ELECTRICAL ENGINEERING - CERTIFICATE OF ACHIEVEMENT

Electrical engineering encompasses the design and application of systems that harness electricity, magnets, and photons to power technologies like smartphones, wireless communication, medical imaging, and autonomous vehicles. The Electrical Engineering Certificate of Achievement provides students with a solid foundation in engineering, science, and mathematics, which is essential for successfully transferring to a four-year university to further their engineering studies. This certificate also opens pathways to internship opportunities, offering students practical experience that enhances their academic journey and career prospects.

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.
- Effectively apply techniques, skills, and computational tools necessary for electrical engineering.

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	
Electrical Engineering Coursework		**16**
CHEM 001A	General Chemistry	
ENGR 071	Introduction to Circuit Analysis	
MATH 079	Linear Algebra	
PHYS 007C	Calculus-Based General Physics for Scientists and Engineers - III	
Total Units		**44-50**