

CA Engineering

Engineering is one of the largest professions in the United States with over one million jobs in fields ranging from airplane design to pollution control. The four largest branches are civil, computer, electrical and mechanical engineering. All engineering branches place a heavy emphasis on problem solving. Engineering education focuses on teaching mathematical, scientific and engineering principles and their application to the creative and effective solution of problems.

Career Opportunities

Engineering is one of the highest paid professions in the country. Engineering graduates work in a variety job functions (research and development, testing, design, construction, manufacturing, sales, consulting, management) and a variety of industry sectors (aerospace, computers/electronics manufacturing, electrical/electronics manufacturing, electrical equipment manufacturing, metals, machinery, architectural, engineering and related services, chemical, drugs, plastics, biotechnology, computers and technical consulting, research and development, professional and technical services, utilities).

Program Learning Outcomes

Students completing this program will be able to:

- 1. Apply knowledge of math, science, and engineering to identify, formulate, and solve engineering problems.
- 2. Communicate effectively and work well in situations that require teamwork.
- 3. Design and perform tests or experiments, analyze and interpret data, and prepare a report summarizing the results of the tests or experiments.
- 4. Develop a design or system given a set of requirements and specifications.
- 5. Use techniques, skills, and modern engineering and computer tools necessary for engineering practice.

Major: Core and Selective Requirements

Complete Core Courses, 26-28 units		Units
CHEM 210	General Chemistry I	5 units
ENGL 100	Reading and Composition	3 units
OR		
ENGL 105	Reading and Composition with Support	5 units
MATH 251	Analytical Geometry and Calculus I	5 units

MATH 252	Analytical Geometry and Calculus II	5 units
PHYS 250	Physics with Calculus I	4 units
PHYS 260	Physics with Calculus II	4 units

Selectives: Complete 6-8 units from the following courses:		Units
ENGR 100	Introduction to Engineering	3 units
ENGR 210	Engineering Graphics	4 units
ENGR 215	Computational Methods for Engineers and Scientists	3 units
ENGR 230	Statics	3 units
ENGR 240	Engineering Dynamics	3 units
ENGR 260	Circuits and Devices	3 units
ENGR 261	Circuits and Devices Laboratory	1 unit
ENGR 270	Materials Science	4 units

