B.S. in Mechanical Engineering and Minor in Materials Science & Engr
Plan of Study

<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>ENGR 150 Introduction to Engineering (LAB)</td>
<td>MATH 113 Calculus I</td>
<td>THEO 101 The Christian Theological Tradition</td>
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<td></td>
<td>MATH 113 Calculus I</td>
<td>MATH 114 Calculus II</td>
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<td></td>
<td>ENGR 171 Engineering Graphics and Design</td>
<td>CHEM 109 General Chemistry for Engineers (LAB)</td>
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<td></td>
<td>ENGL 121 Critical Thinking: Literature &amp; Writing</td>
<td>PHYS 111 Classical Physics I</td>
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<td></td>
<td>Foreign Language 111*</td>
<td>Foreign Language 112*</td>
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<td>2</td>
<td>ENGR 220 Statics (LAB)</td>
<td>ENGR 221 Mechanics of Materials (LAB)</td>
<td>HIST 1XX</td>
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<td>ENGR 361 Engineering Materials (LAB)</td>
<td>MATH 200 Multi-Variable Calculus</td>
<td>Materials Elective</td>
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<td>PHYS 112 Classical Physics II</td>
<td>CISC 130 Introduction to Programming and Problem Solving</td>
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<td>Foreign Language 211*</td>
<td>ENGL 20X Texts in Conversation</td>
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<td>3</td>
<td>ENGR 371 Manufacturing Processes &amp; Stat Control (LAB)</td>
<td>ENGR 320 Machine Design &amp; Synthesis (LAB)</td>
<td>PHIL 115 Philosophy of the Human Person (Sum)</td>
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<td>ENGR 381 Thermodynamics (LAB)</td>
<td>ENGR 350 Introduction to Electronics (LAB)</td>
<td>IDSC 365 Materials Sci and Engr Practicum</td>
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<td></td>
<td>MATH 210 Introduction to Differential Equations and</td>
<td>ENGR 382 Heat Transfer (LAB)</td>
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<td></td>
<td>THEO 2XX or 3XX*</td>
<td>Fine Arts Elective**</td>
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<tr>
<td>4</td>
<td>ENGR 480 Engineering Design Clinic I</td>
<td>ENGR 481 Engineering Design Clinic II</td>
<td>Social Sciences Elective **</td>
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<td>ENGR 410 Control Systems &amp; Automation (LAB)</td>
<td>ENGR 383 Fluid Mechanics (LAB)</td>
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<td>ENGR 322 Dynamics (LAB)</td>
<td>ENGR XXX Engineering/Materials Elective</td>
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<td>PHIL 214 Introductory Ethics</td>
<td>THEO 4XX</td>
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* May place out of one or more semesters if proficient at 3rd Level
** May satisfy human diversity requirement
\[\leftrightarrow\] 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)
- Technical Elective* - (4 credits)

**61 Engineering Credits**

**Allied Requirements:**
- MATH 113 – Calculus I (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)

**32 Allied Requirement Credits**

**MSE Minor Requirements:**
- Materials Electives (8 credits)
- IDSC 365 – Materials Science and Engineering Practicum (0 credits)
* = Course fulfills an MSE requirement

**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: 153 (61 engineering credits + 92 non-engineering credits)