EME 207 Paramedic Medical Training (Lecture) (10)
10 hours lecture
Prerequisite: Admission into Paramedic program
Corequisite: EME 207L and EME 211
Note: May be taken 2 times
The study of medical diseases for Paramedic training which meets the requirements of the National Standard Curriculum for Paramedic Training. Includes ACLS training and certification.

EME 207L Paramedic Medical Skills (Laboratory) (1.5)
4½ hours laboratory
Prerequisite: Admission into Paramedic program
Corequisite: EME 207
Note: Credit/No Credit grading only; may be taken 2 times
Application of skills necessary for the medical portion of Paramedic Training which meets the requirements of the National Standard Curriculum for Paramedic Training.

EME 208 Paramedic Trauma Training (Lecture) (4.5)
4½ hours lecture
Prerequisite: Admission into Paramedic program
Corequisite: EME 208L and EME 212
Note: May be taken 2 times
The study of traumatic emergencies for Paramedic training which meets the requirements of the National Standard Curriculum for Paramedic Training. Includes Pre-hospital Trauma Life Support training and certification.

EME 208L Trauma Skills (Laboratory) (.5)
1½ hours laboratory
Prerequisite: Admission into Paramedic program
Corequisite: EME 208
Note: Credit/No Credit grading only; may be taken 2 times
Application of skills necessary for trauma class of Paramedic training which meets the requirements of the National Standard Curriculum for Paramedic Training. Includes Pre-hospital Trauma Life Support training and certification.

EME 209 Paramedic Obstetrical and Pediatric Training (Lecture) (2.5)
2½ hours lecture
Prerequisite: Admission into Paramedic program
Corequisite: EME 209L and EME 212
Note: May be taken 2 times
The study of Obstetrical and Pediatric emergencies for Paramedic training which meets the requirements of the National Standard Curriculum for Paramedic Training. Includes Pediatric Education for Pre-hospital Professionals.

EME 209L Paramedic Obstetrical and Pediatric Skills (Laboratory) (.5)
1½ hours laboratory
Prerequisite: Admission into Paramedic program
Corequisite: EME 209
Note: Credit/No Credit grading only; may be taken 2 times
Application of skills necessary for the Obstetrical and Pediatric class for Paramedic Training which meets the requirements of the National Standard Curriculum for Paramedic Training. Includes Pediatric Education for Pre-hospital Professionals.

EME 210 Hospital Clinical Experience (4)
12 hours laboratory
Prerequisite: EME 209 and EME 209L
Note: May be taken 2 times
Supervised clinical experience in acute care areas of hospitals where knowledge of advanced life support techniques is necessary.

EME 211 Clinical Integration I (1.5)
4½ hours laboratory
Corequisite: EME 207
Note: May be taken 2 times; Credit/No Credit grading only
Application of assessment and BLS skills necessary to be successful in Paramedic Training.

EME 212 Clinical Integration II (1.5)
4½ hours laboratory
Corequisite: EME 208 and EME 209
Note: Credit/No Credit grading only; may be taken 2 times
Application of assessment and BLS skills necessary to be successful in Paramedic Training.

EME 215 Field Internship (9)
28 hours laboratory
Prerequisite: EME 210
Note: May be taken 2 times
Assignment to a response vehicle with a field preceptor. Includes direct patient care responsibilities in providing advanced life support.

EME 295 Directed Study in Emergency Medical Education (1,2,3)
3, 6, or 9 hours laboratory
Prerequisite: Approval of project or research by department chairperson/director
Note: May be taken 4 times
Independent study for students who have demonstrated skills and/or proficiencies in Emergency Medical Education subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Engineering (ENGR)

Contact the Physics and Engineering Department for further information, (760) 744-1150, ext. 2505

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY

Engineering

Provides the background to begin upper division coursework and will prepare the student for entry level jobs that require a knowledge of engineering and engineering related topics. The highly sequential nature of the engineering curriculum necessitates completion of lower division requirements before being admitted into upper division courses.

Engineering students are urged to give priority to the completion of major field requirements over the completion of general education requirements. Engineering lower division requirements are not the same for different universities. These institutions recommend that their particular lower division requirements be completed before transfer. Students should seek early assistance in planning their specific program from the Counseling Department, the Transfer Center, or the Physics/Engineering Department.

A.A. DEGREE MAJOR

Program Requirements		**Units**
(Select a minimum of 11 units)		
ENGR 125	Engineering Graphics	3
ENGR/ ECHT 126	Intro Electric/Computer Engineering	4
ENGR 210	Electrical Network Analysis	3
ENGR 210L	Electrical Network Analysis Laboratory	1
ENGR 231	Engineering Measurement Analysis	3
ENGR 235	Engineering Mechanics Statics	3
ENGR 236	Engineering Mechanics Dynamics	3
ENGR 245	Properties of Materials	3
Electives (Select a minimum of 30 units)		
Note that mathematics courses are often prerequisite to engineering and physics courses.		
MATH 140*	Calculus/Analytic Geometry, First Course	5
MATH 141	Calculus/Analytic Geometry, Second Course	4

MATH 205	Calculus/Analytic Geometry, Third Course	4
MATH 206	Calculus with Differential Equations	4
PHYS 230*	Principles of Physics	5
PHYS 231	Principles of Physics	5
PHYS 232	Principles of Physics	4
CHEM 110*	General Chemistry	3
CHEM 115*	General Chemistry	3
CHEM 110L*	General Chemistry Laboratory	2
CHEM 115L*	General Chemistry Laboratory	2
MINIMUM TOTAL UNITS		**41**

Recommended Elective: ENGR 100

* Courses marked with an asterisk may be used to fulfill General Education requirements. ENG 100, ENG 202, and BIOL 100 are highly recommended as electives to fulfill General Education requirements.

COURSE OFFERINGS

ENGR 100 Introduction to Engineering (1)
1 hour lecture
Transfer acceptability: CSU; UC
An overview of the engineering profession including not only the different engineering fields but also the specialized demands and rewards of each. It will afford the opportunity for community building among the students, who usually are otherwise isolated in the community college milieu. Group projects in the course will encourage socialization and human relations training in what is often perceived as a dry and dull profession. Academic success strategies will be explained and practiced; ethical concepts will be examined through case histories and practical applications.

ENGR 125 Engineering Graphics (3)
2 hours lecture-3 hours laboratory
Transfer acceptability: CSU; UC
Fundamental principles of orthogonal projection and their application to the solution of three dimensional problems arising in the various branches of engineering, free hand and instrumental working drawings, and graphic computations.

ENGR 126 Introduction to Electrical and Computer Engineering (4)
3 hours lecture-3 hours laboratory
Prerequisite: Math 140
Note: Cross listed as ECHT 126
Transfer acceptability: CSU
Introductory concepts covering a broad range of topics in Electrical and Computer Engineering presented in an integrated approach at a hands-on level. Students work in small teams to analyze, build, and test a small programmable robot for competition at the end of the semester. Provides basic understanding and skills for students to later build their theoretical understanding in more advanced physics and engineering courses.

ENGR 197 Engineering Topics (.5-5)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: May be taken 4 times
Transfer acceptability: CSU
Topics in Engineering. See Class Schedule for specific topic offered. Course title will designate subject covered.

ENGR 210 Electrical Network Analysis (3)
3 hours lecture
Prerequisite: Completion of, or concurrent enrollment in, both ENGR 210L and PHYS 231
Transfer acceptability: CSU; UC; CAN ENGR 12
Circuit analysis by reduction methods, source transformations, loop and nodal analysis, OPAMP model for networks, transient analysis, alternating current circuits, impedance, power and phasor diagrams.

ENGR 210L Electrical Network Analysis Laboratory (1)
3 hours laboratory
Prerequisite: Completion of, or concurrent enrollment in, ENGR 210
Transfer acceptability: CSU; UC
Laboratory exercises of circuit analysis by reduction methods, source transformations, loop and nodal analysis, OPAMP model for networks, transient analysis, alternating current circuits, impedance, power and phasor diagrams.

ENGR 231 Engineering Measurement Analysis (3)
2 hours lecture-3 hours laboratory
Prerequisite: MATH 140
Transfer acceptability: CSU; UC
Analysis and treatment of engineering data. Probability, statistics, error theory, correlation and regression analysis, dimensional analysis, data processing, and preparation of technical reports. Laboratory experiments in hydraulic flow, surveying, heat transfer, and static and dynamic test systems.

ENGR 235 Engineering Mechanics – Statics (3)
3 hours lecture
Prerequisite: PHYS 230 and MATH 140
Transfer acceptability: CSU; UC; CAN ENGR 8
Force systems and equilibrium conditions. Engineering problems covering structures, machines, distributed forces, and friction. Graphical and algebraic solutions, and vectorial analysis.

ENGR 236 Engineering Mechanics – Dynamics (3)
3 hours lecture
Prerequisite: ENGR 235
Transfer acceptability: CSU; UC
Fundamental principles of bodies in motion; kinetics and kinematics of particles; system of particles; central force; work and energy; linear and angular momentum; moments and products of inertia; vibrations and time response; engineering applications.

ENGR 245 Properties of Materials (3)
2 hours lecture-3 hours laboratory
Prerequisite: CHEM 110 and 110L
Transfer acceptability: CSU,UC; CAN ENGR 4
Physical properties of engineering materials. Atomic, molecular, and crystal lattice characteristics. Relations between these and mechanical, thermal, electrical, corrosion, and radiation properties. Metallic, ceramic, polymer, and agglomerate materials. Selection, treatment, and use of materials.

ENGR 295 Directed Study in Engineering (1,2,3)
3, 6, or 9 hours laboratory
Prerequisite: Approval of project or research by department chairperson
Note: May be taken 4 times
Transfer acceptability: CSU
Designed for the student who has demonstrated a proficiency in engineering subjects and the initiative to work independently on a particular sustained project which does not fit into the context of regularly scheduled classes.

English (ENG)

Contact the English Department for further information, (760) 744-1150, ext. 2392

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY

English

Focuses on the English language and literatures in English. Provides the background for students to succeed in diverse fields, such as advertising and marketing, teaching, journalism and telecommunications, law, technical writing, and business administration. Prepares students for upper division course work in English. For specific transfer requirements, the student should consult an academic counselor or the catalog for the school to which he or she wishes to transfer.