



# Mechatronics A.S. Degree

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: 60

Start Term: Spring

#### First Year

#### Semester 1 (Spring)

8 Units

	CAT.	COURSE	TITLE	UNIT	GE AREA
	Req	ET 302	Principles of Electricity and Electronics	4	
ſ	Req	ET 193	Introduction to Robotics and Sensors	4	

#### Semester 2 (Fall)

7 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	ET 197	Introduction to Mechatronics	4	
Req	DESGN 301	Introduction to Computer Aided Drafting and Design (CADD)	3	

# Second Year

#### Semester 3 (Spring)

8 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
RE	DESGN 302 <sup>1</sup>	Technical Documentation with CADD	3	
Req	WELD 300	Introduction to Welding	3	
Elec	ET 308	Technical Soldering Practices and Techniques	2	

<sup>&</sup>lt;sup>1</sup> or ENGR 312

### Semester 4 (Fall)

7 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	ET 253	Industrial Communication Systems Support	4	
GE	HCD 310	College Success	3	IIIb
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# **Third Year**

#### Semester 5 (Spring)

7 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
GE	ENGWR 300 / 480 <sup>H</sup>	College Composition	3	Ila WC
GE	TAFILM 307	Diversity in American Film	3	I

#### CAREER PATH

#### Career Options:

This degree prepares students for the following careers: industrial mechanical/ electrical systems technician, food processing machine service technician, facilities systems technician, waste water systems technician, manufacturing coordinator, field service technician, and mechanical electrical machine systems installer.

#### **Advising Notes:**

• Students can substitute ESLW 340 for ENGWR 300/480.

#### Scheduling Notes:

- ET 193 is offered days in the spring semester.
- ET 197 is offered days in the fall semester.
- ET 253 is offered every semester, alternating day and night schedules.
- Due to the scheduling of ET 193 and 197, this map is designed for students starting in the spring.
- This degree can be started in the fall. <u>See a counselor</u> to adjust the coursework

#### Other Notes:

- At the end of semester 2, students qualify for the **Robotics certificate**.
- At the end of semester 3, students qualify for the Basic Mechatronics certificate.

CAT.	COURSE	TITLE	UNIT	GE AREA
Elec	ET 298	Work Experience in Electronics Technology	1	

#### Semester 6 (Fall)

7 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
GE	NUTRI 310 / 481 <sup>H</sup>	Cultural Foods of the World	3	Vb, VI
GE	STAT 300 / 480 <sup>H</sup>	Introduction to Probability and Statistics	4	IIb MC

# Fourth Year

# Semester 7 (Spring)

7 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
GE	POLS 301 / 481 <sup>H</sup>	Introduction to Government: United States	3	Va
GE	PHYS 310	Conceptual Physics	3	IV
GE		any PE activity course	1	IIIa

#### Semester 8 (Fall)

9 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Elec	ARTNM 324	Digital Design	3	
Elec	BUS 310	Business Communications	3	
Elec	BUS 312	Workplace Behavior and Ethics	3	

<sup>&</sup>lt;sup>H</sup> honors courses

	EXPLANATION OF CATEGORIES					
Req	Required Core	A course that is required for this program				
RE	Restricted Elective	A course selected from a list of elective courses specified for this program in the course list in the catalog, which can be replaced with another course from the same list				
Elec	Degree Elective	A degree-applicable course that is part of a degree roadmap to ensure that there is a total of at least 60 units, which is a requirement for an associate degree				
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

- At the end of semester 4, students qualify for the Mechatronics certificate.
- An internship (ET 298) is highly recommended as it opens up potential employment opportunities. Students can earn between 0.5 4.0 units for related paid or unpaid work experience including volunteer and internship positions through ET 298. This course also works toward satisfying GE Area IIIb. See the Work Experien ce website for more information.