I & SE 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 (15 credit hours)

IE 111 Engineering Probability and Statistics (3) MATH 23 Calculus III (4)

PHY 21, 22 Introductory Physics II and Laboratory (5) CSE 17 Structured Programming and Data Structures (3)

Sophomore year, second semester (16 credit hours)

IE 121 Applied Engineering Statistics (3)
IE 172 Algorithms in Systems Engineering (4)
MATH 205 Linear Methods (3)
ACCT 108 Fundamentals of Accounting (3)
ECE 83 Introduction to Electrical

Engineering (3)

Junior year, first semester (17 credit hours)

IE 122 Software Tools (1)
IE 220 Introduction to Operations Research (3)
IE 224 Information Systems Analysis and

Design (3) ECO 1 Principles of Economics (4) MECH 2 Elementary Engineering Mechanics (3) or ME 104 Thermodynamics I (3) or MAT 33 Engineering Materials Processing (3) FE Free Elective (3)

Junior year, second semester (1819 credit hours)

IE 226 Engineering Economy and Decision

Analysis (3) IE 275 Fundamentals of Web Applications (3) IE 305 Simulation (3) HSS Humanities/Social Science

Elective (67)* FE Free Elective (3)

Summer

IE 100 Industrial Employment (0)

Senior year, first semester (1516 credit hours)

IE 316 Optimization Models and

Applications (3) IE 372 Systems Engineering Design (3) TE Technical Elective (6)** HSS Humanities/Social Sciences elective (3-4)*

Senior year, second semester (18 credit hours)

IE 154 Senior Project (3)
IE 339 Stochastic Models and Applications (3)
TE Technical Elective (6)**
HSS Humanities/Social Sciences elective (3)*
FE Free Elective (3)

Notes:

*HSS elective credit totals must satisfy the college HSS program **Technical Electives from approved list