COLLEGE OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

ENGINEERING PHYSICS: MECHANICAL APPLICATIONS OPTION

Bachelor of Science (BS)

This is a guide based on the 2025-2026 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

*"Critical Courses" are **italicized and bolded**. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.*

62 hour major – No minor required

A grade of 'C' or better is required in each course that is a prerequisite course.

___ EP100 Introduction to Engineering (3)
___ EP240 Circuit Analysis I (3)
___ EP242 Circuit Analysis II (3)
___ EP261 Engineering Mech: Statics (3)
___ EP262 Engineering Mech: Dynamics (3)
___ EP263 Mechanics of Materials (4)
___ EP361 Engineering Thermodynamics (3)
___ EP372 Signals and Systems (3)
___ EP374 Control Systems (3)
___ EP462 Materials Science (3)
___ EP480 Capstone Design I (2)
___ EP481 Capstone Design II (2)
___ PH230 General Physics I (5)
___ PH231 General Physics II (5)
___ PH345 Experimental Methods I (3)
___ PH360 Modern Physics (3)
___ PH371 Electromagnetics (3)

MECHANICAL APPLICATIONS OPTION (12 hours)

___ EP350 Mechanical Engineering Design (3)
___ EP363 Fluid Mechanics (3)
___ EP365 Heat Transfer (3)
___ EP465 HVAC Engineering (3)

Additional Requirements:

A grade of 'C' or better is required in each course that is a prerequisite course.
This sequence of mathematics courses constitutes a minor, but it must be declared.

___ CH184 General Chemistry I Lab (1)
___ CH185 General Chemistry (3)
___ ***MA140 Analytic Geometry & Calculus I (5)***
___ MA145 Analytic Geometry & Calculus II (4)
___ MA223 Elementary Probability & Statistics (3)
___ MA244 Analytic Geometry & Calculus III (4)
___ MA350 Differential Equations (3)
___ MN120 Fund of Engr Design Processes (3)

Choose 3 hours:

___ EC215 Principles of Microeconomics (3)
___ MN220 Engineering Economic Analysis (3)

NOTE: Seniors are required to take the Fundamentals of Engineering Exam in their last semester.

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

**Many major courses are on a set rotation and dependent on when prerequisites are completed. The actual semester a course is taken may vary based on the rotation.*

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	*Hrs*	*Course #*	*Hrs*
FIRST YEAR	UI100	1	CH184/CH185	4
	EP100	3	EP240	3
	MA140	5	MA145	4
	EC215/MN220	3	PH230/030	5
	General Education	3		
	Total	**15**	**Total**	**16**
SECOND YEAR	EP242	3	EN100	3
	EP261	3	EP262	3
	MA244	4	EP263	4
	PH231/031	5	MA350	3
	General Education	3	General Education	3
	Total	**18**	**Total**	**16**
THIRD YEAR	EC215/MN220	3	EP363	3
	EP361	3	EP365	3
	PH345	3	EP462	3
	General Education	3	PH360	3
			General Education	3
	Total	**12**	**Total**	**15**
FOURTH YEAR	EP372	3	EP350	3
	EP480	2	EP374	3
	MA223	3	EP465	3
	PH371	3	EP481	2
	General Education	3	General Education	3
	Total	**14**	**Total**	**14**

Degree requirements for all students: a minimum of 120 credit hours, completion of the General Education program, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

A minimum 2.0 GPA in the major and overall are required to graduate with a BS degree.

ABET Engineering Accreditation Commission

FASTTRACK WORKFORCE INCENTIVE GRANT

Revised 3/3/2025

2025-2026 degree map