## Industrial Management Science Concentration

### Science – Biology (16-21 credits)

**Complete 1 of the following sequences (7-8 credits):**

**Sequence 1:**
- BIOL 11000 Fundamentals of Biology I (4cr)
- BIOL 11100 Fundamentals of Biology II (4cr)

**Sequence 2:**
- BIOL 12100 BIOL I: Diversity, Ecology, & Behavior (2cr)
- BIOL 13100 BIOL II: Develop/Structure/Function of Organisms (3cr)
- BIOL 13500 First Year Biology Lab (2cr)

**Complete the following courses:**
- BIOL 23100 BIOL III: Cell Structure & Function (3cr)
- or
- BIOL 23000 Biology of the Living Cell (3cr)
- BIOL 24100 BIOL IV: Genetics & Molecular Biology (3cr)
- or
- AGRY 32000 Genetics (3cr)

**Complete 1 of the following courses: (2-4 credits)**
- BIOL 28600
- BIOL 29500
- BIOL 30100
- BIOL 30200
- BIOL 32800
- BIOL 36600
- BIOL 39500
- BIOL 41500
- BIOL 41600

**Complete at least 1 of the following lab courses:**
- BIOL 23200 Lab in Cell Structure & Function
- BIOL 24200 Lab in Genetics & Molecular BIOL
- BIOL 30100 Human Anatomy & Physiology
- BIOL 30200 Human Anatomy & Physiology
- BIOL 32800 Principles of Physiology
- BIOL 36600 Developmental Biology
- BIOL 39500 Macromolecules
- AGRY 32100 Genetics Lab

### Science – Earth, Atmospheric & Planetary Sciences (17 credits)

**Complete 10 additional credit hours in EAPS:**

- Only one of the additional courses may be at the 10000 level.

All courses for this concentration must be taken at Purdue.

### Science – Math (15 credits)

**Complete 1 of the following courses:**
- MA 26500 Linear Algebra
- MA 35100 Elementary Linear Algebra
- MA 51100 Linear Algebra with Applications

**Complete 1 of the following courses:**
- MA 34100 Foundations of Analysis
- MA 44000 Real Analysis Honors
- MA 45000 Algebra Honors
- MA 45300 Elements of Algebra

**Complete 9 more credits from the following courses:**

**Analysis area:**
- MA 30100 Introduction to Proof through Real Analysis
- MA 34100 Foundations of Analysis
- MA 44000 Real Analysis – Honors
- MA 36200 Topics in Vector Calculus
- or MA 51000 Vector Calculus
- MA 42500 Elements of Complex Analysis
- or MA 52500 Introduction to Complex Analysis

**Algebra & Discrete Mathematics area:**
- MA 37500 Introduction to Discrete Mathematics
- MA 38500 Introduction to Logic
- MA 45300 Elements of Algebra
- or MA 45000 Algebra Honors
- MA 45400 Galois Theory – Honors

**Linear Algebra area:**
- MA 35300 Linear Algebra II

**Differential Equations area:**
- MA 36600 Ordinary Differential Equations
- or
- MA 30300 Differential Equations for ENGR and Science
- or
- MA 30400 Differential Equations & Analysis of Nonlinear Systems for ENGR and Science
- MA 42800 Introduction to Fourier Analysis
- MA 52000 Boundary Value Problems of Differential Equations
- MA 52300 Introduction to Partial Differential Equations

### Science – Chemistry (16 credits)

**Complete 16 hours beyond CHM 11500 and CHM 11600 in additional general chemistry courses.**

CHEM 22400, CHEM 25700, and CHEM 33300 cannot be used to fulfill this requirement; 3 credits of CHEM 49900 may be used to fulfill this requirement.
# Industrial Management Science Concentration

## Science – Physics (15 credits)

Complete 1 option from each of the following course sequences:

**Sequence 1:**
- PHYS 15200  Mechanics (4cr)
- PHYS 24200  Introduction to Heat & Thermal Physics (1cr)
- PHYS 17200  Modern Mechanics (4cr)

**Sequence 2:**
- PHYS 24100  Electricity and Optics (4cr)
- PHYS 25200  Electricity and Magnetism Laboratory (1cr)
- PHYS 27200  Electric and Magnetic Interactions (4cr)

**Complete 1 of the following courses:**
- PHYS 34200  Modern Physics (3cr)
- PHYS 34400  Modern Physics – Honors (4cr)
- PHYS 34000  Modern Physics Lab (1cr)

Complete 6 additional credit hours at or above the 300 level in Physics.

## Science – Statistics (15 credits)

Complete the following courses:

- STAT 51200  Applied Regression Analysis
- STAT 51300  Statistical Quality Control
- STAT 51400  Design of Experiments

Complete 6 additional credit hours in Statistics – STAT 22500 or MGMT 30500 may not fulfill this minor.

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*Effective Fall 2015*

Not available to students outside of the School of Management