ISE FOCUS AREA: Management

Department of Industrial and Systems Engineering

General Education (19 sh)

- English: RHET:1030 Rhetoric
- Diversity & Inclusion
- Any 5000 or above Industrial Engineering (ISE) course
- Any 3000 or above course offered by an engineering department

Math & Basic Science Core (24 sh)

- Mathematics: MATH:2300 Calculus (P: MATH:1550)
- MATH:2500 Math III: Linear Algebra (P: MATH:2300)
- MATH:2560 Math IV: Difference Equations (P: MATH:2300 & MATH:2500)
- CHEM:1110 Principles of Chemistry I
- CHEM:1120 Principles of Chemistry II
- PHYS:1611 Introductory Physics I / Lab (C: MATH:1550)

Electives: Management (9 sh)

- Elective: Management (P: MATH:1550)
- PHYS:2704 Physics IV - no lab required

ISE Requirements (20 sh)

- ISE:1010 Introductory Electronics II / Lab (P: PHYS:1512 & C: MATH:1560)
- ISE:2360 Design for Manufacturing
- ISE:2500 Engineering Economy (P: STAT:2020)
- ISE:3350 Process Engineering (P: ISE:3700)
- ISE:3400 Human Factors (P: PHYS:1501)
- ISE:3500 Ergonomics
- ISE:3500 Information Systems Design (P: ENGR:1300)
- ISE:3630 Data Analytics with R (P: STAT:2020)

ISE Capstone Design Courses (4 sh)


ISE Departmental Seminars (0 sh)

- ISE:2000 Sophomore Seminar: Industrial Engineering (Status: Sophomore)
- ISE:3000 Professional Seminar: Industrial Engineering (Status: Junior)

ISE Fundamentals Electives (11 sh)

- ISE:2300 Introduction to Management (P: ISE:1300)
- ISE:2310 Managerial Accounting (P: ISE:1300 & ISE:2500 or ISE:3700)
- ISE:3610 Introduction to Engineering (P: MATH:1550)

Electives: Focus Area - Systems (select one course)

- F/S ENGR:2730 Computers in Engineering (P: ENGR:1300)
- F/S ISE:4172 Big Data Analytics (P: STAT:2020 or ISE:2500)
- F/S ISE:4175 Safety Engineering
- S ISE:4900 Introduction to SIPE (P: ISE:3620)

Electives: Focus Area - Above 3000-level engineering course (select one course)

- Any 3000 or above course offered by an engineering department

Elective: Focus Area - Math/Science (select one course from this list)

- ISE:2210 Electrical Circuits (P: MATH:2500)
- ISE:2710 Dynamics (P: PHYS:1512 & MATH:2500)
- ISE:2720 Materials Science (P: CHEM:1110 & C: MATH:1550)
- F/S ENGR:2730 Computers in Engineering (P: ENGR:1300)
- S ENGR:2750 Mechanics of Deformable Bodies (P: PHYS:1512 & MATH:2500)
- S ENGR:3110 Intro to AI & Machine Learning in Engr (P: ENGR:1300 & C: MATH:2500)
- F BM&E:2710 Engineering Drawing, Design, and Solid Modeling
- S CBE:2040 Environment, Energy, and Climate Change
- F/S ECE:2400 Linear Systems I (P: ENGR:1300 & MATH:2500)

Required: Management (15 sh)

- All ACCT:2100 Intro to Financial Accounting (Status: sophomore standing)
- All ACCT:2200 Managerial Accounting (P: ECON:1100 & ACCT:2100 & (MATH:1850 or MATH:2500 or MATH:2560))
- All MGMT:2000 Introduction to Law (Status: sophomore standing)
- All MGMT:2100 Introduction to Management (P: sophomore standing)
- All MKTG:3000 Introduction to Marketing Strategy

Electives: Focus Area - Math/Science (select one course from this list)

- ISE:2320 Engineering Statics (P: MATH:1850)
- ISE:2340 Engineering Thermodynamics (P: MATH:1550 & MATH:1560 or PHYS:1512 & MATH:2500)
- ISE:2350 Engineering Fluids (P: MATH:1550 & MATH:1560 or PHYS:1512 & MATH:2500)
- ISE:2360 Introduction to Heat Transfer (P: MATH:1550 & MATH:1560)
- ISE:2370 Introduction to Materials Science (P: MATH:1550 & MATH:1560 or PHYS:1512 & MATH:2500)
- ISE:2380 Introduction to Numerical Methods (P: MATH:2350 & MATH:2500 or MATH:2560)
- S PHYS:2704 Physics IV - no lab required (P: PHYS:1512 & MATH:1560 or MATH:2500)
- S STAT:3210 Experimental Design & Analysis (P: STAT:2020)

Elective: Focus Area - Above 3000-level engineering course (select one course)

- Any 3000 or above course offered by an engineering department

Elective: Focus Area - Systems (select one course from this list)

- F/S ENGR:2730 Computers in Engineering (P: ENGR:1300)
- F/S ISE:4172 Big Data Analytics (P: STAT:2020 or ISE:2500)
- F ISE:4175 Safety Engineering
- S ISE:4900 Introduction to SIPE (P: ISE:3620)
- All Any 5000 or above Industrial Engineering (ISE) course

Elective: Focus Area - Systems (select one course)

- F/S ENGR:2730 Computers in Engineering (P: ENGR:1300)
- F/S ISE:4172 Big Data Analytics (P: STAT:2020 or ISE:2500)
- F ISE:4175 Safety Engineering
- S ISE:4900 Introduction to SIPE (P: ISE:3620)
- All Any 5000 or above Industrial Engineering (ISE) course