**Bachelor of Science in Industrial Engineering**

**2024-2025 Catalog**

**Total Credits Required = 122 or 123**

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### 1. Communications (9 cr.)
- SPCM 2120 Fundamentals of Public Speaking (3)
- ENGL 3140 Technical Communication (3)
- ENGL 2500 Written, Oral, Visual, & Electronic Composition (3)

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### 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.

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### 3. Basic Program (24 cr.)
- CHEM 1670 General Chemistry for Engineering Students (4)
  or CHEM 1770 General Chemistry (4)
- ENGL 1500 Critical Thinking and Communication (3)
- ENGR 1010 Engineering Orientation (R)
- IE 1480 Information Engineering (3)
- LIB 1600 Information Literacy (1)
- MATH 1650 Calculus I (4)
- MATH 1660 Calculus II (4)
- PHYS 2310 and 2310L Introduction to Classical Physics I (5)

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### 4. Math and Physical Science (17 cr.)
- MATH 2650 Calculus III (4)
- MATH 2670 Elementary Differential Equations & Laplace Transforms (4)
- PHYS 2320 and 2320L Introduction to Classical Physics II (5)
- STAT 2310 Probability & Statistical Inference for Engr (4)

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### 5. Industrial Engineering Core (34 cr.)
- IE 2220 Design & Analysis Methods for System Improvements (3)
- IE 2480 Engineering System Design, Manufacturing Processes & Specifications (3)
- IE 2710 Applied Ergonomics & Work Design (3)
- IE 3050 Engineering Economic Analysis (3)
- IE 3120 Optimization (3)
- IE 3410 Production Systems (3)
- IE 3480 Solidification Processes (3)
- IE 3610 Statistical Quality Assurance (3)
- IE 4130 Stochastic Modeling, Analysis & Simulation (4)
- IE 4410 Industrial Engineering Design (3)
- IE 4480 Manufacturing Systems Engineering (3)

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### 6. Other Remaining Courses (26 or 27 cr.)
- MATE 2730 Principles of Materials Sci & Engineering (3)
- CE 2740 Engineering Statics (3)
- IE 4320 Industrial Automation (3) OR: EE 4420 Introduction to Circuits and Instruments (2)
- ME 2310 Engineering Thermodynamics (3)
- Focus Electives (6)
- Management Elective (3)
- Engineering Topic Electives (6)

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### 7. Required Seminar
- IE 1010 Industrial Engineering Profession (R)

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Last updated 3/23/2024 (DPS)