University of Minnesota – Mechanical Engineering Curriculum
(Applies to students starting their Freshman year after June 2018 or students entering the ME Program after January 1, 2020)

**Freshman Year**
- Math 1371/1271 Calculus I 4 cr
- Math 1372/1272 Calculus II 4 cr
- Phys 1302W Physics II 4 cr
- Physics I 4 cr
- Liberal Ed 3 cr
- Biology 1 Chem 1061 Chemical Principles I 3 cr
- Writ 1301 Univ Writing 4 cr
- Chem 1065 Chem Prin I Lab 1 cr
- Mats 2001 Materials Sci 3 cr
- Mats 2002 Mat Sci Lab 1 cr
- Liberal Ed 3 cr
- Total: 16 cr

**Sophomore Year**
- Math 2374/2263 Multi–Variable Calculus 4 cr
- Math 2373/2243 Linear Algebra & Diff Eqs 4 cr
- AEM 2021 Statics & Dynamics 4 cr
- AEM 3031 Deformable Body Mechanics 3 cr
- ME 2011 Intro to Mech Eng 4 cr
- CSci 1113 Intro to C/C++ 4 cr
- ME 3011 Thermodynamics 3 cr
- ME 3311 Thermodynamics 3 cr
- IE 3521 Stats, Quality & Reliability 4 cr
- Liberal Ed 3 cr
- Total: 17 cr

**Junior Year**
- Math 2372/2243 Linear Algebra & Diff Eqs 4 cr
- Math 3270 Fundamentals of Elec Eng 4 cr
- EE 3005 Fundamentals of Elec Eng 4 cr
- EE 3006 Elec Eng Lab 1 cr
- ME 3221 Fundamentals of Design & Manufacturing 4 cr
- ME 3222 Mechanisms & Machine Design 4 cr
- ME 3332 Fluid Mechanics 3 cr
- ME 3333 Heat Transfer 3 cr
- ME 4031W Measurements Laboratory 4 cr
- ME 4131W Thermal Environment Lab 4 cr
- ME 4231 Motion Control Lab 4 cr
- ME 4232 Fluid Power Control Lab 4 cr
- ME 4331 Thermal Energy Lab 4 cr
- ME 4431W Energy Conversion Lab 4 cr
- ME 5248 Vibration Eng 4 cr
- ME 4054W Design Projects 4 cr
- Liberal Ed 3 cr
- Total: 15 cr

**Senior Year**
- Technical Elective #1 4 cr
- ME 4053 Mech Eng Modeling 4 cr
- ME 4054 Design Projects 4 cr
- Liberal Ed 3 cr
- Technical Elective #2 4 cr
- Specialization Elective 3–4 cr
- Total: 15 cr

**Footnotes:**
1. Biology class must be taken A/F. Strongly encourage Biol 1009.
2. All liberal education classes must be selected to satisfy both a core and a theme to enable graduating with the minimum of 4 liberal education classes. HSCI 3421 is strongly encouraged for fulfilling the CIV & HIS requirements.
3. Elective program requires ME advisor approval.
4. See Elective Program Brochure.