## FIRST YEAR

### FALL SEMESTER
- **GE A**
  - ISE 105
  - MATH 125 (GE F)
  - WRIT 150
  - ENGR 102

### SPRING SEMESTER
- **GE B**
  - CHEM 105A or MASC 110L
  - MATH 126 or MATH 129
  - ISE 150

## SECOND YEAR

### FALL SEMESTER
- **GE C**
  - ISE 220
  - MATH 122 or MATH 129

### SPRING SEMESTER
- **ISE 225**
  - ISE 315L

### THIRD YEAR

### FALL SEMESTER
- **ISE 330**
  - MATH 225
  - ISE 435
  - ISE 382
  - APPROVED ENGINEERING ELECTIVE

### SPRING SEMESTER
- **BIOLOGY ELECTIVE (GE D)**
  - ISE 335
  - ISE 495b
  - PHYS 152L

### FOURTH YEAR

### FALL SEMESTER
- **ISE 410**
  - GE 130
  - ISE 495b
  - PHYS 152L
  - ISE 375L
  - OPERATIONS ELECTIVE

### SPRING SEMESTER
- **GE C**
  - ISE 426
  - ISE 440

### MATHEMATICS (16 UNITS)
- MATH 125: Calculus I
- MATH 126 OR 129: Calculus II
- MATH 226 OR 229: Calculus III
- MATH 225: Linear Algebra and Diff. Equations

### SCIENCE (12 UNITS)
- CHEM 105AL: General Chemistry or MASC 110L: Materials Science
- PHYS 151L: Mechanics and Thermodynamics
- PHYS 152L: Electricity and Magnetism
- BIOLOGY ELECTIVE

### GENERAL EDUCATION (32 UNITS)
- GE A: The Arts (1 Course)
- GE B: Humanistic Inquiry (2 Courses)
- GE C: Social Analysis (2 Courses)
- GE D: Life Sciences (1 Course)
- GE E: Physical Sciences (1 Course)
- GE F: Quantitative Reasoning (1 Course)
- GE G, H: Global Perspectives (2 Courses)
- GESM: General Education Seminar (1 Course)

### WRITING (7 UNITS)
- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

### ENGINEERING (58 UNITS)
- ENGR 102: Engineering Freshman Academy
- ISE 105: Intro. to Industrial Engineering
- ISE 150: Solving Engr. Problems via Computer Programming
- ISE 225: Engineering Statistics I
- ISE 315L: Engineering Project Management
- ISE 330: Intro. to Operations Research I
- ISE 331: Introduction to Operations Research: Stochastic Models
- ISE 335: Supply Chain Design
- ISE 370: Operations Research: Stochastic Models
- ISE 370L: Facilities Design
- ISE 382: Database Systems: Concept, Design and Implementation
- ISE 410: Prod. Planning and Scheduling
- ISE 426: Statistical Quality Control
- ISE 435: Discrete Systems Simulation
- ISE 440: Work, Technology and Organization
- ISE 460: Engineering Economy
- ISE 495A: Senior Design Project
- ISE 495B: Senior Design Project

### OPERATIONS ELECTIVES

### SPECIAL NOTES
Courses with the AP/IB symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.

**GE:** Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.

**APPROVED ENGINEERING ELECTIVES:** 9 units of coursework. See Advisor for current, approved list.

**OPERATIONS ELECTIVES:** Select at least one among ISE 232L, ISE 315, ISE 327, or ISE 410

Please note some courses can fulfill both the Approved Engineering Electives and Info Systems Electives requirements. Discuss options with your advisor.

**BIOLOGY ELECTIVE:** Select one among BISC 103, BISC 104, BSC 230, or HBIO 205
## INDUSTRIAL & SYSTEMS (INFO SYSTEMS)

### FIRST YEAR

**FALL SEMESTER**
- **GE A**
- ISE 105
- MATH 125 (GE F)
- WRIT 150
- ENGR 102

**SPRING SEMESTER**
- **GE B**
- CHEM 105aL or MASC 110L
- MATH 126 or MATH 129
- ISE 150
- OPTIONAL ELECTIVE

### SECOND YEAR

**FALL SEMESTER**
- ISE 220
- MATH 226 or MATH 229
- PHYS 151L (GE E)
- OPTIONAL ELECTIVE

**SPRING SEMESTER**
- **GE C**
- ISE 225
- ISE 331
- ISE 460
- MATH 225
- OPTIONAL ELECTIVE

### THIRD YEAR

**FALL SEMESTER**
- ISE 330
- DSO 435
- PHYS 152L
- APPROVED ENGINEERING ELECTIVE

**SPRING SEMESTER**
- **GE B**
- ISE 315L
- ISE 470
- ISE 495ax
- APPROVED ENGINEERING ELECTIVE

### FOURTH YEAR

**FALL SEMESTER**
- ISE 410
- WRIT 340
- INFO SYSTEMS OR APPROVED ENG ELECTIVE

**SPRING SEMESTER**
- **BIOLOGY ELECTIVE (GE D)**
- GE C
- ISE 440
- INFO SYSTEMS ELECTIVE
- INFO SYSTEMS ELECTIVE
- INFO SYSTEMS ELECTIVE
- INFO SYSTEMS ELECTIVE
- OPTIONAL ELECTIVE

### MATHEMATICS (16 UNITS)
- MATH 125: Calculus I
- MATH 126 OR 129: Calculus II
- MATH 226 OR 229: Calculus III
- MATH 225: Linear Algebra and Diff. Equations

### SCIENCE (16 UNITS)
- CHEM 105AL: General Chemistry or MASC 110L: Materials Science
- PHYS 151L: Mechanics and Thermodynamics
- PHYS 152L: Electricity and Magnetism

### GENERAL EDUCATION (32 UNITS)
- **GE A** The Arts (1 Course)
- **GE B** Humanistic Inquiry (2 Courses)
- **GE C** Social Analysis (2 Courses)
- **GE D** Life Sciences (1 Course)
- **GE E** Physical Sciences (1 Course)
- **GE F** Quantitative Reasoning (1 Course)
- **GE G,H** Global Perspectives (2 Courses)
- **GESM** General Education Seminar (1 Course)

### WRITING (7 UNITS)
- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing

### ENGINEERING (54 UNITS)
- DSO 435: Enterprise Data Architecture
- ENGR 102: Engineering Freshman Academy
- ISE 105: Intro. to Industrial Engineering
- ISE 150: Solving Engr. Problems via Computer Programming
- ISE 225: Engineering Statistics I
- ISE 315L: Engineering Project Management
- ISE 330: Intro. to Operations Research I
- ISE 331: Introduction to Operations Research: Stochastic Models
- ISE 410: Prod. Planning and Scheduling
- ISE 435: Discrete Systems Simulation
- ISE 440: Work, Technology and Organization
- ISE 460: Engineering Economy
- ISE 470: Human/Computer Interface Design
- ISE 495A: Senior Design Project
- ITP 320: Enterprise information Systems

### SPECIAL NOTES
Courses with the AP/IB symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 21 for more information and consult your advisor for detailed assistance.

BIOLOGY ELECTIVE: Select one among BISC 103, BISC 104, BISC 230, or HBIO 205

APPROVED ENGINEERING ELECTIVES: See Advisor for current, approved list.

INFO SYSTEMS ELECTIVES: Select at least 8 units among the following courses: DSO 435 (4) & DSO 433 (4); ISE 305 (3); ITP 482* (3) & ITP 487* (3). Also select at least 5 units of additional, approved coursework. A current approved class list is available from your advisor.

Please note some courses can fulfill both the Approved Engineering Electives and Info Systems Electives requirements. Discuss options with your advisor.