

Industrial & Systems Engineering Degree Plan (2024/25 catalog)

34 units of Prep for Major must be completed before taking ISYE 305, ISYE 310 and ISYE 340

First Year			
Fall			
ENGR 101: Introduction to Engineering	3		
MATH 150: Calculus I	4		
COMP 110: Computational Problem Solving	3.5		
Core Curriculum	3		
Core Curriculum	3		
Total Semester Units		16.5	
Spring			
ENGR 102 or ENGR 103		3	
PHYS 270/270L: Mechanics & Lab		4	
MATH 151: Calculus II		4	
CHEM 151/151L: General Chemistry I & Lab		4	
Core Curriculum		3	
Total Semester Units			18
Second Year			
Fall			
ENGR 102 or ENGR 103	3		
PHYS 271/271L: Electricity and Magnet. & Lab	4		
MATH 310: Applied Math for Engineers	3		
Core Curriculum	3		
Core Curriculum	3		
Total Semester Units		16	
Spring			
ISYE 330: Engineering Prob./Statistics		3	
MATH Elective (MATH 250, 222 or 262)		3	
MENG 210: Statics		3	
ENGR Lower Div Elect (ELEC 201 or MENG 260)		3	
Core Curriculum		3	
Total Semester Units			15
Third Year			
Fall			
ISYE 220: Engineering Economics	3		
ISYE 310: Work Analysis & Design	4		
ISYE 340: Operations Research I	3		
ISYE 305: Professional Practice	3		
MENG/ENGR 311: Materials Science	3		
Total Semester Units		16	
Spring			
ISYE 320: Intro to Systems Engineering		3	
ISYE 335: Six Sigma - Process Improvement Methods		4	
ISYE 350/350L: Manufacturing Processes & Lab		4	
ISYE 440: Operations Research II		3	
ISYE Program Elective I		3	
Total Semester Units			17
Fourth Year			
Fall			
ISYE 420: Simulation	4		
ISYE 430: Design of Experiments	3		
ISYE 470: Facilities Planning	3		
PHIL 332/338/342/345: Ethics (Core Curr.)	3		
ISYE 491: ISyE Senior Design Preparation	1		
ISYE Program Elective II	3		
Total Semester Units		17	
Spring			
ISYE 492: Senior Design Project		3	
ISYE 460: Operations & Supply Chain Mgmt.		3	
ISYE Program Elective III		3	
ISYE Program Elective IV		3	
Core Curriculum		3	
Total Semester Units			15
Final Semester			
Fall			
ISYE Program Elective V	3		
Core Curriculum	3		
Core Curriculum	3		
Free Elective	3		
Free Elective	3		
Free Elective	3		
Total Semester Units		18	
Spring			
ISYE Program Elective Courses			
ISYE 380: Sustainability and Engineering		3	
ISYE 385: Technology, Environment & Society		3	
ISYE 410: Human Factors (Spring)		3	
ISYE 450: Manufacturing Systems (Fall)		3	
ISYE 480: Data Science / Analytics		3	
ISYE 494: ISYE Special Topics Course		3	
Sustainability Concentration (12 units total)			
ISYE 380: Sustainability and Engineering		3	
ISYE 385: Technology, Environment & Society		3	
Plus 2 more sustainability-related courses		6	
Total ISYE Degree Units		148	