

Mechanical Engineering Technology BSMET

Overview

The **Bachelor of Science in Mechanical Engineering Technology** is offered by the Department of Engineering, Technology and Management. This program provides trained applied mechanical engineering practitioners for small and medium manufacturing and service firms. This market aligns well with the traditional history of Mechanical Engineering Technology education that suggests a greater emphasis on hands-on laboratory experiences and less emphasis on advanced engineering theory. Small to medium firms often require engineering talent that can span the boundary between engineering design and the actual production operations. There are over 1,000 manufacturing firms in the 11-county Greater Philadelphia region which are large enough to employ these versatile mechanical engineering technology graduates.

This diverse set of manufacturing and service firms are expected to prosper in the immediate to near future. Economic advantages in North America such as low energy costs and high productivity resulting from technology-based automation combined with rising wages in traditionally low-cost countries have combined to not only stem the loss of North American manufacturing jobs to Asia but to reverse the trend in a process referred to as re-shoring.

It should be noted that the future career prospects of Bachelor of Science in Mechanical Engineering Technology graduates are not significantly different from the prospects of more traditional engineering disciplines.

Campus Location: Main

Program Code: EN-MENT-BSME

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Learn more about the Mechanical Engineering Technology program.

These requirements are for students who matriculated in academic year 2023-2024. Students who matriculated prior to fall 2023 should refer to the Archives to view the requirements for their Bulletin year.

Summary of Requirements

University Requirements

All new students are required to complete the university's General Education (GenEd) curriculum.

All Temple students must take a minimum of two writing-intensive courses for a total of at least six credits. The writing-intensive course credits are counted as part of the major; they are not General Education (GenEd) or elective credits. The writing-intensive courses must be completed at Temple University and students may not transfer in credits to satisfy this requirement. The specific writing-intensive courses required for this major are:

Code	Title	Credit Hours
ENGR 2196 or ENGR 2996	Technical Communication Honors Technical Communication	3
ENGT 4196	Capstone Project	3

College and Major Requirements

Code	Title	Credit Hours
Required Math & Basic Science Courses		
MATH 1022	Precalculus	4
MATH 1031	Differential and Integral Calculus	4
ISE 2101	Applied Statistical Methods for Industrial and System Engineers	3
PHYS 1021	Introduction to General Physics I	4
PHYS 1022	Introduction to General Physics II	4
CHEM 1031	General Chemistry I	3

or CHEM 1951	Honors General Chemical Science I	
CHEM 1033	General Chemistry Laboratory I	1
or CHEM 1953	Honors Chemical Science Laboratory I	

Required General Education Courses

Select one of the following:		4
ENG 0802	Analytical Reading and Writing	
ENG 0812	Analytical Reading and Writing: ESL	
ENG 0902	Honors Writing About Literature	
IH 0851	Intellectual Heritage I: The Good Life	3
or IH 0951	Honors Intellectual Heritage I: The Good Life	
IH 0852	Intellectual Heritage II: The Common Good	3
or IH 0952	Honors Intellectual Heritage II: The Common Good	
GenEd 08xx or 09xx (U.S. Society)		3
GenEd 08xx or 09xx (Global/World Society)		3
GenEd 08xx or 09xx (Human Behavior)		3
GenEd 08xx or 09xx (Arts)		3
GenEd 08xx or 09xx (Race and Diversity)		3

Required Economics and Communication Courses

ECON 1101	Macroeconomic Principles	3
or ECON 1901	Honors Macroeconomic Principles	
or ECON 1102	Microeconomic Principles	
or ECON 1902	Honors Microeconomic Principles	
CSI 1111	Introduction to Public Speaking	3
or CSI 1911	Honors Introduction to Public Speaking	

Required Engineering Technology Courses

ECE 2112	Electrical Devices & Systems I	3
ECE 2113	Electrical Devices & Systems I Lab	1
ENGR 1101	Introduction to Engineering & Engineering Technology	3
or ENGR 1901	Honors Introduction to Engineering	
ENGR 1117	Engineering Graphics	2
ENGR 2196	Technical Communication	3
or ENGR 2996	Honors Technical Communication	
ENGR 3001	Engineering Economics	3
ENGR 3033	Entrepreneurial Engineering	3
ENGT 2322	Applied Strength of Materials	3
ENGT 2331	Applied Engineering Statics	3
ENGT 2521	Applied Fluid Mechanics	3
ENGT 3201	Applied Materials Technology	3
ENGT 3323	Applied Dynamics	3
ENGT 3532	Thermodynamics	3
ENGT 3651	Manufacturing Control Systems	3
ENGT 3652	CAD/CAM/CNC	3
ENGT 3661		3
ENGT 4119	Professional Seminar	1
ENGT 4196	Capstone Project	3
ENGT 4342	Machine Elements	3
ENGT 4532	Heating, Ventilating, and Air Conditioning	3
ISE 2102	Production Process Design and Laboratory	4
ISE 3101	Product Quality Assurance	3
MEE 2305	Instrumentation and Data Acquisition Lab	1
Technical Elective #1		3
Technical Elective #2		3

Free Elective	3
Total Credit Hours	126

Suggested Academic Plan

Please note that this is a **suggested** academic plan. Depending on your situation, your academic plan may look different.

Bachelor of Science in Mechanical Engineering Technology

Suggested Plan for New Students Starting in the 2023-2024 Academic Year

Year 1		Credit Hours
Fall		
MATH 1022	Precalculus	4
CHEM 1031 or CHEM 1951	General Chemistry I or Honors General Chemical Science I	3
CHEM 1033 or CHEM 1953	General Chemistry Laboratory I or Honors Chemical Science Laboratory I	1
ENGR 1101 or ENGR 1901	Introduction to Engineering & Engineering Technology or Honors Introduction to Engineering	3
ENG 0802 or ENG 0812 or ENG 0902	Analytical Reading and Writing or Analytical Reading and Writing: ESL or Honors Writing About Literature	4
Credit Hours		15
Spring		
MATH 1031	Differential and Integral Calculus	4
ENGR 1117	Engineering Graphics	2
PHYS 1021	Introduction to General Physics I	4
IH 0851 or IH 0951	Intellectual Heritage I: The Good Life or Honors Intellectual Heritage I: The Good Life	3
GenEd Breadth Course		3
Credit Hours		16
Year 2		
Fall		
ENGT 2331	Applied Engineering Statics	3
CSI 1111 or CSI 1911	Introduction to Public Speaking or Honors Introduction to Public Speaking	3
PHYS 1022	Introduction to General Physics II	4
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good or Honors Intellectual Heritage II: The Common Good	3
Free Elective		3
Credit Hours		16
Spring		
ENGT 2322	Applied Strength of Materials	3
ENGT 2521	Applied Fluid Mechanics	3
ECE 2112	Electrical Devices & Systems I	3
ECE 2113	Electrical Devices & Systems I Lab	1
Select one of the following:		3
ECON 1101	Macroeconomic Principles	
ECON 1901	Honors Macroeconomic Principles	
ECON 1102	Microeconomic Principles	
ECON 1902	Honors Microeconomic Principles	
GenEd Breadth Course		3
Credit Hours		16

Year 3		
Fall		
ENGR 3033	Entrepreneurial Engineering	3
ENGT 3661		3
ISE 2101	Applied Statistical Methods for Industrial and System Engineers	3
ISE 2102	Production Process Design and Laboratory	4
GenEd Breadth Course		3
Credit Hours		16
Spring		
ENGT 3201	Applied Materials Technology	3
ENGT 3532	Thermodynamics	3
ENGT 3652	CAD/CAM/CNC	3
ENGT 4119	Professional Seminar	1
GenEd Breadth Course		3
GenEd Breadth Course		3
Credit Hours		16
Year 4		
Fall		
ENGR 2196 or ENGR 2996	Technical Communication or Honors Technical Communication	3
ENGR 3001	Engineering Economics	3
ENGT 3323	Applied Dynamics	3
ENGT 3651	Manufacturing Control Systems	3
MEE 2305	Instrumentation and Data Acquisition Lab	1
Technical Elective #1		3
Credit Hours		16
Spring		
ENGT 4196	Capstone Project	3
ENGT 4342	Machine Elements	3
ENGT 4532	Heating, Ventilating, and Air Conditioning	3
ISE 3101	Product Quality Assurance	3
Technical Elective #2		3
Credit Hours		15
Total Credit Hours		126

Approved Technical Electives

Code	Title	Credit Hours
EET 3276	Digital Logic Circuits	4
EET 3277	Microcomputer Systems	4
EET 3278	Digital Logic Circuits & Microprocessors	4
ENGT 4040	Special Topics	1 to 5
ENGT 4641	Production Tooling	3
ENGT 4642	Quality Control	3
ENGT 4643	Fundamentals of Manufacturing	3
ISE 3101	Product Quality Assurance	3
ISE 4101	Human Factors (Ergonomics)	3
MET 4671	Computer Integrated Manufacturing Systems	3
ART 1401	Introduction to Jewelry for Non-Tyler BFA Students	3