■ Pre-Engineering

ASSOCIATE OF ARTS AND SCIENCES Minimum of 72 Credits

This A.A. Degree in Pre-Engineering provides a student with the first two years of a four-year program in Engineering. This degree allows the student to begin baccalaureate degree studies in a technical field by completing the first two years Engineering at CMN and then finishing a baccalaureate at a major university. A graduate with an A.A. Degree could pursue an entry-level position as a scientist, engineer, technologist or technician.

ENTRANCE REQUIREMENTS:
Entering students must have demonstrated ability comparable to a grade of "B" or better, equivalent to ENG101, ENG102, COM100 and MAT120.

CORE REQUIREMENTS		**(11 CREDITS)**	**COMPLETED**	**GRADE**
EDU100	Student Success Strategies	3 cr.	_____	_____
EDU295	*Student Portfolio Seminar	1 cr.	_____	_____
MAT231	*Calculus and Analytic Geometry I	4 cr.	_____	_____
SDE100	*Introduction to Sustainable Development	3 cr.	_____	_____
GENERAL EDUCATION REQUIREMENTS		**(28–29 CREDITS)**		
Natural and Physical Sciences				
CHM205	*Chemistry I	5 cr.	_____	_____
PHY203	*Physics I	5 cr.	_____	_____
Social Sciences				
ECN202	Macroeconomics **or** ECN203 Microeconomics	3 cr.	_____	_____
Elective		3 cr.	_____	_____
Humanities				
	*American Indian History **or** American Indian Language	3-4 cr.	_____	_____
Elective		3 cr.	_____	_____
Elective		3 cr.	_____	_____
Fine Arts				
ENG211	*Introduction to Creative Writing	3 cr.	_____	_____
EMPHASIS COURSE REQUIREMENTS		**(33 CREDITS)**		
MAT115	*Computer Applications in Science	3 cr.	_____	_____
MAT232	*Calculus and Analytic Geometry II	4 cr.	_____	_____
MAT234	*Multivariate Calculus	3 cr.	_____	_____
MAT247	*Linear Algebra and Differential Equations	3 cr.	_____	_____
PHY204	*Physics II	5 cr.	_____	_____
PHY231	*Physics III Physics of Matter	4 cr.	_____	_____
CHM207	*Chemistry II	5 cr.	_____	_____
EGR101	*Introduction to Engineering	3 cr.	_____	_____
EGR201	*Statics I	3 cr.	_____	_____

PRE-ENGINEERING PROGRAM OUTCOMES
Upon completion of this program, the graduate will be able to:

1. Demonstrate adequate engineering background preparation in order to be able to transfer to a four- year university with a major in an engineering discipline at a level equivalent to the beginning of year three;
2. Identify, formulate, and solve basic problems in physics, chemistry and engineering using core knowledge, mathematical techniques and practicum;
3. Identify properties of various materials, their application, and behavior; and
4. Use computer applications software in the solution of basic problems of mathematics, physics, chemistry and engineering.

Courses that have an asterisk (*) in front of them have a requisite. Students should refer to the academic catalog and plan accordingly.