aerosol medications, postural drainage, bronchopulmonary hygiene, cardiopulmonary resuscitation; providing support services to mechanically ventilated patients; maintaining artificial and natural airways; performing pulmonary function testing, hemodynamic monitoring and other physiologic monitoring; collecting specimens of blood and other materials. Documents necessary information in the patient's medical record and on other forms, and communicates that information to members of the health care team. Obtains, assembles, calibrates, and checks necessary equipment. Uses problem solving to identify and correct malfunctions of respiratory care equipment. Demonstrates appropriate interpersonal skills to work productively with patients, families, staff, and co-workers. Accepts directives, maintains confidentiality, does not discriminate, and upholds the ethical standards of the profession.

State License and National Registration and Certification

Successful completion of the respiratory care program qualifies the graduate for an associate in science degree and satisfies eligibility requirements to: (1) take the licensing examination for the CRT by the National Board for Respiratory Care, (2) take the national registry examinations for the registered respiratory therapist credential issued by the National Board for Respiratory (3) be eligible to apply for California State licensing through the Respiratory Care Board in Sacramento, California.

Program Statement

The Respiratory Care program is accredited by the Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Road, Bedford, TX 76021, 1-817-283-2835, www.coarc.com http://www.coarc.com/.

Application Requirements

Enrollment into the respiratory care program is limited; however, there are no restrictions as to age, sex, race, or marital status. To qualify for admission to the program, the applicant must meet all of the following conditions:

1. Complete and submit an Academic Summary Form for the Respiratory Care Program.
2. Have graduated from high school with a minimum average grade of 2.0 ("C") or have an average score of 45 on the General Educational Development (GED) examination.
3. Have completed Fresno City College Math 103 or higher, Biology 1 or 5, and Chemistry 3A or higher (or their college level equivalents) with a "C" grade or better.
4. Have attained a minimum average grade of "C" (2.0) in all completed college work.
5. Submit high school and college transcripts.

Note: It is the applicant's responsibility to request his/her transcripts from the necessary schools and to ensure that the transcripts are on file by the deadline. The college GPA and courses will have precedence over an applicant's high school GPA and courses.

PRIOR TO REGISTRATION for the semester in which the applicant is actually scheduled to take courses in respiratory care, the following conditions must be met to finalize program qualifications: 1. submit evidence of physical and mental health (a physical examination form to be completed by a physician.) 2. complete immunization portfolio and diagnostic tests. 3. attend an allied health orientation program. 4. complete a State and Federal background check.

Change of Name, Address, and/or Telephone Number
Applicants and respiratory care students must keep the Respiratory Care Program office informed of any change in name, address, and /or telephone number. Failure of applicant to inform the Respiratory Care Program office of this vital information may result in loss of entry into the program.

Academic Requirements
In order to be licensed by the State of California, the student must pass the CRT offered by the National Board for Respiratory Care. Additionally, the student must apply for State licensing through the Respiratory Care Board in Sacramento, California. The student must earn an associate in science degree with a grade of "C" or better in every course. Students earning less than a "C" grade in any course must repeat that course in its entirety. In the case of earning less than a "C" grade in a respiratory care course, the student may not progress in the major until the course is completed successfully. Courses may be repeated once only.

Student Learning Outcomes:
1. Graduate will pass the NBRC (National Board for Respiratory Care) CRT (entry level exam) within five months of graduation.
2. Students will demonstrate effective patient assessment skills as respiratory care practitioners. Respiratory Care course sequence (all must be completed with a "C" grade or better):

FIRST YEAR

First Semester		**Units**
RCARE 16	Patient Assessment	3
RCARE 17	Fundamentals of Patient Management	4
RCARE 18	Physiology of the Respiratory System	2
RCARE 20	Introduction to Respiratory Care	5

Second Semester Units

RCARE 21	Applications and Procedures in Respiratory Care	11

SECOND YEAR

First Semester		**Units**
RCARE 22	Clinical Applications in Respiratory Care I	9

Second Semester Units

RCARE 23	Clinical Applications in Respiratory Care II	9
RCARE 25	Respiratory Disease	2
		Total 45

RESPIRATORY CARE PRACTITIONER PROGRAM REQUIREMENTS
(A "C" or better grade is required in each course.)
In addition to the program application requirements and the Respiratory Care course sequence requirements, the following courses are required to apply for the associate degree:

Course		**Units**
BIOL 24	Human Anatomy and Physiology, or	
BIOL 20	Human Anatomy, *and*	
BIOL 22	Human Physiology	5-9
BIOL 31	Microbiology	5
SOC 1A	Introduction to Sociology	3
COMM 1	Introduction to Public Speaking, *or*	
COMM 2	Interpersonal Communication	3
PSY 2	General Psychology	3
PHYSC 11	Introductory Physical Science, *or*	
AT 120	Industrial Science	3

General education courses to complete the Associate in Science degree requirements.
Note: All applications requirements, program requirements, and selection criteria are subject to change. Students will enter the selection pool based on the current catalog or catalog supplement. Contact a Fresno City College Health Science Counselor every semester for current information.

TEACHER AIDE

TEACHER AIDE – Major #5910 ***program revised, Fall 2010***

The Teacher Aide major provides students the first two years of transferable lower division course work and field experience for the California Single Subject Teaching Credential required to teach at public middle schools, high schools and in some adult education settings.

The Teacher Aide major also prepares students for an education career as aides to classroom teachers in elementary, middle and high schools. The major may be used for employment as an aide in day-care centers, migrant training programs, community centers and adult education programs.

FCC's Education 30, Survey of American Education and Educational Aide 19, Work Experience are particularly valuable for students seeking an understanding of education in the United States. These courses will also enable students to explore the field of education before committing to a teacher aide or teaching program of study.

Associate in Science Degree

Student Learning Outcomes:

1. While most students will use this associate degree as a transfer major toward a single subject teaching degree, the major also prepares students to meet federal "No Child Left Behind" (NCLB) academic requirements for employment as teacher aides in public K-12 classrooms.
2. The major provides students with the ability to transfer to selected UC's and CSU's as rising juniors to pursue the California Single Subject teaching credential required for teaching in public middle and high schools.
3. The major will prepare students for the California Basic Education Skills Test(CBEST)required of students applying to a UC or CSU school of education for purposes of beginning a Single Subject Teaching Credential Program.
4. Students will learn student management (discipline) techniques.
5. Students will clearly understand the role of the K-12 credentialed teacher and the K-12 teacher aide.

Program Requirements

Required Core Courses		**Units**
EDA 19	Work Experience (Cooperative),Occupational	1
EDUC 30	Survey of American Education	3

Course Options: Select a Minimum of 16 Units		**Units**
ART 2	Art Appreciation	3
ART 5	Art History 1, *or*	
ART 5H	Honors Art History 1	3
ART 6	Art History 2, *or*	
ART 6H	Honors Art History 2	3
ASTRO 10	Basic Astronomy	3
BIOL 3	Introduction to Life Science, *or*	
BIOL 11A	Biology for Science Majors I, *or*	
BIOL 11AH	Honors Biology for Science Majors I	4-5
CHDEV 39	Child Growth and Development	3
COMM 1	Introduction to Public Speaking	3
COMM 2	Interpersonal Communication	3
COMM 8	Group Communication	3
COMM 25	Argumentation	3
ECON 1A	Introduction to Macroeconomics, *or*	
ECON 1AH	Honors Introduction to Macroeconomics	3
ECON 1B	Introduction to Microeconomics, *or*	
ECON 1BH	Honors Introduction to Microeconomics	3
ENGL 1B	Introduction to the Study of Literature, or	
ENGL 1BH	Honors Introduction to the Study of Literature	3
ENGL 3	Critical Reading & Writing, *or*	
ENGL 3H	Honors Critical Reading & Writing	3
ENGL 4	The Structure of English	3
ENGL 15B	Creative Writing: Fiction	3
ENGL 46A	English Literature to 1800	3
CLS 21	Chicano Literature	3
GEOG 1	Physical Geography	3
GEOG 4A	World Geography	3
GEOG 7	Physical Geography: Earth's Surface	4
GEOG 8	Physical Geography: Weather and Climate	4
GEOL 1	Physical Geology	4
HIST 1	Western Civilization to 1648, *or*	
HIST 1H	Honors Western Civilization to 1648	3
HIST 2	Western Civilization since 1648	3

HUMAN 10	Classical Humanities, *or*	
HUMAN 10H	Honors Classical Humanities	3
HUMAN 11	Modern Humanities, *or*	
HUMAN 11H	Honors Modern Humanities	3
LING 10	Introduction to Language	3
MATH 4A	Trigonometry, *or*	
	higher math	4-5
MATH 11	Elementary Statistics	4
MATH 45	Contemporary Mathematics	3
MUS 3	Music Fundamentals	3
PHYSC 7	Environmental Science	3
TA 30	Theatre Appreciation	3
TA 41	Beginning Acting	3
		Total 20

Notes:
1. A minimum of 1 unit of Work Experience (EDA 19) is required.
2. The 16 units of Course Options cannot be double counted in the major and in General Education.
3. An Associate Degree in Science will be awarded to Teacher Aide certificate of achievement candidates who successfully complete a total of 60 units. The 60 units must include associate degree requirements and 20 units of course work in the major as listed above.
4. General Education requirements for transfer certification and associate degree requirements are in the FCC catalog.

TEACHER AIDE – Major #5910 ***revised program, Fall 2010***

The Teacher Aide Certificate major prepares students for an education career as aides to classroom teachers in elementary, middle and high schools. The major may also be used for employment as an aide in daycare centers, migrant training programs, community centers, and adult education programs.

The Teacher Aide Certificate major satisfies the federal No Child Left Behind legislation for school districts to employ teacher aides that have completed an appropriate college requisite course of study.

FCC's Education 30, Survey of American Education and Educational Aide 19, Work Experience are particularly valuable courses for students seeking an understanding of education in the United States. These courses are also useful for exploring the field of education before committing to a teacher aide or teaching program of study.

Certificate of Achievement

Student Learning Outcomes:
1. The major prepares students to meet federal "No Child Left Behind" requirements for employment as teacher aides in public K-12 classrooms.
2. Students will learn student management (discipline)techniques.
3. Students will learn how to successfully apply for a job as a teacher aide in a K-12 school system.
4. Students will clearly understand the role of the K-12 credentialed teacher and the K-12 teacher aide.

Program Requirements

Required Core Courses		**Units**
EDUC 30	Survey of American Education	3
EDA 19	Work Experience (Cooperative), Occupational	1
ENGL 125	Writing Skills for College, *or*	
ENGL 1A	Reading and Composition, *or*	
ENGL 1AH	Honors Reading and Composition	4
MATH 101	Elementary Algebra, *or*	
MATH 102	Plane Geometry, *or*	
MATH 103	Intermediate Algebra, *or*	
	higher math	3-5

Course Options: Select a Minimum of 9 Units		**Units**
ART 2	Art Appreciation	3
ART 5	Art History 1 *or*	
ART 5H	Honors Art History 1	3
ART 6	Art History 2 *or*	
ART 6H	Honors Art History 2	3
ASTRO 10	Basic Astronomy	3
BIOL 3	Introduction to Life Science	4
BIOL 11A	Biology for Science Majors I *or*	
BIOL 11AH	Honors Biology for Science Majors I	5
CHDEV 39	Child Growth and Development	3
CLS 21	Chicano Literature	3
COMM 1	Introduction to Public Speaking	3

COMM 2	Interpersonal Communication	3
COMM 8	Group Communication	3
COMM 25	Argumentation	3
ECON 1A	Introduction to Macroeconomics *or*	
ECON 1AH	Honors Introduction to Macroeconomics	3
ECON 1B	Introduction to Microeconomics *or*	
ECON 1BH	Honors Introduction to Microeconomics	3
ENGL 1B	Introduction to the Study of Literature *or*	
ENGL 1BH	Honors Introduction to the Study of Literature	3
ENGL 3	Critical Reading & Writing *or*	
ENGL 3H	Honors Critical Reading & Writing	3
ENGL 4	The Structure of English	3
ENGL 15B	Creative Writing: Fiction	3
ENGL 46A	English Literature to 1800	3
GEOG 1	Physical Geography	3
GEOG 4A	World Geography	3
GEOG 7	Physical Geography: Earth's Surface	4
GEOG 8	Physical Geography: Weather and Climate	4
GEOL 1	Physical Geology	4
HIST 1	Western Civilization to 1648 *or*	
HIST 1H	Honors Western Civilization to 1648	3
HIST 2	Western Civilization Since 1648	3
HUMAN 10	Classical Humanities *or*	
HUMAN 10H	Honors Classical Humanities	3
HUMAN 11	Modern Humanities *or*	
HUMAN 11H	Honors Modern Humanities	3
LING 10	Introduction to Language	3
MATH 11	Elementary Statistics	4
MATH 45	Contemporary Mathematics	3
MATH 4A	Trigonometry *or*	
	higher math	3-5
MUS 3	Music Fundamentals	3
PHYSC 7	Environmental Science	3
TA 30	Theatre Appreciation	3
TA 41	Beginning Acting	3
		Total 20-22

Note: A minimum of 1 unit is required for EDA 19.

TEACHER AIDE – Major #5970 ***program delete, Fall 2010***
Certificate

THEATRE ARTS (TA)

THEATRE ARTS – #5440 ***revised program, Spring 2011***

The Theatre Arts major is more Performance oriented than the Design/Technical Theatre Studies major. Both major options emphasize a "hands on" approach and places special focus on the "well rounded" theatre artist. Students who complete the program can successfully transfer to a competitive four-year university or conservatory.

Student Learning Outcomes:

1. Demonstrate the acting process from script and character analysis, through a performance before an audience.
2. Demonstrate basic proficiency in technical theatre production.
3. Analyze a play in context of his historical period, structure, theme, character, style and other components of drama.

Required Courses		**Units**
TA 24	Theatre Crafts Practicum	3
TA 25	Theatre Crafts I *or*	
TA 26	Theatre Crafts II	3
TA 30	Theatre Appreciation *or*	
TA 15C	Creative Writing: Playwriting	3
TA 31	Theatre History and Dramatic Literature I	3
TA 32	Theatre History and Dramatic Literature II	3
TA 34	Costume Practicum	3
TA 35	Costume Crafts	3
TA 41	Beginning Acting *or*	
TA 42	Beginning Acting for Theatre Majors	3
TA 43	Intermediate Acting	3
TA 44	Actors Workshop	3
TA 46	Voice for the Actor	3

Three Units from the following Courses:		**Units**
TA 40	Performance Practicum	3
TA 45	Kennedy Center American College Theater	2
TA 48	Teasers	1
TA 24 *	Theatre Crafts Practicum	3
TA 34 **	Costume Practicum	3
		Total 36

Recommended electives: DANCE 9, 10, 11, 12, 14, 16; TA 28

**In addition to completing three units of Theatre Crafts Practicum.*
***In addition to completing three units of Costume Practicum.*

DESIGN/TECHNICAL THEATRE STUDIES – MAJOR #5482 ***revised program, Fall 2010***

Student Learning Outcomes:

1. Analyze a play in the context of its historical period, structure, theme, character, style and synthesize these components with research in the creation of a theatrical design.
2. Demonstrate the performance process as an actor from rehearsal to preparing to go before an audience.
3. Demonstrate the production process from construction/installation through technical rehearsals and performance before an audience.

WELDING TECHNOLOGY

METAL FABRICATION OPTION – Major #8371 ***revised program, Spring 2011***

Welding technology provides an opportunity for students to prepare for employment in welding and metal occupations. Specific preparation is provided in welding and metal fabrication or pipe and steel certification procedures.
Instruction in the design and fabrication of metal projects by welding. Skills will be taught in design, manufacturing processes, production techniques, and material cost estimation.

Associate in Science Degree

Student Learning Outcomes:

1. Given an idea or description students will be able to design and plan the construction of one or more advanced metal fabricated projects.
2. From the design and specifications, students will be able to determine estimated steel weights, cost calculations, and fabrication time requirements.
3. Students will be able to demonstrate the proper safety precautions, setup and use of tools and equipment common to metal fabrication.
4. In the construction of their project, students will apply various types of welds with quality workmanship to assemble the steel components of their advanced projects.
5. During the construction of their project, students will demonstrate the efficient use of time and materials to produce advanced projects.

First Year

First Semester		**Units**
AT 10	Technical Computer Applications	2
AT 130	Industrial Mathematics, *or*	
MATH 101	Elementary Algebra	3-5
WELD 2A	Introduction to Welding Technology	6

Second Semester		**Units**
AT 21	Occupational Safety and Health	2
AT 40	Preparing for Employment Opportunities	3
WELD 2B	Advanced Multi-Process Welding	5
CADD 14	2D CAD I	3

Second Year

First Semester		**Units**
DRAFT 12	Drafting Practices	3
WELD 3A	Welding Design and Fabrication	5

Second Semester		**Units**
WELD 3B	Advanced Welding Design and Fabrication	5
Elective		2–3
		Total 39-42

Recommended electives: CAM 10; CADD 24, 34; ENGR 10, 11; WELD 56.
Note: Associate degree requirements are listed on page _.

METAL FABRICATION OPTION – Major #8371 ***revised program, Spring 2011***

Welding technology provides an opportunity for students to prepare for employment in welding and metal occupations. Specific preparation is provided in welding and metal fabrication or pipe and steel certification procedures.
Instruction in the design and fabrication of metal projects by welding. Skills will be taught in design, manufacturing processes, production techniques, and material cost estimation.

Certificate of Achievement

Student Learning Outcomes:

1. Given an idea or description, students will be able to design and plan the construction of one or more advanced metal fabricated projects.
2. From design and specifications, students will be able to determine estimated steel weights, cost calculations and fabrication time requirement.
3. Students will be able to demonstrate the proper safety precautions, setup and use of tools and equipment common to metal fabrication.
4. In the construction of their project, students will apply various types of welds with quality workmanship to assemble the steel components of advanced projects.
5. During the construction of their project, students will demonstrate efficient use of time and materials to produce advanced Projects.

First Year

First Semester		**Units**
AT 10	Technical Computer Applications	2
AT 130	Industrial Mathematics *or*	
MATH 101	Elementary Algebra	3-5
WELD 2A	Introduction to Welding Technology	6

Second Semester		**Units**
AT 21	Occupational Safety and Health	2
AT 40	Preparing for Employment Opportunities	3
WELD 2B	Advanced Multi-Process Welding	5
CADD 14	2D CAD I	3

Second Year

First Semester		**Units**
DRAFT 12	Drafting Practices	3
WELD 3A	Welding Design and Fabrication	5

Second Semester		**Units**
WELD 3B	Advanced Welding Design and Fabrication	5
Elective		2–3
		Total 39–42

Recommended Electives: CAM 10; CADD 24, 34; ENGR 10, 11; WELD 56.

WELDING DESIGN AND FABRIATION – Major #8374 ***revised program, Spring 2010***

Student Learning Outcomes:

1. Given an idea or description students will be able to design and plan the construction of one or more advanced metal fabricated projects.
2. From the design and specifications, students will be able to determine estimated steel weights, cost calculations, and fabrication time requirements.
3. Students will be able to demonstrate the proper safety precautions, setup and use of tools and equipment common to metal fabrication.
4. In the construction of their project, students will apply various types of welds with quality workmanship to assemble the steel components of advanced projects.
5. During the construction of their project, students will demonstrate the efficient use of time and materials to produce advanced projects.

WELDING MULTI-PROCESS – Major #8373 ***revised program, Spring 2010***

Student Learning Outcomes:

1. After completing a lab objective, students will be able to identify defects and discontinuities in their horizontal, vertical, and overhead welds according to AWS (American Welding Society) standards.
2. Given a power source, students will be able to properly set up and adjust the GTAW, FCAW and air carbon arc gouging machines to complete their lab assignment to AWS standards.
3. Given a drawing with weld symbols and specifications, students should be able to prepare their metal and perform the correct weld
4. Given a set of plans, students will be able to construct a simple project by correctly setting up and using various fabrication tools

COURSE DESCRIPTIONS

Changes to Pages 173-327

Course Classification System

New courses

Registered Nursing 203	RN Refresher Course	***effective Fall 2010***

Deleted courses

Administration of Justice 287	Field Tactics for Probation/CDC Officer	***effective Fall 2010***
Electrical Systems Tech 240	Building Automation	***effective Spring 2011***
Electrical Systems Tech 272	Industrial Motor Controls	***effective Spring 2011***
Electrical Systems Tech 273	Industrial Electronics Fundamentals	***effective Spring 2011***

SCCCD Intra-District Articulated Courses, Common Courses, and In-Lieu Courses

This is a list of courses that Fresno City College and Reedley College (which includes the North Centers--Clovis, Madera, Oakhurst and Willow International) have agreed to articulate with one another.

Note: Before registering for courses you want to use for transfer (for use in CSU-GE, IGETC or to meet a major requirement at a university), you must verify that the course is listed on Fresno City College's or Reedley College's CSU GE or IGETC pattern or articulation list. Do not ask a friend! Check with the lists provided by Fresno City College, Reedley College and the North Centers--or see the Fresno City College or Reedley College catalogs.

FRESNO CITY COLLEGE

Course	Title
ACCTG 4A	Financial Accounting
ACCTG 4B	Managerial Accounting
ACCTG 19	Work Experience (Cooperative), Occupational
ANTHRO 1	Biological Anthropology
ANTHRO 2	Cultural Anthropology
ANTHRO 3	Intro to Archaeology & Prehistory
ART 2	Art Appreciation
ART 5	Art History 1
ART 6	Art History 2
ART 6H	Honors Art History 2
ART 7	Beginning Drawing
ART 9	Beginning Painting: Oil/Acrylic
ART 10	Beginning Ceramics
ART 13	Beginning Watercolor Painting
ART 17	Intermediate Drawing
ART 19	Intermediate Painting: Oil/Acrylic
ART 20	Intermediate Ceramics
ART 23	Intermediate Watercolor Painting
ASL 1	Beginning American Sign Language
ASL 2	High Beginning American Sign Language
ASL 3	Intermediate American Sign Language
ASL 4	High Inter American Sign Language
ASTRO 10	Basic Astronomy
AUTOT 9	Automotive Essentials
BA 5	Business Communications
BA 10	Introduction to Business
BA 11	Introduction to Hospitality Management
BA 18	Business and the Legal Environment

REEDLEY COLLEGE

Course	Title
ACCTG 1A	Principles of Accounting
ACCTG 1B	Principles of Accounting
ACCTG 19V	Cooperative Work Experience, Accounting
ANTHRO 1	Biological Anthropology
ANTHRO 2	Cultural Anthropology
ANTHRO 3	Intro to Archaeology & Prehistory
ART 2	Art Appreciation
ART 5	Art History 1
ART 6	Art History 2
ART 6H	Honors Art History 2
ART 7	Beginning Drawing
ART 9	Beginning Painting: Oil/Acrylic
ART 10	Beginning Ceramics
ART 13	Beginning Watercolor Painting
ART 17	Intermediate Drawing
ART 19	Intermediate Painting: Oil/Acrylic
ART 20	Intermediate Ceramics
ART 23	Intermediate Watercolor Painting
ASL 1	Beginning American Sign Language
ASL 2	High Beginning American Sign Language
ASL 3	Intermediate American Sign Language
ASL 4	High Inter American Sign Language
SCI 3	Introduction to Astronomy
AUTOT 9	Automotive Essentials
BA 5	Business Communications
BA 10	Introduction to Business
BA 12	Introduction to Hospitality
BA 18	Business and the Legal Environment

BA 19	Work Experience (Cooperative), Occupational	BA 19V	Cooperative Work Experience, Business
BA 27	Students in Free Enterprise SIFE/CEO**	BA 27	Students in Free Enterprise (SIFE)
BA 33	Human Relations in Business	BA 33	Human Relations in Business
BA 34	Fundamentals of Investing	BA 34	Fundamentals of Investing
BA 38	Operation of the Small Business	BA 38	Operation of the Small Business
BA 40	Supervision and Leadership	BA 15	Introduction to Management
BA 52	Introduction to Entrepreneurship**	BA 52	Introduction to Entrepreneurship
BA 55	Introduction to Logistics	BA 55	Introduction to Logistics
BIOL 1	Principles of Biology	BIOL 1	Principles of Biology
BIOL 3	Introduction to Life Science	BIOL 3	Introduction to Life Science
BIOL 4	Principles of Zoology	BIOL 4	Principles of Zoology
BIOL 5	Human Biology	BIOL 5	Human Biology
BIOL 6	Principles of Botany	BIOL 6	Principles of Botany
BIOL 11A	Biology for Science Majors I	BIOL 11A	Biology for Science Majors I
BIOL 11AH	Honors Biology for Science Majors I	BIOL 11AH	Honors Biology for Science Majors I
BIOL 11B	Biology for Science Majors II	BIOL 11B	Biology for Science Majors II
BIOL 20	Human Anatomy	BIOL 20	Human Anatomy
BIOL 22	Human Physiology	BIOL 22	Human Physiology
BIOL 31	Microbiology	BIOL 31	Microbiology
BT 4	Ten-Key Calculation	BA 46	Calculator Applications
BT 5	Business Communications	BA 5	Business Communications
BT 19	Work Experience (Cooperative), Occupational*	OT 19V	Cooperative Work Experience, Office Tech*
CHDEV 1	Principles and Practices of Teaching Young Children	CHDEV 1	Prin & Practices of Teaching Young Children
CHDEV 3	Introduction to Curriculum	CHDEV 3	Introduction to Curriculum
CHDEV 5	Parent Education	CHDEV 5	Parent Education
CHDEV 6	Health, Safety & Nutrition in ECE	CHDEV 6	Health. Safety & Nutrition in ECE
CHDEV 8B	Programs for School Age Child Care	CHDEV 8B	Programs for School Age Child Care
CHDEV 11	The Young Child with Special Needs	CHDEV 35	Working w/Fam & Children w/Special Needs
CHDEV/PSY 12	Child Abuse	CHDEV 12	Child Abuse
CHDEV 15	Diversity Issues in Early Care & Ed Programs	CHDEV 15	Diversity Issues in Early Care & Ed Program
CHDEV 16	Intro to Early Intervention	CHDEV 32	Intro to Early Intervention (3-unit course)
CHDEV 17A	Infant Development – Birth to Age Three	CHDEV 7	Infant-Toddler Development and Care
CHDEV 17B	Advanced Infant Toddler Development & Care	CHDEV 7A	Advanced Infant Toddler Develop & Care
CHDEV 20	Observation and Assessment	CHDEV 20	Observation and Assessment
CHDEV 30	Child, Family and Community	CHDEV 30	Child, Family and Community
CHDEV 37A	Early Childhood Practicum	CHDEV 37A	Early Childhood Practicum
CHDEV 37B	Adv. Practicum in Early Childhood Education	CHDEV 37B	Adv. Practicum in Early Childhood Educ
CHDEV/PSY 38	Lifespan Development	CHDEV/PSY 38	Lifespan Development
CHDEV/PSY 39	Child Growth and Development	CHDEV 39	Child Growth and Development
CHDEV 40A	Admin of Early Childhood Programs	CHDEV 40A	Admin of Early Childhood Programs
CHDEV 40B	Adv Admin of Early Childhood Programs	CHDEV 40B	Adv Admin of Early Childhood Programs
CHDEV 42	Child Nutrition	FN 42	Child Nutrition*
CHDEV 45	Adult Supervision in Early ECE Classrooms	CHDEV 45	Supervision of Adults in ECE Classrooms
CHEM 1A	General Chemistry	CHEM 1A	General Chemistry
CHEM 1B	General Chemistry & Qual Analysis	CHEM 1B	General Chemistry & Qual Analysis
CHEM 3A	Introductory General Chemistry	CHEM 3A	Introductory General Chemistry
CHEM 3B	Intro Organic & Biological Chemistry	CHEM 3B	Intro Organic & Biological Chemistry
CHEM 8A	Elementary Organic Chemistry	CHEM 8	Elementary Organic Chemistry
CHEM 28A	Organic Chemistry I	CHEM 28A	Organic Chemistry
CHEM 28B	Organic Chemistry II	CHEM 28B	Organic Chemistry
CHEM 29A	Organic Chemistry Laboratory I	CHEM 29A	Organic Chemistry Laboratory
CHEM 29B	Organic Chemistry Laboratory II	CHEM 29B	Organic Chemistry Laboratory
CIT 12	Computer Literacy	IS 12	Computer Literacy
CIT 15	Computer Concepts	IS 15	Computer Concepts
CIT 19	Work Experience (Cooperative), Occupational	IS 19V	Cooperative Work Experience, Info Sys
CIT 23	Spreadsheet Fundamentals	IS 18	Spreadsheet Fundamentals
CIT 60	Beginning Visual Basic	IS 47	Visual Basic
CIT 63	Beginning Java Programming	IS 33	Beginning Java Programming
CIT 202	Introduction to Online Learning	IS 202	Introduction to Online Learning
CLS 21	Chicano Literature	ENGL 49	Latino & Chicano Literature
COMM 1	Introduction to Public Speaking	COMM 1	Introduction to Public Speaking
COMM 1	Introduction to Public Speaking	COMM 1H	Honors Intro to Public Speaking
COMM 2	Interpersonal Communication	COMM 2	Interpersonal Communication
COMM 4	Persuasion	COMM 4	Persuasion

COMM 8	Group Communication
COMM 12	Fundamentals of Interpretation
COMM 25	Argumentation
COUN 53	College and Life Management
COUN 147AB	College Study Skills
CRIM 1	Introduction to Criminology
CRIM 3	Legal Aspects of Evidence
CRIM 4	Princ & Proced of the Justice System
CRIM 5	Community Relations
CRIM 6	Concepts of Criminal Law
CRIM 7	Concepts of Enforcement Services
CRIM 8	Criminal Investigation
CRIM 11	Juvenile Delinquency
CRIM 12	Criminal Justice Communications
CRIM 19	Work Experience (Cooperative), Occupational
CRIM 20	Introduction to Corrections
CSCI 26	Discrete Mathematics for Computer Science
CSCI 40	Programming Concepts & Methodology I
CSCI 40	Programming Concepts & Methodology I
CSCI 41	Programming Concepts & Methodology II
DANCE 9	Dance Conditioning
DEVSER 250	Workability Assessment and Career Awareness
DEVSER 251	Workability Preparation and Job Placement
DEVSER 252	Workability strategies and Job Maintenance
DEVSER 255	Workability Experience
DEVSER 262	Group Interaction for Students w/Disabilities
DEVSER 264	Transition to College for Students w/Disabilities
DEVSER 272	Consumer Skills
DEVSER 273	Independent Living Skills for DSP&S Students
DEVSER 275	Horticulture Skills I
DEVSER 276	Horticulture Skills II**
DEVSER 277	Adapted Computer Literacy**
DS 23	Business Statistics
DS 117	Business Mathematics
ECON 1A	Intro to Macroeconomics
ECON 1B	Intro to Microeconomics
EDUC 30	Survey of American Education
ENGL 1A	Reading and Composition
ENGL 1AH	Honors Reading and Composition
ENGL 1B	Intro to the Study of Literature
ENGL 1BH	Honors Intro to the Study of Literature
ENGL 3	Critical Reading and Writing
ENGL 3H	Honors Critical Reading and Writing
ENGL 15A	Creative Writing: Poetry
ENGL 15B	Creative Writing: Fiction
ENGL 44A	World Literature to the Renaissance
ENGL 44B	World Literature since the Renaissance
ENGL 46A	English Literature to 1800
ENGL 46B	English Literature from 1800 to Present
ENGL 47	Introduction to Shakespeare
ENGL 105	Grammar and Punctuation
ENGL 125	Writing Skills for College
ENGL 126	Reading Skills for College
ENGL 250	Basic Writing
ENGL 252	Writing Improvement
ENGL 260	Basic Reading
ENGL 262	Reading Improvement
ENGR 2	Graphics
ENGR 4	Engineering Materials
ENGR 6	Circuits with Lab
ENGR 8	Statics
ENGR 10	Introduction to Engineering
EST 61	Networking Fundamentals**
EST 62	Routing Protocols and Concepts**

COMM 8	Group Communication
COMM 12	Fundamentals of Interpretation
COMM 25	Argumentation
COUN 53	College and Life Management
COUN 47	Learning Strategies
CRIM 1	Introduction to Criminology
CRIM 3	Legal Aspects of Evidence
CRIM 4	Princ & Proced of the Justice System
CRIM 5	Community Relations
CRIM 6A	Criminal Law
CRIM 7A	Police Operations & Procedures
CRIM 8	Criminal Investigation
CRIM 11	Juvenile Delinquency
CRIM 12	Criminal Justice Communications
CRIM 19V	Cooperative Work Experience, Crim. Just
CRIM 20	Introduction to Corrections
CSCI 26	Discrete Mathematics for Computer Science
ENGR 40	Programming for Sci & Engin
CSCI 40	Programming Concepts & Methodology I
CSCI 41	Programming Concepts & Methodology II
DANCE	Dance Conditioning
DEVSER 250	Workability Assessment and Career Aware
DEVSER 251	Workability Preparation and Job Placement
DEVSER 252	Workability strategies and Job Maintenance
DEVSER 255	Workability Experience
DEVSER 262	Group Interaction for Students w/Disabilities
DEVSER 240	Trans to College for Students w/Disabilities
DEVSER 272	Consumer Skills
DEVSER 273	Independent Living Skills
DEVSER 275	Horticulture Skills I
DEVSER 276	Horticulture Skills II**
DEVSER 277	Adapted Computer Literacy**
STAT 7	Elementary Statistics
DS 117	Business Mathematics
ECON 1A	Intro to Macroeconomics
ECON 1B	Intro to Microeconomics
EDUC 10	Introduction to Teaching
ENGL 1A	Reading and Composition
ENGL 1AH	Honors Reading and Composition
ENGL 1B	Intro to the Study of Literature
ENGL 1BH	Honors Intro to the Study of Literature
ENGL 3	Critical Reading and Writing
ENGL 3H	Honors Critical Reading and Writing
ENGL 15A	Creative Writing: Poetry
ENGL 15B	Creative Writing: Fiction
ENGL 44A	World Literature to the Renaissance
ENGL 44B	World Literature since the Renaissance
ENGL 46A	English Literature to 1800
ENGL 46B	English Literature from 1800 to Present
ENGL 47	Shakespeare
ENGL 105	Grammar and Punctuation
ENGL 125	Writing Skills for College
ENGL 126	Reading Skills for College
ENGL 250	Basic Writing
ENGL 252	Writing Improvement
ENGL 260	Basic Reading
ENGL 262	Reading Improvement
ENGR 2	Graphics
ENGR 4	Engineering Materials
ENGR 6	Circuits with Lab
ENGR 8	Statics
ENGR 10	Introduction to Engineering
IS 49A	LAN Fundamentals – Cisco I
IS 49B	Router Theory & Technology – Cisco II Tech

EST 63	Adv. Routing & Switching	IS 49C	Ad. Routing & Switching – Cisco III Switching
EST 64	Adv. Networking & Management	IS 49D	Adv. Networking & Mgmt – Cisco IV Mgmt
FILM 1	Introduction to Film Studies	FILM 1	Introduction to Film Studies
FILM 2A	History or Cinema 1895-1960	FILM 2A	History of Cinema: 1895-1960
FILM 2B	History of Cinema 1960 to Present	FILM 2B	History of Cinema:1960 to Present
FILM 5	Digital Filmmaking	FILM 5	Digital Filmmaking
FN 35	Nutrition and Health	FN 35	Nutrition and Health
FN 40	Nutrition	FN 40	Nutrition
FN 41	Sports Nutrition	FN 41	Sports Nutrition
FN/CHDEV 42	Child Nutrition	FN 42	Child Nutrition
FRENCH 1	Beginning French	FRENCH 1	Beginning French
FRENCH 2	High Beginning French	FRENCH 2	High Beginning French
FRENCH 3	Intermediate French	FRENCH 3	Intermediate French
FRENCH 4	High Intermediate French	FRENCH 4	High Intermediate French
FSM 35	Food Services, Sanitation, Safety and Equipment	FN 20	Sanitation, Safety, & Equip for Food Serv
GEOG 4A	World Geography	GEOG 4A	World Geography
GEOG 4B	World Geography	GEOG 4B	World Geography
GEOL 1	Physical Geology	GEOL 1	Physical Geology
GEOL 2	Historical Geology	GEOL 2	Historical Geology
GEOL 9	Introduction to Earth Science	GEOL 9	Introduction to Earth Science
GERMAN 1	Beginning German	GERMAN 1	Beginning German
GERMAN 2	High Beginning German	GERMAN 2	High Beginning German
GERMAN 3	Intermediate German	GERMAN 3	Intermediate German
GERMAN 4	High Intermediate German	GERMAN 4	High Intermediate German
HIST 1	Western Civilization to 1648	HIST 1	Western Civilization to 1648
HIST 2	Western Civilization since 1648	HIST 2	Western Civilization since 1648
HIST 11	History of the United States to 1877	HIST 11	History of the United States to 1877
HIST 12	History of the United States since 1877	HIST 12	History of the United States since 1877
HIST 20	Comparative World Civilizations to 1600	HIST 20	Comparative World Civilizations to 1600
HIST 22	History of American Women	HIST 22	History of American Women
HLTH 1	Contemporary Health Issues	HLTH 1	Contemporary Health Issues
HLTH 2	First Aid and Safety	HLTH 2	First Aid and Safety
HS 19A	Work Experience (Cooperative), Occupational	HS 19V	Cooperative Work Experience, Human Serv*
HS 20	Introduction to Social Work	HS 20	Introduction to Social Work
HS 24	Fundamentals of Interviewing and Counseling	HS 24	Fundamentals of Interviewing & Counseling
HS 30	Group and Community Social Services	HS 30	Group and Community Social Services
INTRDSN 7	Interior Design	FM 30	Interior Design
JOURN 1	Introduction to Mass Communications	JOURN 1	Introduction to Mass Communications
JOURN 3	Newswriting	JOURN 3	Newswriting
JOURN 19	Work Experience (Cooperative), Occupational	JOURN 19	Cooperative Work Experience, Journalism
LING 10	Introduction to Language	LING 10	Introduction to Language
LING 11	Intro to Language for Educators	LING 11	Intro to Language
MATH 4A	Trigonometry	MATH 4A	Trigonometry
MATH 4B	Precalculus	MATH 4B	Precalculus
MATH 5A	Math Analysis I	MATH 5A	Math Analysis I
MATH 5B	Math Analysis II	MATH 5B	Math Analysis II
MATH 6	Math Analysis III	MATH 6	Math Analysis III
MATH 7	Introduction to Differential Equations	MATH 7	Introduction to Differential Equations
MATH 10A	Structure and Concepts in Mathematics I	MATH 10A	Structure and Concepts in Mathematics I
MATH 10B	Structure and Concepts in Mathematics II	MATH 10B	Structure and Concepts in Mathematics II
MATH 11	Elementary Statistics	MATH 11/STAT 7	Elementary Statistics
MATH 21/DS 21	Finite Mathematics	MATH 21	Finite Mathematics
MATH 26	Elementary Linear Algebra	MATH 26	Elementary Linear Algebra
MATH 45	Contemporary Mathematics	MATH 45	Contemporary Mathematics
MATH 101	Elementary Algebra	MATH 101	Elementary Algebra
MATH 102	Plane Geometry	MATH 102	Plane Geometry
MATH 103	Intermediate Algebra	MATH 103	Intermediate Algebra
MATH 250	College Arithmetic	MATH 250	College Arithmetic
MATH 255	Pre-Algebra	MATH 256	Algebra Topics
MATH 260B	Arithmetic Review: Fractions	MATH 260B	Arithmetic Review: Fractions
MKTG 10	Principles of Marketing	MKTG 10	Marketing
MKTG 11	Salesmanship	MKTG 11	Salesmanship
MKTG 12	Advertising and Promotion	MKTG 12	Advertising and Promotion
MKTG 14	Retailing	MKTG 14	Retailing

MUS 1A	Music Theory I
MUS 1B	Music Theory II
MUS 2A	Music Theory III
MUS 2B	Music Theory IV
MUS 3	Music Fundamentals
MUS 7A	Ear Training: Level I
MUS 7B	Ear Training: Level II
MUS 12	Music Appreciation
MUS 16	Jazz History and Appreciation
MUS 18	Basic Conducting and Score Reading
MUS 20	Beginning Piano: Level I
MUS 21	Beginning Piano: Level II
MUS 22	Intermediate/Advanced Piano
MUS 24	Elementary Voice: Level I
MUS 27	Beginning Guitar: Level I
MUS 28	Beginning Guitar: Level II
MUS 30	College Choir
MUS 40	Concert Band
MUS 41	Jazz Ensembles
NATSCI 1A	Integrated Sci: Physics & Chemistry
PE 4	Badminton
PE 5	Basketball
PE 6	Fitness and Health
PE 7	Golf
PE 12	Swimming
PE 13	Tennis
PE 14	Volleyball
PE 20	Athletic Training
PE 30A	Theory of Baseball
PE 30B	Competitive Baseball
PE 30C	Off-Season Conditioning for Baseball
PE 31A	Theory of Basketball
PE 31B	Competitive Basketball
PE 31C	Off-Season Conditioning for Basketball
PE 33A	Theory of Football
PE 33B	Competitive Football
PE 33C	Off-Season Conditioning for Football
PE 34A	Theory of Golf
PE 34B	Competitive Golf
PE 34C	Off-Season Conditioning for Golf
PE 35B	Pep and Cheer
PE 37A	Theory of Softball
PE 37B	Competitive Softball
PE 37C	Off-Season Conditioning for Softball
PE 38A	Theory of Tennis
PE 38B	Competitive Tennis
PE 38C	Off-Season Conditioning for Tennis
PE 39A	Theory of Track & Field
PE 39B	Competitive Track & Field
PE 39C	Off-Season Conditioning for Track & Field
PE 40A	Theory of Volleyball
PE 40B	Competitive Volleyball
PE 40C	Off-Season Conditioning for Volleyball
PE 62	Introduction to Kinesiology
PHIL 1A	Theories of Knowledge and Reality
PHIL 1C	Ethics
PHIL 1C	Ethics
PHIL 1D	World Religions
PHIL 4	Critical Reasoning
PHIL 6	Introduction to Logic
PHOTO 5	Introduction to Photography
PHYS 2A	General Physics 1
PHYS 2B	General Physics 2
PHYS 4A	Physics for Scientists & Engineers

MUS1A	Music Theory I
MUS 1B	Music Theory II
MUS 2A	Music Theory III
MUS 2B	Music Theory IV
MUS 3	Music Fundamentals
MUS 7A	Ear Training: Level I
MUS 7B	Ear Training: Level II
MUS 12	Music Appreciation
MUS 16	Jazz History and Appreciation
MUS 18	Basic Conducting and Score Reading
MUS 20	Beginning Piano: Level I
MUS 21	Beginning Piano: Level II
MUS 22	Intermediate/Advanced Piano
MUS 24	Elementary Voice: Level I
MUS 27	Beginning Guitar: Level I
MUS 28	Basic Guitar: Level II
MUS 31	Concert Choir
MUS 40	Concert Band
MUS 41	Jazz Ensembles
SCI 1A	Introductory Chemical & Physical Science
PE 4	Badminton
PE 5	Basketball
PE 6	Fitness and Health
PE 7	Golf
PE 12	Swimming
PE 13	Tennis
PE 14	Volleyball
PE 20	Athletic Training
PE 30A	Theory of Baseball
PE 30B	Competitive Baseball
PE 30C	Off-Season Conditioning for Baseball
PE 31A	Theory of Basketball
PE 31B	Competitive Basketball
PE 31C	Off-Season Conditioning for Basketball
PE 33A	Theory of Football
PE 33B	Competitive Football
PE 33C	Off-Season Conditioning for Football
PE 34A	Theory of Golf
PE 34B	Competitive Golf
PE 34C	Off-Season Conditioning for Golf
PE 35B	Pep and Cheer
PE 37A	Theory of Softball
PE 37B	Competitive Softball
PE 37C	Off-Season Conditioning for Softball
PE 38A	Theory of Tennis
PE 38B	Competitive Tennis
PE 38C	Off-Season Conditioning for Tennis
PE 39A	Theory of Track & Field
PE 39B	Competitive Track & Field
PE 39C	Off-Season Conditioning for Track & Field
PE 40A	Theory of Volleyball
PE 40B	Competitive Volleyball
PE 40C	Off-Season Conditioning for Volleyball
PE 22	Introduction to Physical Education
PHIL 1	Introduction to Philosophy
PHIL 1C	Ethics
PHIL 1CH	Honors Ethics
PHIL 1D	World Religions
PHIL 4	Critical Reasoning
PHIL 6	Introduction to Logic
PHOTO 1	Basics of Digital Photography
PHYS 2A	General Physics 1
PHYS 2B	General Physics 2
PHYS 4A	Physics for Scientists & Engineers

PHYS 4B	Physics for Scientists & Engineers	PHYS 4B	Physics for Scientists & Engineers
PHYS 4C	Physics for Scientists & Engineers	PHYS 4C	Physics for Scientists & Engineers
POLSCI 2	American Government	POLSCI 2	American Government
POLSCI 2H	Honors American Government	POLSCI 2H	Honors American Government
POLSCI 5	Comparative Government	POLSCI 5	Comparative Government
POLSCI 110	American Institutions	POLSCI 110	American Institutions
PSY 2	General Psychology	PSY 2	General Psychology
PSY 2H	Honors General Psychology	PSY 2H	Honors General Psychology
PSY 5	Social Psychology	PSY 5	Social Psychology
PSY/CHDEV 12	Child Abuse	CHDEV 12	Child Abuse
PSY 16	Abnormal Psychology	PSY 16	Abnormal Psychology
PSY 25	Human Sexuality	PSY 25	Human Sexuality
PSY/CHDEV 38	Lifespan Development	PSY/CHDEV 38	Lifespan Development
RE 40	Real Estate Principles	RE 40	Real Estate Principles
RE 41	Real Estate Practice	RE 41	Real Estate Practice
RE 42	Legal Aspects of Real Estate	RE 42	Legal Aspects of Real Estate
RE 43	Real Estate Appraisal I	RE 43	Real Estate Appraisal
RN 33	Transcultural Health Care	RN 78	Prof Nursing Relationships & Culture
SOC 1A	Introduction to Sociology	SOC 1A	Introduction to Sociology
SOC 1AH	Honors Introduction to Sociology	SOC 1A	Introduction to Sociology
SOC 2	American Minority Groups	SOC 2	American Minority Groups
SOC 32	Courtship, Marriage, Divorce	SOC 32	Courtship, Marriage, Divorce
SPAN 1	Beginning Spanish	SPAN 1	Beginning Spanish
SPAN 2	High Beginning Spanish	SPAN 2	High Beginning Spanish
SPAN 3	Intermediate Spanish	SPAN 3	Intermediate Spanish
SPAN 3NS	Spanish for Spanish Speakers	SPAN 3NS	Spanish for Spanish Speakers
SPAN 4	High Intermediate Spanish	SPAN 4	High Intermediate Spanish
SPAN 4NS	Spanish for Spanish Speakers	SPAN 4NS	Spanish for Spanish Speakers
WKEXP 19	Work Experience (Cooperative), General	COTR 19G	Cooperative Work Experience Education

Courses

Administration of Justice (AJ)

Change: hours, weeks, prerequisite ***effective Spring 2011***

219 Requalification Basic Course, 3 units, 11.4 lecture hours, 5.4 lab hours, (9 weeks), (Unlimited Repeats)

Prerequisite: Administration of Justice 270B. California POST Basic Certificate or out-of-state, a letter of recommendation from POST. No criminal record that disqualifies an individual under 12021 California Penal Code.

Delete course ***effective Fall 2010***

287 Field Tactics for Probation/CDC Officer, 1 unit, 24 lecture hours, 18 lab hours.

Building Safety and Code Administration (BSCA)

Change: description ***effective Spring 2011***

37 National Electrical Code Part 3, 3 units, 3 lecture hours, (Repeats = 3), (See also Electrical Systems Technology 96C)

Prerequisite: None.

Application of the rules for engineering, designing, installing, maintaining and inspecting electrical systems. Designed for newcomers to the electrical industry and professionals seeking preparation for obtaining additional certifications or further knowledge. General wiring, motors, controls, transformers, other equipment and grounding. (A, CSU)

Child Development (CHDEV)

Correction: title

3 Introduction to Curriculum

Correction: transferability

(A, CSU, UC)

Computer Information Technology (CIT)

Correction: transferability
46 Network+ Preparation
(A, CSU)

Correction: transferability
48 A+ and Server+ Systems Fundamentals
(A, CSU)

Correction: transferability
49 INET+ Preparation
(A, CSU)

Dance (DANCE)

Correction: transferability
28 Intermediate Modern Dance Technique
(A, CSU, UC)

Electrical Systems Technology (EST)

Change: advisory ***effective Spring 2011***
51 Direct Current Fundamentals of Electronics, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 53.

Change: hours ***effective Spring 2011***
52 Alternating Current Fundamentals, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Change: hours, repeats, description ***effective Spring 2011***
53 Lab Safety Practices, 2 units, 2 lecture hour, 1 lab hour, (Repeats = 3)
Prerequisite: None.
Introduction to the proper and safe use of hand tools, electrical devices/instruments, and component identification, and general circuit assembly procedures. (A, CSU)

Change: advisory ***effective Spring 2011***
54 Integrated Devices, 3 units, 3 lecture hours, 1 lab hour
Advisory: Electrical Systems Technology 51 and 52.

Change: advisory ***effective Spring 2011***
55C SCADA Systems, 2 units, 2 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 51, 55A and 58.

Change: hours, advisory ***effective Spring 2011***
56A Wiring Methods, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54.

Change: hours, advisory ***effective Spring 2011***
56B Motor Controls, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54.

Change: hours, advisory ***effective Spring 2011***
56C Industrial Electronics, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54 and 58.

Change: advisory ***effective Spring 2011***
57A Analog Communications, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54 and 55.

Change: advisory, description ***effective Spring 2011***
57B Digital Communications, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54.
Digital multiplexing, digital conversions, and modems. (A, CSU)

Change: hours, advisory ***effective Spring 2011***
57C Voice and Data Cabling, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Advisory: Electrical Systems Technology 54.

Change: title, description ***effective Spring 2011***

61 Network Fundamentals, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Advisory: Electrical Systems Technology 55A, 60, and Applied Technology 10 strongly recommended.

Local Area Networks fundamentals. Providing a theoretically rich, hands-on introduction to networking and the Internet. First class in a series of four in preparation for the CISCO CCNA Certification. (A, CSU)

Change: title, description ***effective Spring 2011***

62 Routing Protocols and Concepts, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 61.

Local Area Network routers, including basic router configuration and routing protocols. Second class in a series of four for preparation for the CISCO CCNA Certification. (A, CSU)

Change: description ***effective Spring 2011***

63 Advanced Routing and Switching, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 62.

How to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network. The third class in a series of four in preparation for the CISCO CCNA Certification. (A, CSU)

Change: description ***effective Spring 2011***

64 Advanced Networking and Management, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 63.

WAN technologies and network services; implementation and configure of data link protocols and WAN security concepts, principles of traffic, access control, and addressing services. Fourth class in a series of four in preparation for the CISCO CCNA Certification. (A, CSU)

Change: title, prerequisite, description ***effective Spring 2011***

65 Building Scalable Internetworks, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 64 or CISCO CCNA Certification (Industry Standard/Certification)

Teaches students about the deployment of state-of-the-art campus LANs and WANs. Students will develop skills in the following areas: Campus Networks, configuring EIGRP, OSPF, IS-IS, and BGP routing protocols and how to manipulate and optimize routing updates between routing protocols. Other topics include multicast routing, IPv6, and DHCP configuration. First class in a series of four in preparation for the CISCO CCNP Certification. (A, CSU)

Change: description ***effective Spring 2011***

66 Building Multilayer Switched Networks, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 65.

Multilayer Switching teaches students about the deployment of state-of-the-art campus LANs. Students will develop skills in the following areas: Campus Networks, Virtual Local Area Networks (VLANs), Spanning Tree Protocol, Inter-VLAN Routing, and Configuring Switches to Support Voice. Second class in a series of four in preparation for the CISCO CCNP Certification. (A, CSU)

Change: title, description ***effective Spring 2011***

67 Implementing Secure Converged WANs, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 65.

An introduction to secure enterprise-class networks, including VPNs, MPLS, and IPSec protocols. Third class in a series of four in preparation for the CISCO CCNP Certification. (A, CSU)

Change: title, description ***effective Spring 2011***

68 Optimizing Converged Networks, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)

Prerequisite: Electrical Systems Technology 66 and 67.

Introduces students to optimizing and providing effective QOS techniques in converged networks operating voice, wireless and security applications. Fourth class in a series of four in the preparation for the CISCO CCNP Certification. (A, CSU)

Change: description ***effective Spring 2011***

96C National Electrical Code Part 3, 3 units, 3 lecture hours, (Repeats = 3), (See also Building Safety and Code Administration 37)

Prerequisite: None.

Application of the rules for engineering, designing, installing, maintaining and inspecting electrical installations. Designed for newcomers to the electrical industry and professionals seeking preparation for obtaining additional certifications or further knowledge. General wiring, motors, controls, transformers, other equipment and grounding. (A, CSU)

Course deleted ***effective Spring 2011***

240 Building Automation, 2 units, 2 lecture hours, (Repeats = 2)

Change: prerequisite ***effective Spring 2011***
269B Fundamentals of Wireless LANs, 3 units, 3 lecture hours, 1 lab hour, (Repeats = 3)
Prerequisite: Electrical Systems Technology 62 or equivalent.

Course deleted ***effective Spring 2011***
272 Industrial Motor Controls, 3 units, 2.5 lecture hours, 1.5 lab hours, (Formerly Electronic Technology 72 and Electrical Systems Technology 72)

Course deleted ***effective Spring 2011***
273 Industrial Electronics Fundamentals, 3 units, 3 lecture hours, 1 lab hour, (Formerly Electronic Technology 73 and Electrical Systems Technology 73

Engineering (ENGR)

Change: corequisite, advisory ***effective Spring 2011***
6 Circuits with Lab, 4 units, 3 lecture hours, 3 lab hours.
Prerequisite: Physics 4B. **Corequisite:** Mathematics 7.

Change: corequisite, advisory ***effective Spring 2011***
8 Statics, 3 units, 3 lecture hours (Formerly Engineering 25)
Prerequisite: Physics 4A. **Corequisite:** Mathematics 6.

Film (FILM)

Change: advisory ***effective Spring 2011***
1 Introduction to Film Studies, 3 units, 3 lecture hours
Advisory: Eligibility for English 125 and 126 recommended.

Change: advisory ***effective Spring 2011***
3 Film and Culture, 3 units, 3 lecture hours
Advisory: Eligibility for English 125 and 126 recommended.

Change: advisory ***effective Spring 2011***
5 Digital Filmmaking, 3 units, 3 lecture hours
Advisory: Eligibility for English 125 and 126 recommended.

Change: advisory ***effective Spring 2011***
6 Film Genres, 3 units, 3 lecture hours
Advisory: Eligibility for English 125 and 126 recommended.

Fire Technology (FIRET)

Delete course ***effective Fall 2010***
132 Emergency Medical Technician – Paramedic, 30 units, 10.6 lecture hours, 16.17 lab hours, (60 weeks)

Graphic Communications (GRC)

New course ***effective Spring 2011***
51 Storyboarding, 1 unit, 2 lecture hours, (9 weeks), (Repeats = 3)
Prerequisite: None.
Pre-visualization for animation, video, web, and game production. Introduction to media-specific storyboarding processes and techniques. (A, CSU)

Honors (HONORS)

Change: corequisite, description ***effective Spring 2011***
1A Honors Science Colloquium: Biological Science through Scholarly Research, 1 unit, 1 lecture hour
Corequisite: Meet the qualifications for acceptance into the Honors Program, Biology 11AH and English 1AH.
Interdisciplinary approach to biological research integrating scientific writing and scholarly presentation methods. Critical topics and concepts beyond content offered in Biology 11A Honors. (A, CSU, UC approved as variable topics; evaluation completed by individual campuses after admission)

Delete course ***effective Fall 2010***
1B Honors Humanities Colloquium: The Ancient World to the Renaissance, 1 unit, 1 lecture hour

Change: title, corequisite, description ***effective Spring 2011***

1C Honors Humanities Colloquium: Humanities through the Ages, 1 unit, 1 lecture hour.

Corequisite: Meet the qualification for acceptance into the Honors Program. Philosophy 1AH, History 1H or 2H, History 1H or 2H, Art 5H or 6H, or English 1BH or 3H or Humanities 10H or 11H. See Honors Program listing in college catalog.

Interdisciplinary investigation of aspects of perceived reality. Examination of various concepts of reality as manifested in literature, critical thought, philosophy, religion, ideology, arts, politics, and socioeconomic systems. (A, CSU, UC approved as variable topics; evaluation completed by individual campuses after admission)

Humanities(HUMAN)

Change: description ***effective Spring 2011***

10H Honors Classical Humanities, 3 units, 3 lecture hours

Prerequisite: English 1A. **Advisory:** Meet the qualifications for consideration for acceptance into the Honors Program recommended. See Honors Program listing in the college catalog.

An integrated study of the art, music, literature, philosophy, and drama of Western civilization from the Greeks through the Renaissance. (A, CSU, UC)

Change: description ***effective Spring 2011***

11H Honors Modern Humanities, 3 units, 3 lecture hours

Prerequisite: English 1A. **Advisory:** Meet the qualifications for consideration for acceptance into the Honors Program recommended. See Honors Program listing in the college catalog.

An integrated study of the art, music, literature, philosophy, and drama of Western civilization from the seventeenth century to the present. Honors sections may cover additional subject matter such as more extensive reading and research as well as additional writing. (A, CSU, UC)

Military Science (MILSC)

Change: prerequisite ***effective Spring 2011***

21 ROTC Leadership Development/Assessment Course, 3 units, 3 lecture hours, 18 lab hours, (6 weeks), (Pass/No Pass), (Open Entry/Open Exit)

Prerequisite: Eligibility criteria as set forth in US Army Regulation 145-1.

Nursing, Registered (RN)

Correction: title

31 Foundations and Introduction to Medical-Surgical Nursing

Correction: title

32 Foundations and Introduction to Medical-Surgical Nursing Clinical

Correction: title

32A Foundations and Introduction to Medical-Surgical Nursing Skills

Change: corequisite ***effective Summer 2010***

105 Medication Math, 0.5 units, 0.5 lecture hours, (Formerly Registered Nursing 23)

Corequisite: Acceptance into the Registered Nursing Program.

Change: corequisite ***effective Summer 2010***

107 Introduction to Nursing Process, 0.5 units, 0.5 lecture hours, (Formerly Registered Nursing 25)

Corequisite: Acceptance into the Registered Nursing Program.

New Course ***effective Fall 2010***

203 RN Refresher Course, 3 units, 3.5 lecture hours, 13.5 lab hours, (9 weeks), (Pass/No Pass)

Prerequisite: RN License or NCLEX-RN eligible.

Didactic review, hospital based practice, and application of professional nursing skills for registered nurses and foreign educated nurses planning to return to the workforce.

Psychology (PSY)

Change: advisory ***effective Spring 2011***

2 General Psychology, 3 units, 3 lecture hours, (Formerly Psychology 7)

Advisory: Eligibility for English 1A is recommended.

Change: description ***effective Spring 2011***

5 Social Psychology, 3 units, 3 lecture hours

Advisory: Eligibility for English 125 and 126 or English as a Second Language 67 and 68 recommended.

A systematic analysis of the social determinants of behavior and mental processes, including the ways in which individuals are influenced by, and influence, their social environment. Emphasis is placed on the critical analysis of methodology, theory, and empirical findings related to social perception and cognition, attitudes, roles, conformity and obedience, attraction, aggression, prejudice and discrimination, prosocial behavior, behavior in groups, and behavior in built environments. (A, CSU, UC)

Course deleted ***effective Spring 2011***
14 Youth Suicide, 1 unit, 1 lecture hour

Change: description ***effective Spring 2011***
15 Psychology of Religion, 3 units, 3 lecture hours
Advisory: Eligibility for English 125 and 126 or English as a Second Language 67 and 68 recommended.
Psychological consequences of religion on thinking, emotions, moral and social behavior. Topics include the science-religion conflict, a comparison of selected Eastern and Western approaches to human identity and social relationships, and an examination of the impact of religion on experience, attitudes, behavior, and mental health. (A, CSU, UC)

Change: description ***effective Spring 2011***
16 Abnormal Psychology, 3 units, 3 lecture hours
Advisory: Psychology 2 and eligibility for English 125 and 126 or English as a Second Language 67 and 68 recommended.
Psychological, social, and biological bases of abnormal behavior. Definitions of abnormality; current models of etiology, classification, therapy, and prevention; critical analysis of research techniques and findings. (A, CSU, UC)

Change: description ***effective Spring 2011***
25 Psychology 25, 3 units, 3 lecture hours
Advisory: Psychology 2 and eligibility for English 125 and 126 or English as a Second Language 67 and 68 recommended.
Sexual behaviors and values in contemporary society from a biological, psychological, social, cultural, historical and lifespan perspective. Anatomy and physiology of sex, gender development and socialization, contraception and abortion, conception and prenatal development, sexual orientation, love and communication, sexual patterns and techniques, sexual dysfunctions, sexually transmitted diseases, and the causes and consequences of sexual victimization. Presented in an explicit and scientific manner. (A, CSU, UC)

Change: advisory, description ***effective Spring 2011***
36 Biological Psychology, 3 units, 3 lecture hours
Advisory: Psychology 2, Biology 1, 3 or 5 and eligibility for English 1A recommended.
Biological mechanisms central to fundamental concepts and issues of psychology. Topics include basic neuroanatomy, neurophysiology, and genetics; research methods in biological psychology; and the physiological mechanisms underlying sensation, perception, consciousness, motivation, emotion, stress, sexual behavior, learning, memory, neurological disorders, psychopharmacology, and psychological disorders. (A, CSU, UC)

Respiratory Care (RCARE)

Change: prerequisite, advisory ***effective Spring 2011***
16 Patient Assessment, 3 units, 3 lecture hours
Prerequisite: Acceptance in the Respiratory Care Program; Biology 1, Chemistry 3A, and Mathematics 103. **Advisory:** English 1A.

Change: prerequisite, advisory ***effective Spring 2011***
17 Fundamentals of Patient Management, 4 units, 3 lecture hours, 3 lab hours
Prerequisite: Acceptance in the Respiratory Care Program; Biology 1, Chemistry 3A, and Mathematics 103. **Advisory:** English 1A.

Change: prerequisite, advisory ***effective Spring 2011***
18 Physiology of the Respiratory System, 2 units, 2 lecture hours
Prerequisite: Acceptance in the Respiratory Care Program; Biology 1, Chemistry 3A, and Mathematics 103. **Advisory:** English 1A.

Change: prerequisite, advisory ***effective Spring 2011***
20 Introduction to Respiratory Care, 5 units, 3 lecture hours, 6 lab hours
Prerequisite: Acceptance in the Respiratory Care Program; Biology 1, Chemistry 3A, and Mathematics 103. **Advisory:** English 1A.

Change: advisory ***effective Spring 2011***
21 Applications and Procedures in Respiratory Care , 11 units, 8 lecture hours, 8 lab hours
Prerequisite: Respiratory Care 16, 17, 18 and 20. **Advisory:** English 1A.

Change: advisory ***effective Spring 2011***
22 Clinical Applications in Respiratory Care I, 9 units, 2 lecture hours, 22 lab hours
Prerequisite: Respiratory Care 21. **Advisory:** English 1A.
Change: advisory ***effective Spring 2011***
23 Clinical Applications in Respiratory Care II, 9 units, 2 lecture hours, 22 lab hours
Prerequisite: Respiratory Care 22. **Advisory:** English 1A.

Change: advisory ***effective Spring 2011***
25 Respiratory Disease, 2 units, 2 lecture hours
Prerequisite: Respiratory Care 22. **Corequisite:** Respiratory Care 23. **Advisory:** English 1A.

Supervised Tutoring (ST)

Change: description ***effective Spring 2011***
300 Supervised Tutoring, lab hours arranged, (Repeats = 3), (Pass/No Pass), (Formerly Supervised Tutoring 100)
Prerequisite: None.
Provides tutoring assistance to increase the probability of a student's successful completion of his or her educational objectives. Hours will vary depending upon individual student need.

Theatre Arts (TA)

Correction: title
42 Beginning Acting for Theatre Majors

Welding Technology (WELD)

Change: prerequisite, advisory, description ***effective Spring 2011***
2B Advanced Multi-Process Welding, 5 units, 3 lecture hours, 7 lab hours, (Repeats = 3)
Prerequisite: Welding Technology 2A.
Vertical and overhead welding with the shielded metal arc process leading to the American Welding Society (AWS) Structural Welding Code 3G and 4G Unlimited Certification Test. Advanced welding skills with gas metal arc (MIG), flux cored (FCAW) and gas tungsten arc (TIG). (A, CSU)

Change: description ***effective Spring 2011***
4A Heavy Plate, Structural Steel and Welding Certification, 5 units, 3 lecture hours, 7 lab hours, (Repeats = 3)
Advisory: Welding 2B or equivalent, Drafting 12, and eligibility for English 125 and 126 or English as a Second Language 67 and 68, and Mathematics 101 or Applied Technology 130 recommended.
An emphasis on obtaining certification in vertical and overhead welding positions (3G and 4G) in structural welding with shielded metal arc welding (SMAW) flux cored arc welding (FCAW) gas metal arc welding (GMAW) processes leading to the American Welding Society (AWS) Structural Welding Code Certification test. (A, CSU)

Change: description ***effective Spring 2011***
4B Pipe, Tube Welding and Certification, 5 units, 3 lecture hours, 7 lab hours, (Repeats = 3)
Advisory: Welding 2B or equivalent, Drafting 12, and eligibility for English 125 and 126 or English as a Second Language 67 and 68, and Mathematics 101 or Applied Technology 130 recommended.
Shielded metal arc, gas metal arc welding, gas tungsten arc, and flux cored arc welding processes on different piping systems. Fit up and assemble joint configurations used in pressure vessel, power systems, cross country and refinery applications. Certification procedures in accordance with API, AWS, and ASME codes. (A, CSU)

Course deleted ***effective Spring 2011***
19 Work Experience (Cooperative), Occupational, 1-8 units, 1 lecture hour, (Repeats = 2)