

■ 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. | _____ | _____ |
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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.*