

# CLEAR PATH for ADVISING – *Mechanical Engineering, B.S.M.E.*

2025-2026

[Please see the Courses section of this catalog for complete course descriptions.](#)

| First Year – 31-33 Hours   |       |  |       |
|--|-------|--|-------|
| <i>Fall Semester:</i>  | Hrs   | <i>Spring Semester:</i>  | Hrs   |
| CHEM 1110/1110L: <i>General Chemistry I/Lab</i> (Natural Science)  | 4     | ENCE 1040: <i>Vector Statics</i>   | 3     |
| ENGL 1010: <i>Rhetoric and Composition I</i> or ENGL 1011: <i>Rhetoric and Composition I with Writing Tutorial</i> (Writing and Communication) | 3-4   | ENGL 1020: <i>Rhetoric and Composition II</i> or HIST 2100: <i>Research and Writing in History</i> (Writing and Communication) | 3     |
| ENME 1011: <i>Introduction to Two/Three-Dimensional Modeling</i>   | 1     | ENME 1850: <i>Introduction to Engineering Design</i>   | 2     |
| ENME 1030/1030L: <i>Basic Engineering Science/Lab</i>  | 4     | MATH 1960: <i>Calculus w/ Analytic Geometry II</i>   | 4     |
| MATH 1950: <i>Calculus w/ Analytic Geometry I</i> (Quantitative Reasoning)   | 4     | Humanities and Fine Arts   | 3-4   |
|  | 16-17 |  | 15-16 |
| Second Year – 33 Hours   |       |  |       |
| <i>Fall Semester:</i>  | Hrs   | <i>Spring Semester:</i>  | Hrs   |
| ENCE/ENME 2460/2460L: <i>Mechanics of Materials/Lab</i>  | 4     | ENCE 2220: <i>Probability and Statistics for Engineering</i> (Quantitative Reasoning)  | 3     |
| ENEE 2700: <i>Electrical Circuits I</i>  | 3     | ENME 2240: <i>Introduction to Engineering Computations</i>   | 3     |
| MATH 2450: <i>Introduction to Differential/Difference Equations</i>  | 3     | ENME 2480: <i>Dynamics</i>   | 3     |
| PHYS 2310/2310L: <i>Principles of Physics - Electricity and Magnetism/Lab</i> (Natural Science)  | 4     | MATH 2560: <i>Calculus w/ Analytic Geometry III</i>  | 4     |
| Behavioral and Social Science  | 3     | Behavioral and Social Science  | 3     |
|  | 17    |  | 16    |
| Third Year – 33 Hours  |       |  |       |
| <i>Fall Semester:</i>  | Hrs   | <i>Spring Semester:</i>  | Hrs   |
| ENCE 3520: <i>Engineering Economy</i>  | 3     | ENEE 3700: <i>Energy Conversion and Electronics</i>  | 3     |
| ENME/ENCH 3030: <i>Thermodynamics</i>  | 3     | ENME 3040: <i>Mechanical Engineering Thermodynamics</i>  | 3     |
| ENME 3070/3070L: <i>Fluid Mechanics/Lab</i>  | 4     | ENME 3090: <i>Heat and Mass Transfer</i>   | 3     |
| ENME 3400: <i>Engineering Materials Science</i>  | 3     | ENME 3580: <i>Manufacturing Processes</i>  | 3     |
| ENME 3470: <i>Mechanical Engineering Experimentation</i>   | 2     | ENME 3950: <i>Mechanical Engineering Design Project I</i> (Individual and Global Citizenship)                                  | 3     |
| ENME 3480: <i>Kinematics and Dynamics of Machinery I</i>   | 3     |  |       |
|  | 18    |  | 15    |
| Fourth Year – 30-32 Hours  |       |  |       |
| <i>Fall Semester:</i>  | Hrs   | <i>Spring Semester:</i>  | Hrs   |
| ENME 4420: <i>Machine Design</i>   | 3     | ENME 4470: <i>Mechanical Engineering Experimentation Lab</i>   | 3     |
| ENME 4430: <i>Thermal Component Design</i>   | 3     | ENME 4955: <i>Mechanical Engineering Capstone Design</i>   | 2     |
| ENME 4950: <i>Mechanical Engineering Design Project II**</i>   | 3     | Approved ENME Elective (4000 Level)  | 3     |
| ENME/ENCH 3280/3280L: <i>Control Systems/Lab</i>   | 4     | Approved ENME Elective (4000 Level)  | 3     |
| ENME 3720: <i>Energy Conversion and Storage</i>  | 3     | Humanities and Fine Arts   | 3-4   |
|  | 16    |  | 14-16 |

\*\*Qualified students may substitute ENME 4995R or ENGR 4995R: *Departmental Thesis* (4 hrs)

| <b>Completed:</b>                         |     |  |     |
|---|-----|--|-----|
| <b>Graduation Requirements:</b>           | Hrs | <b>Degree Requirements:</b>              | Hrs |
| 127 Total Hours                           |     | 12-14 General Education Hours            |     |
| 39 Upper Division (3000-4000 Level) Hours |     | 115-116 Program (Major) Hours            |     |
| 32 Hours at UTC                           |     | Minor ( <i>Not Required</i> )            |     |
| 45 Hours at 4-year Institution            |     | Electives ( <i>Not Required</i> )        |     |
|   |     | Foreign Language ( <i>Not Required</i> ) |     |