## Bachelor of Science in Industrial Engineering

**2014 Catalog** Total Credits Required =122

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**1. Communications (6 cr.)**

\_\_\_\_\_\_ Sp Cm 212 Fundamentals of Public Speaking (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 (27 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)

\_\_\_\_\_\_ Engl 250 Written, Oral, Visual, & Electronic Composition (3)

\_\_\_\_\_\_ Engr 101 Engineering Orientation (R)

\_\_\_\_\_\_ I E 148 Information Engineering (3)

\_\_\_\_\_\_ Lib 160 Introduction to Library (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)

\_\_\_\_\_\_ Phys 222 Introduction to Classical Physics II (5)

\_\_\_\_\_\_ Math 267 Elementary Differential Equations & Laplace

 Transforms (4)

\_\_\_\_\_\_ Stat 231 Probability & Statistical Inference for Engrs (4)

Last updated 4/22/2014 (KJW)**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)

\_\_\_\_\_\_ E M 274 Statics of Engineering (3)

\_\_\_\_\_\_ M E 231 Thermodynamics (3)

\_\_\_\_\_\_ E E 442 **Introduction to Circuits and Instruments** (2)

\_\_\_\_\_\_ Engineering Topic Elective (6)

\_\_\_\_\_\_ Focus Elective (6)

\_\_\_\_\_\_ Management Elective (3)

**7. Required Seminar**

\_\_\_\_\_\_ I E 101 Industrial Engineering Profession (R)