# B.S. in Mechanical Engineering
## Plan of Study – Math 108

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
<th>Summer/ J-Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>ENGR 150</strong> Introduction to Engineering (LAB)</td>
<td><strong>MATH 108</strong> Calculus with Review I</td>
<td><strong>THEO 101</strong> The Christian Theological Tradition</td>
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<td></td>
<td><strong>MATH 108</strong> Calculus with Review I</td>
<td><strong>MATH 109</strong> Calculus with Review II</td>
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<td></td>
<td><strong>ENGR 171</strong> Engineering Graphics and Design</td>
<td><strong>CISC 130</strong> Introduction to Programming and Problem Solving in the Sciences (LAB) (or CISC 131)</td>
<td><strong>MATH 114</strong> Calculus II (summer)</td>
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<td></td>
<td><strong>ENGL 121</strong> Critical Thinking: Literature &amp; Writing</td>
<td><strong>ENGL 20X</strong> Texts in Conversation</td>
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<td></td>
<td>Foreign Language 111*</td>
<td>Foreign Language 112*</td>
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<td></td>
<td><strong>PHYS 111</strong> Classical Physics I</td>
<td><strong>PHYS 112</strong> Classical Physics II</td>
<td><strong>HIST 1XX</strong></td>
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<td>2</td>
<td><strong>MATH 200</strong> Multi-Variable Calculus</td>
<td><strong>ENGR 220</strong> Statics (LAB)</td>
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<td></td>
<td><strong>MATH 210</strong> Intro to Differential Equations and Systems</td>
<td><strong>CHEM 109</strong> General Chemistry for Engineers (LAB)</td>
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<td>Foreign Language 211*</td>
<td><strong>PHIL 115</strong> Philosophy of the Human Person</td>
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<td>3</td>
<td><strong>ENGR 221</strong> Mechanics of Materials (LAB)</td>
<td><strong>ENGR 320</strong> Machine Design &amp; Synthesis (LAB)</td>
<td>**Social Sciences Elective **</td>
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<td><strong>ENGR 322</strong> Dynamics (LAB)</td>
<td><strong>ENGR 350</strong> Introduction to Electronics (LAB)</td>
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<td><strong>ENGR 381</strong> Thermodynamics (LAB)</td>
<td><strong>ENGR 371</strong> Manufacturing Processes &amp; Statistical Control</td>
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<td><strong>THEO 2XX or 3XX</strong></td>
<td>Fine Arts Elective**</td>
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<tr>
<td></td>
<td><strong>ENGR 382</strong> Heat Transfer (LAB)</td>
<td><strong>ENGR 383</strong> Fluid Mechanics (LAB)</td>
<td><strong>THEO 4XX</strong></td>
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<td>4</td>
<td><strong>ENGR 410</strong> Control Systems and Automation (LAB)</td>
<td><strong>ENGR XXX</strong> Engineering Elective</td>
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<td><strong>ENGR 480</strong> Engineering Design Clinic I</td>
<td><strong>ENGR 481</strong> Engineering Design Clinic II</td>
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<td><strong>ENGR 361</strong> Engineering Materials (LAB)</td>
<td><strong>PHIL 214</strong> Introductory Ethics</td>
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* May place out of one or more semesters if proficient at 3rd Level
** May satisfy human diversity requirement
 denotes that the two courses can be interchanged
Complete Course Listing:

**Engineering Courses:**
ENGR 150 – Introduction to Engineering (1 credit)
ENGR 171 – Engineering Graphics and Design (4 credits)
ENGR 220 – Statics (4 credits)
ENGR 221 – Mechanics of Materials (4 credits)
ENGR 320 – Machine Design and Synthesis (4 credits)
ENGR 322 – Dynamics (4 credits)
ENGR 350 – Introduction to Electronics (4 credits)
ENGR 361 – Engineering Materials (4 credits)
ENGR 371 – Manufacturing Processes and Statistical Control (4 credits)
ENGR 381 – Thermodynamics (4 credits)
ENGR 382 – Heat Transfer (4 credits)
ENGR 383 – Fluid Mechanics (4 credits)
ENGR 410 – Control Systems and Automation (4 credits)
ENGR 480 – Engineering Design Clinic I (4 credits)
ENGR 481 – Engineering Design Clinic II (4 credits)
4 Credits of Engineering Electives

**61 Engineering Credits**

**Allied Requirements:**
MATH 108 – Calculus with Review I (4 credits)
MATH 109 – Calculus with Review II (4 credits)
MATH 114 – Calculus II (4 credits)
MATH 200 – Multi-Variable Calculus (4 credits)
MATH 210 – Introduction to Differential Equations and Systems (4 credits)
PHYS 111 – Classical Physics I (4 credits)
PHYS 112 – Classical Physics II (4 credits)
CHEM 109 – General Chemistry for Engineers (4 credits)
CISC 130 – Introduction to Programming and Problem Solving in the Sciences (4 credits)

**36 allied requirement credits**

**Core Curriculum**
Three courses in foreign language (12 credits)
Two courses in English (8 credits)
Three courses in Theology** (12 credits)
Two courses in Philosophy (8 credits)
One course in the Social Sciences** (4 credits)
One Fine Arts course** (4 credits)
One History course (4 credits)
**One of these courses must satisfy the human diversity requirement

**52 core curriculum credits**

Total Credit Count: 149 (61 engineering credits + 88 non-engineering credits)