



# Engineering Technology 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: Fall

# First Year

### Semester 1 (Fall)

16 Units

| CAT. | COURSE                 | TITLE   | UNIT | GE AREA |
|------|------------------------|---|------|---------|
| Req  | DESGN 300              | Introduction to Design Resources                          | 3    |         |
| Req  | DESGN 301 <sup>1</sup> | Introduction to Computer Aided Drafting and Design (CADD) | 3    |         |
| RE   | PHYS 310               | Conceptual Physics  | 3    | IV      |
| GE   | MATH 373               | Trigonometry for Calculus                                 | 4    | IIb MC  |
| GE   |                        | any Area I (Humanities) course                            | 3    | I       |

<sup>1</sup>Skills covered in DESGN 301 are often learned in high school drafting courses, as well as by other means. Contact the Design Technology department chair about earning credit by exam or challenging the DESGN 301 prerequisite.

# Semester 2 (Spring)

15 Units

| CAT. | COURSE                          | TITLE                             | UNIT | GE AREA |
|------|---------------------------------|-----------------------------------|------|---------|
| Req  | DESGN 302                       | Technical Documentation with CADD | 3    |         |
| Req  | DESGN 328                       | Engineering Modeling and Design   | 3    |         |
| RE   | CHEM 305                        | Introduction to Chemistry         | 5    |         |
| GE   | ENGWR 300 /<br>480 <sup>H</sup> | College Composition               | 3    | Ila WC  |
| GE   |                                 | any PE activity course            | 1    | IIIa    |

# Second Year

# Semester 3 (Fall)

14 Units

| CAT. | COURSE    | TITLE  | UNIT | GE AREA |
|------|-----------|--|------|---------|
| Req  | DESGN 310 | Graphic Analysis and Documentation                   | 3    |         |
| Req  | DESGN 351 | Surveying For Architectural Design                   | 2    |         |
| GE   |           | any Area Va (American Institutions) course           | 3    | Va      |
| GE   |           | any Area Vb (Social & Behavioral Sciences) course    | 3    | Vb      |
| GE   |           | any Area VI (Ethnic/Multicultural Studies)<br>course | 3    | VI      |

## Semester 4 (Spring)

15 Units

| CAT. COURSE | TITLE | UNIT | GE AREA |
|-------------|-------|------|---------|
|-------------|-------|------|---------|

#### CAREER PATH

# Career Options:

This degree prepares students for careers as engineering technicians, working as technical assistants to engineers.

Engineering technicians are needed in the fields of manufacturing, architecture, construction, materials testing, public utilities, and many other fields.

# **Advising Notes:**

 Students can substitute ESLW 340 for ENGWR 300/480.

# Scheduling Notes:

- DESGN 310 and 351 are offered in the fall.
- DESGN 328, 330, and 360 are offered in the spring.
- DESGN 331 is offered during the F<sup>t</sup> 8 weeks and DESGN 361 is offered during the 2<sup>nd</sup> 8 weeks, so they can be taken in the same semester.
- This degree can be started in the spring as well. <u>See a counselor</u> to adjust the course work.

#### Other Notes:

 This program is designed for students to directly enter the workforce. Students wishing to transfer to pursue a Bachelor's degree should meet with a counsel or to select the appropriate courses, because colleges vary widely in terms of their required coursework. Students should also keep a portfolio of all of their design/

| CAT. | COURSE    | TITLE   | UNIT | GE AREA |
|------|-----------|---|------|---------|
| Req  | DESGN 331 | Machine Design                                | 2    |         |
| RE   | DESGN 360 | Commercial Engineering Design and<br>Drafting | 4    |         |
| Req  | DESGN 361 | Commercial MEP Design                         | 2    |         |
| RC   | DESGN 498 | Work Experience in Design Technology          | 2    | IIIb    |
| Elec |           | any elective course numbered 100-499          | 3    |         |
| Elec |           | any elective course numbered 100-499          | 2    |         |

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

|      | EXPLANATION OF CATEGORIES |  |  |  |
|------|---------------------------|--|--|--|
| Req  | Required Core             | A course that is required for this program   |  |  |
| RE   | Restricted<br>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 |  |  |
| GE   | General<br>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                      |  |  |
| RC   | Recommended<br>Course     | A course that is not part of this program but is included in its roadmap   |  |  |
| 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             |  |  |

# **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

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- engineering technology projects to present for evaluation by college advisors.
- An internship (DESGN 498) 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 DESGN 498. This course also works toward satisfying GE Area IIIb. See the Work Experien ce website for more information.