

# STEM - CERTIFICATE OF ACHIEVEMENT

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The Certificate of Achievement in STEM (Science, Technology, Engineering and Mathematics) provides students with a solid foundation towards an academic or technical career in STEM, offering course prerequisite to, or part of, existing program core courses. Students receiving this certificate will have a better understanding about career choices, especially in STEM oriented areas. It will give them the knowledge needed to make an informed decision about either embracing the pathways leading to academia, and ultimately to an MS or PhD in a STEM field.

## Program Learning Outcomes

- Predict the outcome of real-world situations using the fundamental laws of physics.
- Use graphs and diagrams to explain or predict physical situations.
- Explain the difference between science and technology.
- Develop computer coding to solve real world problems.

Course	Title	Units
ASTRO 010	Introduction to Astronomy	3
COMSC 020	Introduction to Programming Concepts and Methodologies	3
ENGR 001	Technology and Society	3
Take one of the following Math options:		5-7
MATH 025	Precalculus Algebra and Trigonometry	
MATH 071	Calculus I With Analytic Geometry	
MATH 021 & MATH 022	Precalculus Algebra and Trigonometry	
Choose one course from the following:		3
ASTRO 014	Solar System Astronomy	
ASTRO 016	Stars, Galaxies, and the Origin of the Universe	
BIOL 021	General Biology	
CHEM 015	Fundamentals of Chemistry	
CHEM 001A	General Chemistry	
<b>Total Units</b>		<b>17-19</b>