

# Mechanical Engineering Technology

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(Bachelor of Science)

## Accreditation

The Mechanical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, [www.abet.org](http://www.abet.org).

## UW-Green Bay Engineering Technology

Combine hands-on learning with academic coursework and get ready for high-demand jobs in the growing field of engineering technology. The University partners with regional leaders and technical colleges so that you will be prepared for an ever-changing industry. Get the technical skills that will make you an expert and the critical-thinking skills that will make you indispensable.

## Engineering Technology Mission

All of the Engineering Technology programs (Electrical, Mechanical and Environmental) include a strong liberal arts base along with a number of hands-on experiences, including a capstone experience or internship that often will be working with businesses and organizations within the community.

## Mechanical Engineering Technology

Mechanical engineering technology (MET) is the application of engineering principles and technological developments to new and existing manufacturing systems. Mechanical engineering technologists work with engineers in designing, testing, and manufacturing mechanical equipment or systems. There are many employment opportunities in mechanical design, manufacturing and industrial engineering technology, industrial management, computer aided design, applied research and sales and service.

The Bachelor of Science (B.S.) degree in Mechanical Engineering Technology at UW-Green Bay is a professional program that prepares students for careers in applied mechanical engineering using analytical and critical problem solving skills needed in regional and national industries, manufacturing, and engineering services firms. The focus of the program is the application of engineering principles to the solution of practical problems. Students will develop skills in hands on application labs and courses that explore the fundamentals of mechanics, mathematics, physics, materials technology, and computer aided design. Teamwork, technical writing, and project management are also emphasized throughout the curriculum. The goal of the major is to develop well rounded engineering technologists that can adapt and succeed in a highly competitive workplace.

Students will benefit from relationships with local technical colleges, and local industry to complete a B.S. in engineering technology in the Northeast Wisconsin area. Students may start earning their degree at UW-Green Bay or local technical colleges to give maximum flexibility in degree completion. In addition, the Northeast Wisconsin Educational Resource Alliance, NEW ERA, has established advisory boards linking leaders in regional industry and participating institutions to the major. Through these relationships students will have many opportunities for internships, co-op experiences, and employment after graduation.

## Mechanical Engineering Technology Program Learning Outcomes

1. Program graduates will secure and maintain employment in appropriate MET positions industry-wide and perform all functions assigned to an mechanical engineering technologist.
2. Graduates will apply their knowledge of mathematics, science, engineering technology, and computing to identify, analyze, and solve problems pertaining to design, development, and implementation of electronic systems.
3. Graduates will exhibit a desire for life-long learning through higher education, technical training, teaching, membership in professional societies, and other developmental activities and will achieve positions of increased responsibility through these activities.
4. Graduates will demonstrate high levels of oral and written communication skills, critical thinking, responsibility and ethical behavior, teamwork and appreciation for diversity, and leadership in their careers.

## Contact

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**Major**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
<b>Supporting Courses</b>		<b>31-37</b>
ENGR 204	Programming for Engineers	
ENGR 236	Technical Writing	
ET 101	Fundamentals of Engineering Technology	
ET 105	Fundamentals of Drawing	
MATH 202	Calculus and Analytic Geometry I	
MATH 203	Calculus and Analytic Geometry II	
MATH 260	Introductory Statistics	
PHYSICS 202	Principles of Physics II	
PHYSICS 204	Introductory Physics Lab II	
<b>Chemistry options (choose one):</b>		
CHEM 211 & CHEM 213 & CHEM 212 & CHEM 214 or ET 206	Principles of Chemistry I and Principles of Chemistry I Laboratory and Principles of Chemistry II and Principles of Chemistry II Laboratory Chemistry for Engineers	
<b>Fundamental Courses</b>		<b>23</b>
ET 207	Parametric Modeling	
ET 218	Fluid Mechanics	
ENGR 201	Engineering Materials	
ENGR 213	Mechanics I	
ENGR 214	Mechanics II	
ENGR 216	Basic Manufacturing Processes	
ENGR 220	Mechanics of Materials	
ENGR 221	Mechanics of Materials Lab	
ENGR 308	Electrical and Electronic Circuits	
<b>Advanced Courses</b>		<b>30</b>
ET 318	Fluid Power Systems	
ET 324	Motors and Drives	
ET 360	Project Management	
ET 380	Industrial Automation Control	
ET 385	Robotics	
ET 390	Mechatronics	
ET 405	Applied Thermodynamics	
ENGR 324	Engineering Thermodynamics	
ENGR 408	Finite Element Analysis	
ENGR 420	Machine Component Design I	
<b>Capstone Requirement</b>		<b>3</b>
ET 400 or ET 410	Co-op/Internship in Engineering Technology Capstone Project	
<b>Technical Electives (choose two courses):</b>		<b>6</b>
ET 415	Solar and Alternate Energy Systems	
ENGR 334	Industrial Decision Processes	
ENGR 422	Machine Component Design II	
ENGR 498	Independent Study (upto 3 credits)	
ENGR 494	Co-op	

**Total Credits****93-99**

## Curriculum Guide

The following curriculum guide is for a four-year **Mechanical Engineering Technology** degree program and is subject to change without notice. Students should consult their program advisor to ensure that they have the most accurate and up-to-date information available. This program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, [www.abet.org](http://www.abet.org).

Total **123** credits necessary to graduate.

Course	Title	Credits
<b>Freshman</b>		
<b>Fall</b>		
MATH 202	Calculus and Analytic Geometry I (Quantitative Literacy)	4
ET 101	Fundamentals of Engineering Technology	2
ET 105	Fundamentals of Drawing	3
ET 206	Chemistry for Engineers	4
First Year Seminar		3
<b>Credits</b>		<b>16</b>
<b>Spring</b>		
MATH 203	Calculus and Analytic Geometry II	4
ET 207	Parametric Modeling	2
ENGR 204	Programming for Engineers	2
General Education		3
General Education		3
<b>Credits</b>		<b>14</b>
<b>Sophomore</b>		
<b>Fall</b>		
MATH 260	Introductory Statistics	4
ENGR 201	Engineering Materials	2
ENGR 213	Mechanics I	3
ENGR 236	Technical Writing	3
General Education		3
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
ENGR 214	Mechanics II	3
ENGR 216	Basic Manufacturing Processes	3
ET 218	Fluid Mechanics	3
ENGR 220	Mechanics of Materials	3
ENGR 221	Mechanics of Materials Lab	1
General Education		3
<b>Credits</b>		<b>16</b>
<b>Junior</b>		
<b>Fall</b>		
PHYSICS 202	Principles of Physics II	4
PHYSICS 204	Introductory Physics Lab II	1
ENGR 308	Electrical and Electronic Circuits	3
ET 318	Fluid Power Systems	3
ET 385	Robotics	3
General Education		3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
ENGR 324	Engineering Thermodynamics	3
ET 324	Motors and Drives	3
ET 360	Project Management	3
General Education		3
General Education		3
<b>Credits</b>		<b>15</b>
<b>Senior</b>		
<b>Fall</b>		
ET 380	Industrial Automation Control	3
ENGR 408	Finite Element Analysis	3
ENGR 420	Machine Component Design I	3
Technical Elective I		3

General Education		3
	<b>Credits</b>	<b>15</b>
<b>Spring</b>		
ET 390	Mechatronics	3
ET 405	Applied Thermodynamics	3
ET 400 or ET 410	Co-op/Internship in Engineering Technology (Capstone) or Capstone Project	3
Technical Elective II		3
General Education		3
	<b>Credits</b>	<b>15</b>
	<b>Total Credits</b>	<b>123</b>

Technical Electives (choose any two):

1. ET 415 Solar and Alternate Energy Systems (3 s.h.)
2. ENGR 334 Industrial Decision Processes (3 s.h.)
3. ENGR 422 Machine Component Design II (3 s.h.)
4. ENGR 494 Co-op (1-2 s.h.)
5. ENGR 498 Independent Study (1-4 s.h.)

## Faculty

**Maruf Hossain**; Professor; Ph.D., University of Memphis

**John F Katers**; Professor; Ph.D., Marquette University\*

**Patricia A Terry**; Professor; Ph.D., University of Colorado, chair\*

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