



# CSU Bakersfield

School of Natural Sciences, Mathematics, and Engineering

Department of Physics and Engineering

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## **Bachelor of Science degree in Engineering Sciences Student Outcomes**

The program's student outcomes are the same for all options (Bachelor of Science in Engineering Sciences, Bachelor of Science in Engineering Sciences with Emphasis in Biosystems and Agricultural Engineering, Bachelor of Science in Engineering Sciences with Emphasis in Engineering Management, and Bachelor of Science in Engineering Sciences with Emphasis in Petroleum Engineering). These outcomes are identical to those listed by the Engineering Accreditation Commission of ABET. Thus, upon the successful completion of the Bachelor of Science in Engineering Sciences program at California State University, Bakersfield, students will have achieved the following:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

*Approval. These Student Outcomes were part of the proposal for a new BS in Engineering Sciences submitted by the Department of Physics and Engineering to CSUB on October 12, 2011. The degree program, with the Student Outcomes presented in this document, was approved by the Chancellor's Office on April 18, 2012.*