

# Pre-Engineering

**S**tudents interested in a career in engineering can complete many of the lower-division requirements for admission to programs at other universities while enjoying the benefits of a liberal arts education at CSUB.

*If you are thinking about a career in engineering, why not think about California State University, Bakersfield first? You can get a head start at CSUB studying mathematics and science courses which form the foundation of the engineering major. You can then complete your studies at one of several engineering programs within the California State University 23-campus system.*

What are the advantages of coming to CSUB first? There are many. CSUB students enjoy exceptional opportunities to work closely with faculty. Classes are small and promote participation and interaction among students and with faculty. The student faculty ratio in the engineering core courses is the best in the CSU. Classes are generally limited to 24 students per section.

The faculty at CSUB are dedicated to undergraduate teaching. Almost all have completed their doctorate degrees and have done considerable scholarly research, but they are committed to teaching, and that makes a notable difference in the classroom. You will discover a supportive environment that leads to learning.

## **Transfer Agreements**

CSUB students who complete foundation courses for the engineering major are given special consideration when they apply for admission to engineering programs at other CSU campuses. This can be an important advantage at those campuses that receive many more applicants than they can admit, such as Cal Poly, San Luis Obispo.

For Kern County high school students, Cal Poly, San Luis Obispo offers an appealing engineering option. CSUB has reached an agreement with Cal Poly whereby CSUB students who complete the specified transfer program are given "special consideration" for admission. While there is no formal guarantee, completion of the Pre-Engineering curriculum shown on

the back of this sheet provides the student with a very strong assurance of admission. Students who want to transfer to Cal Poly need to work very closely with the engineering advisor.

## **CSUB's Engineering Program**

The engineering curriculum at CSUB is designed to provide a solid foundation for professional engineering programs. While some flexibility is allowed, you should note that many mathematics, chemistry, and physics courses must be taken in sequence and not all courses are offered every quarter. Careful planning of course work is important. Be sure to consult the engineering advisor before registration each quarter.

## **Preparing for College**

An excellent way to begin preparing for a career in engineering is to take college preparatory courses in high school, especially English, mathematics, and science. High school course work should include four years of mathematics, through math analysis or precalculus. Chemistry and physics are strongly recommended, as well as four years of college preparatory English.

If you have not taken all the recommended courses while in high school but still wish to major in engineering, you should not be discouraged. You can complete much of the required and recommended course work at CSUB.

Once you have been admitted to CSUB, you should take the English Placement Test (EPT) for placement in an appropriate English course and the Entry Level Mathematics (ELM) test. These tests may be waived in many cases, depending upon prior course work or satisfactory SAT or ACT scores.

For placement into Calculus you need to take the UC/CSU MDPT Calculus Readiness Test.

Before you register for courses at CSUB, you should meet with the engineering advisor. An appointment can be scheduled by calling the Physics & Geology Department, 661-664-3027.

## **Services for Engineering Students**

**Advising:** Every student is assigned an advisor who assists in selecting appropriate courses and in preparing for transfer, but more importantly, assists you to succeed in your educational objectives and with career preparation.

**Study Support:** The university assists students with study groups, tutorials, and special collaborative learning courses in mathematics, calculus, and science.

**Engineering Tours:** Students have the opportunity to visit local industries and tour campuses of engineering schools such as Cal Poly, San Luis Obispo, CSU Fresno, CSU Northridge, USC, UCLA, and UC, Santa Barbara.

**MESA Engineering Program (MEP):** The goal of the MESA (Math Engineering Science Achievement) Engineering Program is to increase the number of educationally disadvantaged students who graduate with university degrees in engineering and computer science. For more information, please contact the MEP office at 661-335-7734.

## **Scholarships:**

- Arts & Sciences Merit Award Scholarship
- National Science Foundation Computer Science, Engineering, and Math Scholarship

## **More Information?**

For more information about CSUB's pre-engineering program, call the Physics & Geology Department, 661-664-3027, or the School of Natural Sciences, Mathematics, & Engineering, 661-664-3450.



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