ENGINEERING FUNDAMENTALS 2

The Engineering Fundamentals 2 Certificate of Achievement builds upon the Engineering Fundamentals 1 Certificate, further strengthening students' foundational knowledge in the principles that underlie all engineering disciplines. When combined with additional coursework, such as 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.

Program Learning Outcomes

- Acquire, develop, and refine the foundational skills in mathematics, physics, and science necessary to be successful in engineering courses.
- Demonstrate the ability to write computer programs and apply them towards solving engineering problems.

Engineering Fundamentals 1 Coursework

Course	Title	Units
Engineering Fundamentals 1 Coursework		**14-17**
PHYS 007A	Calculus-Based General Physics for Scientists and Engineers - I	
ENGR 010	Introduction to Engineering	
or ENGR 010A	Introduction to Engineering	
One of the following Math sequences:		
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	
Engineering Fundamentals 2 Coursework		**13**
MATH 073	Multivariable Calculus	
MATH 078	Differential Equations	
PHYS 007B	Calculus-Based General Physics for Scientists and Engineers - II	
Choose one programming course from the following:		*1-4*
COMSC 041	Programming Concepts and Methodology I	
COMSC 075	Computer Science I: Introduction to Program Structures	
ENGR 030	Programming and Problem-Solving in MATLAB	
ENGR 050	Introduction to Computing	
ENGR 050L	Introduction to Programming Micro-Controllers	
Total Units		**28-34**