

Student Name:

Updated:

Updated By:

**B.S. in GENERAL ENGINEERING**  
(Individual Course of Study Concentration)  
Suggested 4-Year Academic Flowchart

This document displays only your course requirements  
at the time of publication of the catalog.  
You must use your Degree Progress Report  
to track all your graduation requirements.

2022-2026 Catalog

Updated 5/16/2022

| FRESHMAN  |   |   | SOPHOMORE   |   |   | JUNIOR  |   |   | SENIOR  |   |  |
|---|---|---|---|---|---|---|---|---|---|---|--|
| Fall  | Winter  | Spring  | Fall  | Winter  | Spring  | Fall  | Winter  | Spring  | Fall  | Winter  | Spring   |
| Introduction to Engineering<br><b>ENGR 110 (2)</b>  | Introduction to Design & Manufacturing<br><b>IME 144 (4)</b>  |   | Engineering Statics   | Engineering Dynamics                                      | Choose one:<br>Engin. Economics<br><b>IME 314 (3)</b><br>(MATH 241)<br>OR<br>Financial Decisions...<br><b>IME 315 (3)</b><br>(MATH 142) | Thermodynamics I<br><b>ME 302 (3)</b><br>(ME 212; PHYS 142)   | Fluid Mechanics I<br><b>ME 341 (3)</b><br>(MATH 242 or 244; ME 212) | Heat Transfer<br><b>ME 343 (4)</b><br>(CPE/CSC 101 or CSC 231 or 234; ME 236, 302, & 341) | Interdisciplinary Senior Design Project I<br><b>ENGR 459 (2)<sup>3</sup></b><br>(Sr Standing) | Interdisciplinary Senior Design Project II<br><b>ENGR 460 (2)<sup>3</sup></b><br>(ENGR 459) | Interdisciplinary Senior Design Project III<br><b>ENGR 461 (2)<sup>3</sup></b><br>(ENGR 460) |
|   | Fundamentals of Computer Science<br><b>CSC/CPE 101 (4)<sup>2</sup></b><br>*   |   | <b>ME 211 (3)</b><br>(MATH 241†, PHYS 131 or 141)                                   | <b>ME 212 (3)</b><br>(MATH 241; ME 211 or ARCE 211)       |   |   |   |   |   |   |  |
|   | General Physics I<br><b>PHYS 141 (4)<sup>1</sup></b><br>(MATH 141 w/min C- or MATH 142† or 182†)<br>[Area B Elective]                     | General Physics II<br><b>PHYS 142 (4)</b><br>(PHYS 141; MATH 142 or 182)                                      | General Physics III<br><b>PHYS 143 (4)</b><br>(PHYS 141; MATH 142; Recom: MATH 241) | Mechanics of Materials I<br><b>CE 204 (3)</b><br>(ME 211) | Electric Circuit Theory & Lab<br><b>EE 201 (3) &amp; EE 251 (1)</b><br>(MATH 244; PHYS 143)   | Materials Engineering & Lab I<br><b>MATE 210 (3) &amp; MATE 215 (1)</b><br>(CHEM 111, 124, or 127)  | Individual Course of Study<br><b>(4)***</b>                         | Individual Course of Study<br><b>(4)***</b>   | Individual Course of Study<br><b>(4)***</b>   | Individual Course of Study<br><b>(4)***</b>   | Individual Course of Study<br><b>(4)***</b>  |
| Calculus I<br><b>MATH 141 (4)<sup>1</sup></b><br>*<br>[B4]  | Calculus II<br><b>MATH 142 (4)<sup>1</sup></b><br>(MATH 141 w/min C- or Instr. Consent)<br>[B4]   | Calculus III<br><b>MATH 143 (4)<sup>1</sup></b><br>(MATH 142 w/min C- or Instr. Consent)<br>[Area B Elective] | Calculus IV<br><b>MATH 241 (4)</b><br>(MATH 143)                                    | Linear Analysis I<br><b>MATH 244 (4)</b><br>(MATH 143)    | Math or Stat Elective<br><b>MATH 344, STAT 312, or STAT 350</b><br><b>(4)<sup>1</sup>*</b><br>[Upper-Division B]                        | Physical Science Elective<br><b>(4)</b><br>*  | Individual Course of Study<br><b>(4)***</b>                         | Ethnic Studies course:<br><b>ES 350 (4) OR ES 351 (4)</b><br>*                            | Individual Course of Study<br><b>(4)***</b>   | Individual Course of Study<br><b>(4)***</b>   | Individual Course of Study<br><b>(4)***</b>  |
| Choose one path:<br>General Chemistry I<br><b>CHEM 124 (4)<sup>1</sup> *</b><br>[B1 & B3]<br>OR<br>General Chemistry I<br><b>CHEM 127 (4)<sup>1</sup> *</b><br>[B1 & B3]  | General Chemistry II<br><b>CHEM 125 (4)<sup>1</sup> *</b><br>OR<br>General Chemistry II<br><b>CHEM 128 (4)<sup>1</sup> *</b><br>[B1 & B3] |   |   |   |   |   |   |   | Individual Course of Study<br><b>(4)***</b>   |   |  |
| Oral Communication<br><b>COMS 101/102 (4)**</b><br>[A1]   |   |   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**                                       | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**   | <b>GE (4)</b><br>**  |
| Expository Writing<br><b>ENGL 133/134 (4)**</b><br>[A2]   |   |   |   |   |   |   |   |   |   |   |  |
| Reasoning, Argumentation, & Writing [A3]<br><b>COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)**</b><br>(Completion of GE A2 with a C- or better)<br>Can be taken anytime between Winter of Freshman and Winter of Sophomore Years. |   |   |   |   |   | Graduation Writing Requirement GWR*<br>(Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year) |   |   |   |   |  |
| 14  | 16  | 16  | 15  | 18  | 15  | 15  | 15  | 16  | 18  | 14  | 14   |
|   |   |   |   |   |   |   |   |   |   | <b>TOTAL:</b>   | <b>186</b>   |

**Notes:****MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET**

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR). USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

\* Refer to current catalog for prerequisites.

\*\* One course from each of the following GE areas must be completed: A1, A2, A3, B2, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, Lower-Division E, and F. Upper-Division C should be taken only after Junior standing is reached (90 units).

\*\*\* Concentration form required and should be submitted prior to junior year. Concentration courses should total 40 units (a minimum of 29 units need to be 300-400 level).

† Course can be taken previously or concurrently.

<sup>1</sup> Required in Support; also satisfies GE.

<sup>2</sup> Students with an approved Individualized Course of Study may substitute CSC 231 (2 units) plus an additional 2 units of other advisor approved coursework for CSC/CPE 101 (4 units).

<sup>3</sup> ENGR 459, 460, 461 (6 units) or 6 units of Senior Project in appropriate engineering discipline.

**Legend:**

|                  |                           |
|------------------|---------------------------|
| Course Title     |                           |
| Course # (Units) | <b>Major (46)</b>         |
| (Prerequisite)   | <b>Support (52)</b>       |
|                  | <b>Concentration (40)</b> |
| [GE Area]        | <b>General Ed. (48)</b>   |