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CSUB offers a degree program in Computer Engineering (see the Computer Engineering section of this catalog) and a concentration in Electrical Engineering. For all other engineering degrees, students can complete a substantial portion of lower division courses required for engineering programs elsewhere. Students who have completed the core mathematics and science sequences have been readily accepted by other universities, public and private, both within and outside of California.

Most engineering programs are highly structured and very demanding, and careful selection of courses for transfer programs is strongly urged. Students interested in the pre-engineering program are advised to consult with the pre-engineering advisor in the Department of Physics and Engineering (SCI III 308, 661-654-2104) for information and assistance in planning course work. For student learning objectives and more information, visit our website at www.csub.edu/engineering.

Special Consideration for Transfer to Cal Poly San Luis Obispo - CSUB has reached an agreement with Cal Poly whereby students who complete the specified transfer program at CSUB are given special consideration for admission. While there is no formal guarantee, successful completion of the following courses positions the student with a strong transfer record.

Basic Course Requirements:
CHEM 211, 212, CMPS 221, COMM (not required for transfers to the UC), ENGR 160/161, 207, 240, ENGL 101 (required only for transfers to the UC), 110, MATH 201, 202/222, 203, 204 (Calculus sequence), 205, PHIL 102 Logical Reasoning (some CSUs waive this course), PHYS 221, 222, 223 (Calculus-based Physics sequence)

COURSE DESCRIPTIONS

Lower Division

ENGR 160 Engineering Orientation (1)
An introduction to the various areas within the engineering discipline. Description of engineering curricula and career opportunities within each of the various areas. Academic advising for transferring to other institutions with engineering degree programs. Primarily for students planning to major in one of the fields of engineering. Offered on a credit, no-credit basis only. One hour lecture/discussion.

ENGR 161 Introduction to Engineering Design (2)
Introduces students to real-life engineering projects. Students design, build, tests and present engineering projects designed to solve specified problems within given constraints. Primarily for students planning to major in one of the fields of engineering. Two hours lecture/discussion.

ENGR 207 Electric Circuits (5)
Circuit laws and analysis of DC and AC circuits. Physical properties, electrical characteristics and circuits of discrete and integrated electrical and electronic devices. Design and construction of circuits with instrumentation applications. Three hours lecture/discussion and two three-hour laboratories per week. Prerequisites: PHYS 222, MATH 202/222 (MATH 203 recommended).

ENGR 240 Analytic Mechanics, Statics (5)
Fundamental principles of force systems acting on particles and rigid bodies in static equilibrium. Applications to structural and mechanical problems, both two-dimensional and three-dimensional. Five hours lecture/discussion. Prerequisites: PHYS 221, Co-requisite MATH 202.

ENGR 270 Introduction to CAD in Engineering (3)
Use of computer-aided design software, such as AutoCAD, in engineering. CAD concepts including drawing setups, commands and system variables, layers and object properties, 2-dimensional entity creation, coordinate systems, creating objects, drawing with precision, plotting, and editing methods are applied to a variety of engineering applications. Two hours lecture/discussion and three hours laboratory per week.

ENGR 271 Intermediate CAD in Engineering (3)
Intermediate topics in computer-aided design using AutoCAD. Introduction to 3-dimensional drawing and modeling with engineering applications, adding text to drawings, creating dimensions, using blocks and external references, managing content with Autocad Design Center, creating a layout to plot, plotting your drawings, working with raster images, creating compound documents with OLE, and using other file formats. Two hours lecture/discussion and three hours laboratory per week. Prerequisite: ENGR 270

Natural Sciences, Mathematics & Engineering