# Bachelor of Science in Industrial Engineering
## 2020-2021 Catalog

Total Credits Required = 122

1. **Communications (9 cr.)**
   - SP CM 212 Fundamentals of Public Speaking (3)
   - ENGL 250 Written, Oral, Visual, & Electronic Composition (3)
   - ENGL 314 Technical Communication (3)

2. **Social Science & Humanities (12 cr.)*
   - U.S. Diversity (3)
   - International Perspectives (3)
   - (3)
   - (3)

   *Note: Six credits in the SSH area must be 200-level or above, and six credits must form a sequence of prerequisite or related courses.

   *See the list of courses approved by the IMSE Department.

3. **Basic Program (24 cr.)**
   - CHEM 167 General Chemistry for Engineering Students (4)
     or CHEM 177 General Chemistry and Chemistry Lab (4)
   - ENGL 150 Critical Thinking and Communication (3)
   - ENGR 101 Engineering Orientation (R)
   - I E 148 Information Engineering (3)
   - LIB 160 Information Literacy (1)
   - MATH 165 Calculus I (4)
   - MATH 166 Calculus II (4)
   - PHYS 221 Introduction to Classical Physics I (5)

4. **Math and Physical Science (17 cr.)**
   - MATH 265 Calculus III (4)
   - MATH 267 Elementary Differential Equations & Laplace Transforms (4)
   - PHYS 232/232L Introduction to Classical Physics II (5)
   - STAT 231 Probability & Statistical Inference for Engr (4)

5. **Industrial Engineering Core (34 cr.)**
   - I E 222 Design & Analysis Methods for System Improvements (3)
   - I E 248 Engineering System Design, Manufacturing Processes & Specifications (3)
   - I E 271 Applied Ergonomics & Work Design (3)
   - I E 305 Engineering Economic Analysis (3)
   - I E 312 Optimization (3)
   - I E 341 Production Systems (3)
   - I E 348 Solidification Processes (3)
   - I E 361 Statistical Quality Assurance (3)
   - I E 413 Stochastic Modeling, Analysis & Simulation (4)
   - I E 441 Industrial Engineering Design (3)
   - I E 448 Manufacturing Systems Engineering (3)

6. **Other Remaining Courses (26 cr.)**
   - MAT E 273 Principles of Materials Sci & Engineering (3)
   - C E 274 Engineering Statics (3)
   - E E 442 Introduction to Circuits and Instruments (2)
   - M E 231 Engineering Thermodynamics (3)
   - Focus Electives (6)
   - Management Elective (3)
   - Engineering Topic Electives (6)

7. **Required Seminar**
   - I E 101 Industrial Engineering Profession (R)