# B.S. MECHANICAL ENGINEERING  
*(Entrepreneurship Minor)*  
## Plan of Study

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>1</td>
<td>FYEX Foundation for College Success</td>
<td>CISC 130 Introduction to Programming &amp; Problem Solving Science (Lab)</td>
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<td></td>
<td>ENGR 100 (FYE) Introduction to Engineering Design</td>
<td>PHYS 211 Classical Physics I</td>
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<td>ENGR 170 Mechanical Engineering Graphics</td>
<td>MATH 114 Calculus II</td>
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<td>MATH 113 Calculus I</td>
<td>ENTR 220 Entrepreneurial Thinking</td>
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<td><strong>CORE requirement</strong></td>
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<td>2</td>
<td>ENGR 220 Statics</td>
<td>ENGR 221 Mechanics of Materials (Lab)</td>
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<td>MATH 200 Multi-Variable Calculus</td>
<td>MATH 210 Introduction to Differential Equations &amp; Systems</td>
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<td>PHYS 212 Classical Physics II</td>
<td>CHEM 109 General Chemistry for Engineers (Lab)</td>
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<td><strong>CORE requirement</strong></td>
<td><strong>ENTR 250 Fundamentals of Innovation</strong></td>
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<td>3</td>
<td>ENGR 255 Fabrication Skills (Lab)</td>
<td>ENGR 350 Introduction to Electronics (Lab)</td>
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<td>ENGR 322 Dynamics (Lab)</td>
<td>ENGR 320 Machine Design &amp; Synthesis (Lab)</td>
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<td>ENGR 371 Manufacturing Processes &amp; Statistical Control</td>
<td>ENGR 381 Thermodynamics (Lab)</td>
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<td>ENGR 381 Thermodynamics (Lab)</td>
<td>ENGR 383 Fluid Mechanics (Lab)</td>
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<td>ENTR XXX Entrepreneurship Elective</td>
<td>ENTR 330 Environmental Sustainability &amp; Innovation</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>
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<td>ENGR 410 Control Systems &amp; Automation (Lab)</td>
<td>ENGR 384 Heat Transfer (Lab)</td>
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<td>ENGR 361 Engineering Materials (Lab)</td>
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* arrow indicates that the two courses can be interchanged  
* this illustrates just one example of how all courses could be taken within a 4-year plan
### Complete Course Listing:

#### Engineering Courses:
- ENGR 100 – Introduction to Engineering (2 credits)
- ENGR 170 – Mechanical Engineering Graphics (2 credits)
- ENGR 220 – Statics (4 credits)
- ENGR 221 – Mechanics of Materials (4 credits)
- ENGR 255 – Fabrication Skills (0 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 383 – Fluid Mechanics (4 credits)
- ENGR 384 – Heat Transfer (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

#### 60 Engineering Credits

**Entrepreneurship Minor Requirements:**

- ENTR 220 Entrepreneurial Thinking (4 credits)
- ENTR 250 Fundamentals of Innovation (4 credits)

*ENTR 330 Environmental Sustainability & Innovation (4 credits)

Choose two elective courses:
- ENTR 340 Social Entrepreneurship (4 credits)
- ENTR 348 Franchise Management (4 credits)
- ENTR 349 Family Business Ownership (4 credits)
- ENTR 360 Creativity & Change (4 credits)
- ENTR 370 Entrepreneurial Financial Resource Management (4 credits)
- ENTR 371 Silicon Valley & Entrepreneurial Thinking (4 credits)
- ENTR 380 Entrepreneurship in Practice (4 credits)
- ENTR 490 Topics (4 credits)

Or choose one elective course and one from the list below:
- MUSC 363 Emerging Models in Music Industry (4 credits)
- MUSC 480 Music Business Seminar (4 credits)
- SOWK 430 Development & Fundraising for Social Service Agencies (4 credits)

Any 300-level Opus College of Business course, with approval from Entrepreneurship department chair

*Courses with asterisk are requirements for both the Mechanical degree and the Entrepreneurship minor

#### 20 Entrepreneurship Minor Credits (4 credits are included in the mechanical engineering major requirements)

### 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 211 – Classical Physics I (4 credits)
- PHYS 212 – 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

### University of St. Thomas Core Curriculum:

- FYEX Foundation for College Success (1 credit)
- Language and Culture (0-8 credits)
- Literature and Writing (4 credits)
- Philosophy and Theology (12 credits)
- Social Analysis (4 credits)
- Fine Arts (4 credits)
- Historical Studies (4 credits)

*Some of these courses must satisfy the flagged requirements; check your degree evaluation

*45 Core Curriculum Credits