



# Mechanical Engineering A.S. Degree

FULL TIME

This program roadmap represents one possible pathway to complete the program. **Please see a counselor** to create an education plan that is customized to meet your needs. This roadmap is not a guarantee of course availability or financial aid applicability.

Catalog: 2024-25

GE Pattern: local AA/AS

Total Units: 66

## First Year

### Semester 1

16 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	MATH 400	Calculus I	5	IIb MC
Req	CHEM 400	General Chemistry I	5	IV
RC	ENGR 300	Introduction to Engineering	1	
GE		any Area IIIb (Life Development Skills) course	2	IIIb
GE		any Area I (Humanities) course	3	I

### Semester 2

16 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	MATH 401	Calculus II	5	
Req	PHYS 410	Mechanics of Solids and Fluids	5	
Req	ENGR 312	Engineering Graphics	3	
GE	ENGWR 300 / 480 <sup>H</sup>	College Composition	3	Ila WC

## Second Year

### Semester 3

16 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	MATH 402	Calculus III	5	
Req	PHYS 421	Electricity and Magnetism	4	
Req	ENGR 420	Statics	3	
GE		any Area IIIa (Physical Education) course	1	IIIa
GE		any Area Vb (Social & Behavioral Sciences) course	3	Vb

### Semester 4

18 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	MATH 420	Differential Equations	4	
Req	ENGR 401	Introduction to Electrical Circuits and Devices	4	
Req	ENGR 412	Properties of Materials	4	
GE		any Area Va (American Institutions) course	3	Va
GE		any Area VI (Ethnic/Multicultural Studies) course	3	VI

2 YEARS

## TRANSFER PATH

### Potential Transfer Majors:

- Mechanical Engineering B.S.

This map prepares students for the A.S. degree. Additional major requirements and general education courses are needed for transfer. See a counselor to create an educational plan that prepares you to transfer.

### Potential Career/Options After Completing a Bachelor's Degree:

- automotive engineer
- heating and cooling systems (HVAC) engineer
- robotics engineer
- manufacturing engineer

### Advising Notes:

- Students can substitute ESLW 340 for ENGWR 300/480.
- This map starts with MATH 400 and CHEM 400, which have prerequisites. Please see a counselor to add in prerequisite courses, if needed.

### Other Notes to Students Preparing to Transfer:

- Additional coursework may be required. Work with a counselor and ASSIST.ORG to determine the courses needed for your goals.

### Honors Courses (H):

#### EXPLANATION OF CATEGORIES

Req	Required Core	A course that is required for this program
RC	Recommended Course	A course that is not part of this program but is included in its roadmap
GE	General Education	A course that fulfills a specific general education requirement for a degree, which can be replaced with another course that meets the same requirement

### Graduation Requirement

A course that fulfills a specific graduation requirement which can be replaced by another course that meets the same graduation requirement.

**MC** = Math Competency

**WC** = Writing Competency

Students with a cumulative GPA of 3.2 or better who complete 15 or more units of Honors coursework earn an Honors Transfer Certificate and can take advantage of honors-to-honors transfer agreements with highly selective colleges and universities, both public and private.

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