

PROGRAM CURRICULUM



Engineering

Associate in Science

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program is designed to enhance students' interest in the math and science fields by pursuing a career in engineering. The program's core curriculum emphasizes mathematics, physics, and chemistry -- the foundation for all engineering projects. The core curriculum is complemented with courses in engineering design, engineering mechanics, and engineering physics.

Upon successful completion, the Associate in Science Degree in Engineering is awarded.

CAREER PATHWAY

Students are advised to select career pathway electives after careful consideration of their career choices in their second year. Some electives may or may not transfer to an engineering program at some four-year institutions

Career Pathway Electives:

- MN 118 Ethics for Engineers and Technologists
- EC 201 Principles of Macroeconomics (fall),
- EC 202 Principles of Microeconomics (spring)
(recommended for transferring to UMass Lowell),
- BI 110 Principles of Biology I (fall)
(recommended for transfer to Northeastern University Mechanical Engineering program)

Career Pathway Computer Science Electives:

- CS 120 Programming I (fall), CS 200 Programming II (spring), or
- Computer Science (CS) courses higher than CS 110
(for transfer to UMass Lowell for Electrical Engineering/Computer Science double major program)



| COURSE | COURSE TITLE | CREDITS |
|---|----------------------------------|-------------------------|
| <i>First Year Semester 1</i> | | |
| PY 103 | Engineering Physics I | 4 |
| EN 101 | Freshman English I | 3 |
| MA 200 | Calculus I | 4 |
| MN 130 | Engineering Design with CAD I | 4 |
| | | credits: |
| | | 15 |
| <i>First Year Semester 2</i> | | |
| PY 104 | Engineering Physics II | 4 |
| MN 125 | Engineering Computation | 3 |
| EN 102 | Freshman English II | 3 |
| MA 201 | Calculus II | 4 |
| CS 100 | Critical Thinking | 3 |
| | | credits: |
| | | 18 |
| <i>Second Year Semester 1</i> | | |
| CH 110 | Principles of Chemistry I | 4 |
| | | or |
| CH 140 | Chemistry for Engineers | 4 |
| <i>Second Year Semester 1 (continued)</i> | | |
| CS 110 | Introduction to Computer Science | 4 |
| MA 202 | Calculus III | 4 |
| MN 203 | Engineering Mechanics: Statics | 3 |
| | | or |
| | | Social Science Elective |
| | | credits: |
| | | 18 |
| <i>Second Year Semester 2</i> | | |
| MA 211 | Differential Equations | 4 |
| MN 204 | Engineering Mechanics: Dynamics | 3 |
| <i>Second Year Semester 2 (continued)</i> | | |
| MN 210 | Strength of Materials I | 4 |
| | | or |
| | | Career Pathway Elective |
| | | 3/4 |
| | | Humanities Elective |
| | | 3 |
| | | or |
| | | Humanities Elective |
| | | 3 |
| | | or |
| | | Social Science Elective |
| | | 3 |
| | | credits: |
| | | 16/17 |
| | | Total Credits: |
| | | 67/68 |