

THE UNIVERSITY OF SCRANTON  
COLLEGE OF ARTS & SCIENCES  
MECHANICAL ENGINEERING

## About the Program

Mechanical engineering is the application of engineering, physics and materials science principles to the design, production and operation of mechanical systems. It is one of the oldest and broadest of the engineering disciplines. Our courses offer a robust foundation for a mechanical engineering career.

## Outcomes & Opportunities

- The Physics and Engineering Department, in conjunction with the Center for Career Development, assists mechanical engineering students in obtaining summer internships – an important vehicle for career networking and job placement after graduation.
- Mechanical engineers work in a wide range of industries, including manufacturing, computers and electronics, automotive, aerospace, biotechnology, energy conversion, environmental control and automation.
- After college, many mechanical engineers obtain a Professional Engineering (PE) license, which allows them to supervise other engineers' work and sign off on projects.
- Other graduates continue on to graduate school, earning master's degrees in engineering or business administration to learn new technology or broaden project management skills. Some earn doctorates in order to work in higher education or some research and development programs.

Scranton engineering students achieve top finishes in prestigious regional and national engineering competitions.



**SUCCESS AHEAD**



[admissions.scranton.edu/mechanicaleng](https://admissions.scranton.edu/mechanicaleng)

# MECHANICAL ENGINEERING CURRICULUM

Department & Number - Descriptive Title of Course		Fall Cr.	Spr. Cr.
<b>FIRST YEAR</b>			
COGNATE	CHEM 112 - (E) General & Analytical Chemistry – PHYS 140/PHYS 140L - (E) Elements of Physics I	3	4
COGNATE	MATH 114 - (Q) Calculus I – MATH 221 - Calculus II	4	4
GE WRTG	WRTG 107 - (FYW) Composition	3	
MAJOR	ENGR 253L - An Introduction to Computer Aided Design – ENGR 254L 3D Computer Aided Design	1	1
GE EP MAJOR - COGNATE	ENGR 150 - (FYOC, FYDT) Foundations of Physics & Engineering – CMPS 134/CMPS 134L - Computer Science I	3	4
GE PHIL - GE T/RS GE FSEM	PHIL 120 - Introduction to Philosophy – T/RS 121 - (P) Theology I: Introduction to the Bible First Year Seminar (will be a GE course as well)	3	3
		<b>17</b>	<b>16</b>

<b>SECOND YEAR</b>			
MAJOR	ME 240 - Introduction to Mechanical Engineering	3	
COGNATE	EE 250/250L - Computational Tools for Physics & Engineering – EE 241/EE 241L - (EPW) Circuit Analysis	4	4
MAJOR	ENGR 250 - Engineering Mechanics Statics – ME 260 Strength of Materials	3	3
COGNATE	PHYS 141/141L - (E) Elements of Physics II – PHYS 142 - Elements of Physics III	4	3
COGNATE	MATH 222 - Calculus III – MATH 341 - Differential Equations	4	4
GE HUMN	HUMN ELECT - Humanities Elective	3	3
		<b>18</b>	<b>17</b>

<b>THIRD YEAR</b>			
MAJOR	ME 370/ME 370L - Manufacturing Processes	4	
MAJOR - COGNATE	ENGR 251 - Engineering Mechanics Dynamics – PHYS 352 Engineering Thermodynamics	3	3
MAJOR - COGNATE	ME 270 Materials Engineering – ME 360L Measurement & Instrumentation	3	3
COGNATE	ENGR 350 - Applied & Engineering Mathematics	3	
GE T/RS	T/RS 122 - (P) Theology II: Introduction to Christian Theology		3
GE S/BH	ECO 153 - (S) Principles of Microeconomics – ECO 154 - (S) Principles of Macroeconomics	3	3
GE PHIL	(P) PHIL 210 - Ethics		3
		<b>16</b>	<b>15</b>

Department & Number - Descriptive Title of Course		Fall Cr.	Spr. Cr.
<b>FOURTH YEAR</b>			
MAJOR	ME 460 – Senior Design Project I - ME 461 – Senior Design Project II	2	2
MAJOR	EE 450/EE 450L - Control Systems with lab – ME 470 Vibration Engineering	4	3
MAJOR	ME 353 Fluid Mechanics - ME 440 Heat Transfer	3	3
MAJOR	ME 430 - Engineering Economics		3
GE HUMN	HUMN ELECT - Humanities Elective	3	
GE HUMN	HUMN ELECT – Humanities Electives	3	3
GE PHIL or T/RS	PHIL ELECT - Philosophy Elective or T/RS - Theology Elective		3
		<b>15</b>	<b>17</b>

**Total: 131 Credits**



## CONTACT INFORMATION

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**1.888.SCRANTON** or visit [admissions.scranton.edu](http://admissions.scranton.edu)

*Curriculum grid effective for the 2021-22 academic year in accordance with the undergraduate course catalog.*