

# Bachelor of Science- Mechanical Engineering

## McCoy School of Engineering

### Freshman Year

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

### Sophomore Year

Grade	Fall – 18 hours	Grade	Spring- 16 hours
	<b>Calculus 3</b> (4) MATH 2534 Pre-req: MATH 1734 with a “C” or better		<b>Differential Equations</b> (3) MATH 3433 Pre-req: MATH 1734 with a “C” or better
	<b>Electric Circuits</b> (4) MENG 2104 Pre-req: PHYS 2644		<b>Mechanics of Solids</b> (3) MENG 2223 Pre-req: MENG 2113 <span style="color: red;">SPR/SUM</span>
	<b>Statics</b> (3) MENG 2113 Pre-reqs: PHYS 1624 and MATH 1624		<b>Thermodynamics</b> (3) MENG 2203 Pre-req: PHYS 1624; Co-req: MATH 2534 <span style="color: red;">SPR/SUM</span>
	<b>Engineering Economics</b> (3) MENG 1123 Pre-req: MATH 1233 <span style="color: red;">FALL</span>		<b>Electronics</b> (4) MENG 2204 Pre-req: MENG 2104
	<b>General Chemistry</b> (3) CHEM 1143 Co-req: MATH 1233 or MATH 1534		<b>Dynamics</b> (3) MENG 2213 Pre-req: MENG 2113
	<b>General Chemistry Lab</b> (1) CHEM 1141 Co-req: CHEM 1143		<i>(empty cell)</i>

### Junior Year

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

### Senior Year

Grade	Fall – 18 hours	Grade	Spring – 14 hours
	<b>Mathematical Methods for Engr</b> (3) MENG 4123 Pre-req: MATH 3433 <span style="color: red;">FALL</span>		<b>Topics in Engineering Fundamentals</b> (2) MENG 4212 Pre-req: junior or senior level standing <span style="color: red;">SPR</span>
	<b>Machine Elements Design</b> (4) MENG 4134 Pre-req: MENG 3233 <span style="color: red;">FALL</span>		<b>Mechanical Engineering Analysis</b> (3) MENG 4203 Pre-req: MENG 4123 <span style="color: red;">SPR</span>
	<b>Senior Design 1</b> (3) MENG 4143 Pre-reqs: all 3000 level classes <span style="color: red;">FALL</span>		<b>Senior Design 2</b> (3) MENG 4243 Co-req: MENG 4143 <span style="color: red;">SPR</span>
	<b>Machine Control Programming</b> (2) MENG 4122 Pre-reqs: MENG 3203 <span style="color: red;">FALL</span>		<b>Control Systems</b> (3) MENG 4253 Pre-req: MENG 4123 <span style="color: red;">SPR</span>
	<b>CORE</b> (3) POLS 1333		<b>CORE</b> (3) POLS 1433
	<b>CORE</b> (3) PHIL 2033		<i>(empty cell)</i>