### Bachelor of Science - Mechanical Engineering

**McCoy School of Engineering**

#### Freshman Year

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall – 14 hours</th>
<th>Spring – 16 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|       | **Calculus 1 (4)** MATH 1634  
Pre-req: MATH 1534 or 1433 with a “C” better |
|       | **Calculus 2 (4)** MATH 1734  
Pre-req: MATH 1634 with a “C” or better |
|       | **Introduction to Engineering (1)** MENG 1101  
Pre-req: None |
|       | **MATH Elective (3)**  
MATH 2753 OR STAT 3573 |
|       | **Engineering Graphics (2)** MENG 1132  
Pre-req: None |
|       | **Solid Modeling (2)** MENG 1202  
Pre-req: MENG 1132 |
|       | **Mechanics Wave Motion & Heat (4)** PHYS 1624  
Co-req: MATH 1634 |
|       | **Electricity & Magnetism & Optics (4)** PHYS 2644  
Co-req: MATH 1734; Pre-req: PHYS 1624 |
|       | **CORE Communications (3)**  
ENGL 1153, 2123, 2203, MCOM 1243, or SPCH 1133 |
|       | **Academic Research & Writing (3)** ENGL 1143  
Pre-req: Appropriate TSI, ACT, or SAT test scores |

#### Sophomore Year

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall – 18 hours</th>
<th>Spring - 16 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|       | **Calculus 3 (4)** MATH 2534  
Pre-req: MATH 1734 with a “C” or better |
|       | **Differential Equations (3)** MATH 3433  
Pre-req: MATH 1734 with a “C” or better |
|       | **Electric Circuits (4)** MENG 2104  
Pre-req: PHYS 2644 |
|       | **Mechanics of Solids (3)** MENG 2223  
Pre-req: MENG 2113 |
|       | **Statics (3)** MENG 2113  
Pre-reqs: PHYS 1624 and MATH 1624 |
|       | **Thermodynamics (3)** MENG 2203  
Pre-req: PHYS 1624; Co-req: MATH 2534 |
|       | **Engineering Economics (3)** MENG 1123  
Pre-req: MATH 1233  
**FALL** |
|       | **Electronics (4)** MENG 2204  
Pre-req: MENG 2104 |
|       | **General Chemistry (3)** CHEM 1143  
Co-req: MATH 1233 or MATH 1534 |
|       | **Dynamics (3)** MENG 2213  
Pre-req: MENG 2113 |
|       | **General Chemistry Lab (1)** CHEM 1141  
Co-req: CHEM 1143 |
|       | (empty cell) |

#### Junior Year

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall – 17 hours</th>
<th>Spring – 16 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|       | **Fluid Mechanics (4)** MENG 3104  
Pre-req: MENG 2203  
**FALL** |
|       | **Applied Fluid Power Design (3)** MENG 3203  
Pre-req: MENG 3104 |
|       | **Materials Science (4)** MENG 3114  
Pre-reqs: MENG 2223 and CHEM 1143  
**FALL** |
|       | **Mechanisms & Dynamics of Machines (3)** MENG 3233  
Pre-req: MENG 2213 |
|       | **Measurements & Instrumentations (3)** MENG 3123  
Pre-reqs: MENG 2204 & MATH 3433  
**FALL/SUM** |
|       | **Heat Transfer (4)** MENG 3234  
Pre-req: MENG 3104 |
|       | **Technical Writing (3)** ENGL 3203  
Pre-reqs: ENGL 1143 & Communications core |
|       | **Computer Aided Engineering (3)** MENG 3243  
Pre-req: MENG 1202, 2223,3104  
**SPR** |
|       | **CORE (3)**  
HIST 1133 |
|       | **CORE (3)**  
HIST 1233 |

#### Senior Year

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall – 18 hours</th>
<th>Spring – 14 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|       | **Mathematical Methods for Engr (3)** MENG 4123  
Pre-req: MATH 3433  
**FALL** |
|       | **Topics in Engineering Fundamentals (2)** MENG 4212  
Pre-req: junior or senior level standing  
**SPR** |
|       | **Machine Elements Design (4)** MENG 4134  
Pre-req: MENG 3233  
**FALL** |
|       | **Mechanical Engineering Analysis (3)** MENG 4203  
Pre-req: MENG 4123  
**SPR** |
|       | **Senior Design 1 (3)** MENG 4143  
Pre-reqs: all 3000 level classes  
**FALL** |
|       | **Senior Design 2 (3)** MENG 4243  
Co-req: MENG 4143  
**SPR** |
|       | **Machine Control Programming (2)** MENG 4122  
Pre-reqs: MENG 3203  
**FALL** |
|       | **Control Systems (3)** MENG 4253  
Pre-req: MENG 4123  
**SPR** |
|       | **CORE (3)**  
POLS 1333 |
|       | **CORE (3)**  
POLS 1433 |
|       | (empty cell) |

Note: TSI = Texas Success Initiative; ACT = American College Test; SAT = Scholastic Assessment Test; SPR = Spring; SUM = Summer