



Pre-Engineering

Associate of Science (AS) Degree Program

Division of Math & Science



Betty Henderson-Mathews, MA, Division Chair

Roger Mad Plume, Director

The curriculum for pre-engineering is designed to prepare students to transfer to a four-year institution to pursue a Bachelor's Degree in an engineering field of study. The goal of the Pre-Engineering program will be to give the student a solid foundation in their math, physics, and science skills which are necessary to be successful in completing an engineering program. To achieve an Associates of Science in Pre-Engineering the student must meet all General Core 1-6 requirements and Core 7.

The Learning Outcomes from the General Studies – Math & Science Emphasis in Pre-Engineering degree program are as follows:

- 📖 Be able to apply knowledge of mathematics and science.
- 📖 Have the ability to design experiments as well as to analyze and interpret data.
- 📖 Have effective verbal, written, and graphic communication to accurately and appropriately read, inform, and convey scientific information.
- 📖 Have an ability to function on multi-disciplinary team.
- 📖 Have the broad education necessary to understand the impact of engineering solutions in a global societal context.
- 📖 Recognition of the need for, and an ability to engage in life-long learning.
- 📖 Utilization of current and emerging instrumentation and related technologies.

Students majoring in the Pre-Engineering program are required to take the General Core Requirements 1 – 6 for an Associate of Science (AS) Degree program on page 11-2 as well as the following major CORE 7 courses:

Core 7 – Pre-Engineering			30 Credits Required		
Course #	Name of Course	Offered	Credits	Semester Taken	Grade
CHMY 121	Introduction to General Chemistry w/Lab	Fall	3		
CHMY 122	Introduction to General Chemistry Lab	Fall	1		
EGEN 105	Introduction to Engineering	Every	2		
M 151	Pre-Calculus	Spring	4		
M 171	Calculus I	Fall	4		
M 172	Calculus II	Spring	4		
M 273	Multivariable Calculus	On Demand	4		
PHSX 215	Fundamentals of Physics I (w/Calculus I)	Spring	3		
PHSX 216	Fundamentals of Physics I Lab (w/Calculus I)	Spring	1		
PHSX 217	Fundamentals of Physics II (w/Calculus II)	Fall	3		
PHSX 218	Fundamentals of Physics II Lab (w/Calculus II)	Fall	1		
Total Core 7 Credits To Be Taken By Student			30		