

Industrial and Systems Engineering (Information Systems)

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
ENGR 102 2	ISE 150 3	ISE 220 MATH 126 3	ISE 225 ISE 220 3	ISE 330 MATH 225 3	ISE 315L ISE 225 and 330 3	ISE 410 ISE 330 3	ISE 440 3
ISE 105 2	CHEM 105AL or MASC 110L* 4	ITP 320 4	ISE 331 ISE 220 3	ISE 435 ISE 150 and 225 4	ISE 470 3	ISE 495bx ISE 435, and ISE 370 or ISE 470 2	INFO SYSTEMS ELECTIVE 3-4
MATH 125 (GE F)* 4	MATH 126 or MATH 129* MATH 125 4	MATH 226 or MATH 229 MATH 126 or 129 4	ISE 460 3	DSO 435 3	ISE 495ax ISE 225, ISE 460, DSO 435 or ISE 382 2	WRIT 340 WRIT 150 4	BIOLOGY ELECTIVE (GE D)* 4
WRIT 150 4	GESM (GE A)# 4	PHYS 151L (GE E) MATH 125 or 126 or 226 4	MATH 225 MATH 126 or 129 4	PHYS 152L PHYS 151L 4	GE B 4	INFO SYSTEMS ELECTIVE 3-4	GE C 4
GE B 4	OPTIONAL ELECTIVE 3	OPTIONAL ELECTIVE 3	GE C 4	OPTIONAL ELECTIVE 4	INFO SYSTEMS ELECTIVE 3-4	OPTIONAL ELECTIVE 5-6	OPTIONAL ELECTIVE 3-4
			OPTIONAL ELECTIVE 1		OPTIONAL ELECTIVE 2-3		

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
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 (8 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 220: Probability Concepts in Engr.
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
ISE 495b: Senior Design Project
ITP 320: Enterprise information Systems
APPROVED ENGINEERING ELECTIVES
INFO SYSTEMS ELECTIVES

SPECIAL NOTES

Courses with the * symbol may be satisfied with AP, IB, or A-Level exams. See page 16 for more information.

GESM#: GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.

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 AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 15 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 academic advisor for approved list of courses.

INFO SYSTEMS ELECTIVES: Select at least 8 units among the following courses: DSO 431 (4) & DSO 433 (4); ISE 350* (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.

Some courses can fulfill both the Approved Engineering Electives and Info Systems Electives requirements. Discuss options with your academic advisor.

Industrial and Systems Engineering (Operations)

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
ENGR 102 2	ISE 150 3	ISE 220 MATH 126 3	ISE 225 ISE 220 3	ISE 330 MATH 225 3	ISE 315L ISE 225, ISE 330 3	ISE 375L ISE 331, ISE 460 3	ISE 426 ISE 225 3
ISE 105 2	CHEM 105aL or MASC 110L* 4	MATH 226 or MATH 229 MATH 126 or 129 4	ISE 331 ISE 220 3	ISE 382 4	ISE 335 ISE 330, ISE 460 3	ISE 410 ISE 330 3	ISE 440 3
MATH 125 (GE F)* 4	MATH 126 or MATH 129* MATH 125 4	PHYS 151L (GE E) MATH 125 or 126 or 226 4	ISE 460 3	ISE 435 ISE 150 and 225 3	ISE 370L 4	ISE 495bx ISE 435, ISE 370 or ISE 470 2	GE B 4
WRIT 150 4	GESM (GE A)# 4	GE C 4	MATH 225 MATH 126 or 129 4	OPERATIONS ELECTIVE 3-4	ISE 495ax ISE 225, ISE 460, DSO 435 or ISE 382 2	PHYS 152L PHYS 151L, MATH 126 4	GE C 4
GE B 4	OPTIONAL ELECTIVE 3	OPTIONAL ELECTIVE 3	FREE ELECTIVE 3-4	WRIT 340 WRIT 150 4	BIOLOGY ELECTIVE (GE D)* 4	OPTIONAL ELECTIVE 6-7	OPTIONAL ELECTIVE 4
			OPTIONAL ELECTIVE 1		OPTIONAL ELECTIVE 2		

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 (8 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 220:** Probability Concepts in Engr.
- 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 335L:** Supply Chain Design
- ISE 370:** Human Factors in Work Design
- ISE 375L:** 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**

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APPROVED ENGINEERING ELECTIVES:

9 units of coursework. See academic advisor for approved list of courses.

OPERATIONS ELECTIVES: Select at least one among ISE 232L, ISE 327, ISE 350, or ACCT 410. Please note some courses can fulfill both the Approved Engineering Electives and Info Systems Electives requirements. Discuss options with your academic advisor.

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