

PROGRAM CURRICULUM



# Mechanical Engineering

## Associate in Science

**DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS**

Mechanical engineers are active in all engineering functions of a product including creative design, research and development, production and management. Energy, airplanes, automobiles, space vehicles, machinery, earth-moving equipment and medical hardware are but a few examples of the infinite number of products that mechanical engineers have produced through their use of the basic laws of physical sciences.

Upon successful completion, the Associate in Science Degree in Mechanical 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 not transfer to engineering programs 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</i>		
<i>Semester 1</i>		
CT 100	Critical Thinking	3
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
		<b>credits:</b>
		<b>18</b>
<i>First Year</i>		
<i>Semester 2</i>		
MN 125	Engineering Computation	4
PY 104	Engineering Physics II	4
EN 102	Freshman English II	3
EN 102	Humanities	3
MA 201	Calculus II	4
		<b>credits:</b>
		<b>18</b>
<i>Second Year</i>		
<i>Semester 1</i>		
CH 110	Principles of Chemistry	4
		<b>or</b>
CH 140	Chemistry for Engineers	4
MA 202	Calculus III	4
	Career Pathway Elective	3/4
MN 203	Engineering Mechanics: Statics	3
	Social Science Elective	3
		<b>credits:</b>
		<b>17/18</b>
<i>Second Year</i>		
<i>Semester 2</i>		
MN 204	Engineering Mechanics: Dynamics	3
MA 211	Differential Equations	4
MN 210	Strength of Materials I	4
CS 110	Introduction to Computer Science	4
	Humanities Elective	3
		<b>or</b>
	Social Science Elective	3
		<b>credits:</b>
		<b>18</b>
		<b>Total Credits:</b>
		<b>71/72</b>

