

# Mechanical Engineering - Bachelor of Science

Central Connecticut State University - Department of Engineering

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## Department Chair

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## Program Coordinator

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Website

Instagram

| General Education                                      | Minimum Credit Hours | 40     |
|--|----------------------|--------|
| <b>STUDY AREAS:</b>                                    |                      |        |
| <b>I Arts &amp; Humanities<sup>1</sup></b>             |                      | Crd    |
| Literature (200 Level or higher)                       | 3                    |        |
| PHIL or Fine Arts                                      | 3                    |        |
| Literature or PHIL or Fine Arts                        | 3                    |        |
| <b>II Social Sciences<sup>2</sup></b>                  |                      |        |
| History  | 3                    |        |
| ECON or GEOG or HIST or POL. SCI. or ET 399            | 3                    |        |
| <b>III Behavioral Sciences<sup>3</sup></b>             |                      |        |
| Anthropology or Psychology or Sociology                | 3                    |        |
| <b>IV Natural Sciences (8 credits)</b>                 |                      |        |
| PHYS 125-Univ Physics I                                | 4                    |        |
| PHYS 126-Univ Physics II                               | 4                    |        |
| <b>SKILL AREAS:</b>                                    |                      |        |
| <b>I Communication Skills</b>                          |                      |        |
| WRT 110 Introduction to College Writing                | 3                    |        |
| ENGR 290-Engineering Technical Writing & Present (S/F) | 3                    |        |
| <b>II Mathematics<sup>4</sup></b>                      |                      |        |
| MATH 152-Calculus I                                    | 4                    |        |
| MATH 221- Calculus II                                  | 4                    |        |
| <b>III Foreign Language<sup>5</sup></b>                |                      | 0-6    |
| <b>IV University Requirements<sup>6</sup></b>          |                      |        |
| PE 144 College Wellness                                |                      | 2 or 3 |

|  |   |
|--|---|
| International Requirement <sup>7</sup> | 6 |
|--|---|

|   |   |
|---|---|
| Equity, Justice, and Inclusion Requirement <sup>8</sup> | 3 |
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| † ME 458 (F) or ME 459 (S)  |
| †† ME 340 or ME 360 or ME 403 or ME 452 or ME 460 or ME 461 or ME 463 or ME 465 or ME 466 or ME 470 or ME 480 or ME 483 or ME 485 or ME 486 or ME 487 or ME 488.  |
| ††† ME 340 or ME 360 or ME 403 or ME 452 or ME 460 or ME 461 or ME 463 or ME 465 or ME 466 or ME 470 or ME 480 or ME 483 or ME 485 or ME 486 or ME 487 or ME 488 r ENGR 490 or ETM 340 or ETM 360 or ETM 461 or ETM 464 or ETM 466 or ET 399 or ET 495 or MM 226 or TM 464. |
| †††† ME 461 (S) or ME 466 (F)   |

| Major Requirements   | Total Credit Hours                             | 47  |           |            |   |
|--|--|---|-----------|------------|---|
| <b>Course #</b>  | <b>Course Name</b>                             | <b>Crd</b>  | <b>F</b>  | <b>S</b>   |   |
| ENGR 150   | Introduction to Engineering <sup>9</sup>       | 3   | X         | X          |   |
| ENGR 251   | Engineering Mechanics I- Statics               | 3   | X         | X          |   |
| ENGR 252   | Engineering Mechanics II - Dynamics            | 3   | X         | X          |   |
| ENGR 357   | Mechanics of Materials                         | 3   | X         | X          |   |
| ME 216   | Manufacturing Engineering Processes            | 2   | X         | X          |   |
| ME 217   | Manufacturing Engineering Processes Lab        | 1   | X         | X          |   |
| ME 258   | Engineering Thermodynamics                     | 3   | X         | X          |   |
| ME 345   | Engineering Statistical Analysis of Operations | 3   | X         | X          |   |
| ME 352   | Modeling and Control of Dynamic Systems        | 3   | X         | X          |   |
| ME 354   | Fluid Mechanics                                | 3   | X         | X          |   |
| ME 367   | Machine Design I                               | 3   | X         | X          |   |
| ME 368   | Machine Design II                              | 3   | X         | X          |   |
| ME 370   | Instrumentation                                | 3   | X         | X          |   |
| ME 454   | Heat Transfer                                  | 3   | X         | X          |   |
| ME 467   | Finite Element Analysis with Applications      | 3   | X         | X          |   |
| ME 497   | Senior Project I: Project Research             | 2   | X         | X          |   |
| ME 498   | Senior Project II: Project Design              | 3   | X         | X          |   |
| <b>Concentration Areas</b>   |  | <b>Total Credit Hours</b>                             | <b>12</b> |            |   |
| <b>General Concentration (All four courses in this group)</b>        |  |   |           |            |   |
| General  | †  | ME Elective 1   | 3         | X          | X |
|  | ††   | ME Elective 2   | 3         | X          | X |
|  | †††  | ME Elective 3   | 3         | X          | X |
|  | ††††   | Technical Elective                                    | 3         | X          | X |
| <b>Aerospace Concentration (ALL four Courses in this group)</b>      |  |   |           |            |   |
| Aerospace  | ME 403   | Aerospace Control Systems                             | 3         | X          |   |
|  | ME 480   | Propulsion Systems                                    | 3         | X          |   |
|  | ME 483   | Aerodynamics  | 3         |            | X |
|  | ME 486   | Aerospace Structures and Materials                    | 3         |            | X |
| <b>Manufacturing Concentration ( All four courses in this group)</b> |  |   |           |            |   |
| Manufacturing  | ME 340   | Geometric Dimensioning & Tolerancing for Mechanical D | 3         | X          | X |
|  | ME 360   | Manufacturing Operations Analysis and Simulation      | 3         | X          |   |
|  | ME 460   | Manufacturing System Design                           | 3         |            | X |
|  | ††††   | Manufacturing Engineering Elective                    | 3         | X          | X |
| <b>Additional Requirements</b>                                       |  | <b>Total Credit Hours</b>                             | <b>29</b> |            |   |
| CET 236  | Circuit Analysis                               | 3   | X         | X          |   |
| ETM 260  | Comp. Aided Design & Integrated Manuf.         | 3   | X         | X          |   |
| ETM 356  | Materials Analysis                             | 3   | X         | X          |   |
| ENGR 392   | Engineering Practicum (400 hours)              | 1   | X         | X          |   |
| ENGR 240   | Computational Methods for Engineering          | 3   | X         | X          |   |
| CHEM 161   | General Chemistry                              | 3   | X         | X          |   |
| CHEM 162   | General Chemistry Laboratory                   | 1   | X         | X          |   |
| MATH 222   | Calculus III                                   | 4   | X         | X          |   |
| MATH 226   | Linear Algebra and Probability for Engineers   | 4   | X         | X          |   |
| MATH 355   | Introduction to Differential Equations         | 4   | X         | X          |   |
| <b>Total Number of Credits</b>                                       |  |   |           | <b>128</b> |   |

1 [Study Area I Choices Link](#)

2 [Study Area 2 Choices Link](#)

3 [Study Area 3 Choices Link](#)

4 [Math Requirements Link](#)

5 [Foreign Language Requirements Link](#)

6 [Study Area IV Requirements Link](#)

7 [International Requirements Link](#)

8 [Equity, Justice and Inclusions Requirements Link](#)

9 MATH 115 or MATH 119 or MATH 135 or MATH 152 (May be taken Concurrently)

# CCSU – Department of Engineering – Mechanical Engineering Program Flowchart

Updated Spring 2025

