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.

Effective Fall 2015