EME 210 Hospital Clinical Experience (4)
12 hours laboratory
Prerequisite: *A minimum grade of 'C' in 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 and EME 207L or EME 208 and EME 208L*
Note: *May be taken 2 times; Pass/No Pass 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 209 and EME 209L or EME 210*
Note: *Pass/No Pass 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)
27 hours laboratory
Prerequisite: *A minimum grade of 'C' in 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 220 Paramedic Refresher (2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8)
2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8 hours lecture
Prerequisite: *Provide proof of receiving a failing grade in one or more of the following courses: EME 207, 207L, 208, 208L, 210, 215 within the previous 24 months.*
Provides students who were unsuccessful in one or more of the following courses, EME 207, 207L, 208, 208L, 210 or 215, an opportunity to refresh, strengthen, and maintain their clinical abilities and knowledge base.

EME 223 OB/Peds Block Refresher (1, 2)
1, 2 hours lecture
Prerequisite: *Provide proof of receiving a failing grade in one or more of the following courses: EME 210, 215 within the previous 24 months*
Corequisite: *EME 224*
Provides students who were unsuccessful in one or more of the following courses, EME 210 or 215, an opportunity to refresh, strengthen, and maintain their academic knowledge base in obstetrical and pediatric medicine.

EME 224 Clinical Refresher (1.5)
½ hour lecture - 3 hours laboratory
Prerequisite: *Failure in EME 215*
Corequisite: *EME 223*
Provides students who were unsuccessful in EME 215 an opportunity to refresh, strengthen, and maintain their clinical abilities and knowledge base.

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
Office: NS-355B

Associate in Arts Degrees -
AA Degree requirements are listed in Section 6 (green pages).
• Engineering

PROGRAMS 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)		
ARCH/DT 125 or DT 128	AutoCAD Introduction to Computer Aided Drafting SolidWorks Introduction to 3D Design and Presentation	3
ENGR126	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	4
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 126 Introduction to Electrical and Computer Engineering (4)
3 hours lecture - 3 hours laboratory
Prerequisite: *A minimum grade of 'C' in MATH 140*
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 lecture and/or 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: *A minimum grade of 'C' in ENGR 210L and PHYS 231, or concurrent enrollment in ENGR 210L and PHYS 231*
Transfer acceptability: *CSU; UC*
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: *A minimum grade of 'C' in ENGR 210, 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: *A minimum grade of 'C' in 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: *A minimum grade of 'C' in PHYS 230 and MATH 140*
Transfer acceptability: *CSU; UC*
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: *A minimum grade of 'C' in 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 (4)
3 hours lecture - 3 hours laboratory
Prerequisite: *A minimum grade of 'C' in CHEM 110 and 110L*
Transfer acceptability: *CSU,UC*
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
Office: P-2

Associate in Arts Degrees -

AA Degree requirements are listed in Section 6 (green pages).
• English

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.

AA DEGREE MAJOR

Program Requirements		**Units**
ENG 205 and	Introduction to Literature	3
ENG 202 or	Critical Thinking /Composition	
ENG 203	Critical Thinking/Composition Through Literature	4
Literature Surveys (Select 9 Units) Of these nine units, students must take either a two-semester survey of British literature or a semester each of British and United States literature.		
ENG 210	Survey of British Literature I	3
ENG 211	Survey of British Literature II	3
ENG 220	Survey of World Literature I	3
ENG 221	Survey of World Literature II	3
ENG 225	Literature of the United States I	3
ENG 226	Literature of the United States II	3
Elective Courses (Select 2 courses) Any of the above courses not previously taken or pick from the following:		
ENG 135	Introduction to Creative Writing	4
ENG 136	Intermediate Creative Writing	4
ENG 137	The Literary Magazine: History/Production	4
ENG 215	Introduction to the British Novel	3
ENG 230	Introduction to the American Novel	3
ENG 240	Introduction to Classical Mythology	3
ENG 245	Survey of Biblical Literature	3
ENG 250	Introduction to Shakespeare	3
ENG 260	Literature Through Film	3
ENG 265	Science Fiction	3
ENG 270	Popular Literature	3
ENG 280	Women and Literature	3
TOTAL UNITS		**22 - 24**