

ENGINEERING FUNDAMENTALS 1 - CERTIFICATE OF ACHIEVEMENT

The Engineering Fundamentals 1 Certificate of Achievement offers students a solid foundation in the fundamental principles that underlie all engineering disciplines. When combined with additional coursework, such as the Engineering Fundamentals 2 Certificate and a major-specific engineering certificate (such as Electrical, Mechanical, Civil, or Computer Engineering), it can lead to transfer to four-year universities for continued engineering studies. Designed to be completed early in a student's academic journey, ideally during the freshman year, this certificate effectively prepares students for advancement into most sophomore-level engineering and STEM support courses.

Program Learning Outcomes

- Acquire, develop, and refine the foundational skills in mathematics, physics, and science necessary to be successful in engineering courses.
- Differentiate the various engineering branches as they apply to four-year academic pathways.

Course	Title	Units
Engineering Fundamentals 1 Coursework		14-17
PHYS 007A	Calculus-Based General Physics for Scientists and Engineers - I	
ENGR 010 or ENGR 010A	Introduction to Engineering Introduction to Engineering	
<i>One of the following Math sequences:</i>		
MATH 066 & MATH 067	Calculus I Late Transcendentals for STEM and Calculus II Late Transcendentals for STEM	
or		
MATH 071 & MATH 072	Calculus I With Analytic Geometry and Calculus II With Analytic Geometry	
Total Units		14-17