

# Industrial and Management Engineering

Fall Semester				Spring Semester			
		FIRST		YEAR			
CHEM-1100	Chemistry I <sup>1</sup>	4		ENGR-1200	Engineering Graphics & CAD <sup>2</sup>	1	
ENGR-1100	Intro to Eng Analysis	4		MATH-1020	Calculus II	4	
ENGR-1300	Engineering Processes <sup>2</sup>	1		PHYS-1100	Physics I	4	
MATH-1010	Calculus I	4			Computer Science Elective <sup>3</sup>	4	
	Hum. or Soc. Sci. Elective	4			Hum. or Soc. Sci. Elective	4	
		SECOND		YEAR			
ENGR 2050	Intro to Engineering Design	4		ENGR 2600	Modeling & Analysis of Uncertainty	3	
PHYS 1200	Physics II	4		ISYE-2210	Prod & Ops Mgt & Cost Acctg. <sup>5</sup>	4	
MATH 2400	Intro. to Differential Equations	4		MATH-2010	Multivariable Calc & Mat Algebra	4	
	Hum., Arts or Soc. Sci. Elective	4			Science Elective <sup>4</sup>	4	
Summer Arch Semester		THIRD		YEAR		Fall or Spring	
ISYE-4140	Statistical Analysis	4		ISYE-4250	Discrete Event Simulation	4	
ISYE-4600	Operations Research Methods	4			Technical Elective <sup>7</sup>	3	
	Technical Elective <sup>7</sup>	3			Technical Elective <sup>7</sup>	3	
	Professional Development II <sup>6</sup>	2			Free Elective I	4	
	Hum., Arts or Soc. Sci. Elective	4			Hum., Arts or Soc. Sci. Elective	4	
		FOURTH		YEAR			
ISYE-4530	Information Systems <sup>1</sup>	4		ISYE-4270	IME Design	3	
ENGR-4760	Eng. Economics	3		ISYE-4210	Design & Anal of Supply Chains	3	
	Technical Elective <sup>7</sup>	3		ENGR-4010	Professional Development III	4	
	Free Elective I1	4			Technical Elective <sup>7</sup>	3	
					Free Elective III	4	

- This course is only offered in the fall semester.*
- For these two courses, order does not matter. ENGR 1300 may be replaced with ISYE 1100 Introduction to Industrial and Systems Engineering. ENGR 1200 may be replaced with ENGR 1400 Engineering Communications.*
- IME majors must take CSCI 1010 Introduction to Computer Programming or CSCI 1100 Computer Science I for the Computer Science Elective.*
- IME majors may select any 4-credit course with the designation ASTR, BCBP, BIOL, CHEM, EARTH, MATH, or PHYS to satisfy the science elective requirement.*
- This course is only offered in the spring semester.*
- This course can be fulfilled by taking a 2-credit course from a list of courses published at the start of each semester.*
- IME majors must select five courses from the following list of technical electives. The selected courses must include a minimum of three ISYE numbered courses and at least two courses from among: ISYE 4200, ISYE 4230, ISYE 4240, ISYE 4250 and ISYE 4280:*

<i>ENGR 1600 Materials Science for Engineers</i>	<i>ENGR 2090 Engineering Dynamics</i>
<i>ENGR 2250 Thermal and Fluids Engineering I</i>	<i>ENGR 2300 Electronic Instrumentation</i>
<i>ENGR 2350 Embedded Control</i>	<i>ENGR 2530 Strength of Materials</i>
<i>ENGR 2710 General Manufacturing Processes</i>	<i>ENGR 4710 Advanced Manufacturing Laboratory I</i>
<i>ENGR 4720 Advanced Manufacturing Laboratory II</i>	<i>ISYE 4200 Design and Analysis of Work Systems</i>
<i>ISYE 4230 Quality Control</i>	<i>ISYE 4240 Engineering Project Management</i>
<i>ISYE 4250 Facilities Design &amp; Industrial Logistics</i>	<i>ISYE 4280 Decision Focused Systems Engineering</i>

*Other approved technical elective options:*

<i>ISYE 4220 Optimization Algorithms and Applications</i>	<i>ISYE 4260 Human Performance Modeling and Support</i>
<i>ISYE 4300 - Complex Systems Models for Industrial and Systems Engineering</i>	<i>ISYE 4320 Theory of Scheduling</i>
<i>ISYE 4310 - Ethics of Modeling for Industrial and System Engineering</i>	<i>ISYE 4760 Mathematical Statistics</i>
<i>ISYE-4330 Design of Experiments</i>	
<i>ISYE 4810 Computational Intelligence</i>	

*Special undergraduate sections or regular graduate sections of 6000-level ISYE courses can also serve as technical electives except for ISYE 6600, ISYE 6610 and ISYE 6620.*