

# IE Major Requirements

2009-2010

## Freshman year, first semester (14-15 credits)

- ENGL 1 Composition and Literature (3)
- MATH 21 Calculus I (4)
- Science: Required natural science course\*
- ENGR 1 Engineering Computations (3), or
- ENGR 5 Introduction to Engineering Practice (3)

## Freshman year, second semester (14-15 credits)

- ENGL 2 Composition and Literature: Fiction, Drama, Poetry (3)
- MATH 22 Calculus II (4)
- Science: Required natural science course\*
- ENGR 1 Engineering Computations (3), or
- ENGR 5 Introduction to Engineering Practice (3)

\*The required science courses, one taken fall semester and the other taken in spring, are:

- CHM 25 Introductory Chemical Principles and Laboratory (4)
- PHY 11, 12 Introductory Physics I and Laboratory

(5) Bioengineering students take Chm 25 and ENGR1 in the fall, and Bioscience 41/42 (instead of ENGR5) in the spring along with PHY 11/12.

## Sophomore year, first semester (16 credit hours)

IE 111 Engineering Probability (3)  
IE 112 Computer Graphics (1)  
MATH 23 Calculus III (4)  
PHY 21, 22 Introductory Physics II and Laboratory (5)  
MAT 33 Engineering Materials and Processes (3)

## Sophomore year, second semester (17-18 credit hours)

IE 121 Applied Engineering Statistics (3)  
IE 131 Work Systems and Operations Management (3)  
IE 132 Work Systems Laboratory (1)  
ME 104 Thermodynamics I (3)  
MATH 205 Linear Methods (3)  
HSS Humanities/Social Sciences

elective (3-4)\*

## Junior year, first semester (17-18 credit hours)

IE 215 Fundamentals of Modern Manufacturing (3)  
IE 216 Manufacturing Laboratory (1)

HSS Humanities/Social Science Elective (3-4)\*  
ACCT 108 Fundamentals of Accounting (3)  
MECH 2 Elementary Engineering Mechanics (3)  
ECO 1 Principles of Economics (4)

**Junior year, second semester (16 credit hours)**

IE 122 Software Tools (1)  
IE 226 Engineering Economy and Decision Analysis (3)  
IE 220 Introduction to Operations Research (3)  
IE 224 Information Systems Analysis and Design (3)  
ECE 83 Introduction to Electrical Engineering (3)  
IE 305 Simulation (3)

Summer

IE 100 Industrial Employment (0)

**Senior year, first semester (18 credit hours)**

IE 251 Production and Inventory Control (3)  
IE elective (3)\*\*  
IE elective (3)\*\*  
IEOR elective (IE 316 or IE 339) (3)\*\*\*  
HSS Humanities/Social Sciences elective (3)\* FE free elective (3)

**Senior year, second semester (18 credit hours)**

IE 154 Senior Project (3)  
HSS Humanities/Social Sciences elective (3)\*  
IE elective (3)\*\*  
IE elective (3)\*\*  
FE free elective (6)

Notes:

\*HSS elective credit totals must satisfy the college HSS program \*\*IE elective courses are chosen from the current offering of

300-level IE courses \*\*\*IEOR elective is either IE 316 or IE 339 (could be fall or spring).