



University of San Diego Shiley-Marcos School of Engineering

Industrial & Systems Engineering Degree Plan (2023/24 catalog)

First Year			
Fall		Spring	
ENGR 101: Introduction to Engineering	3	ENGR 102 or ENGR 103	3
MATH 150: Calculus I	4	PHYS 270/270L: Mechanics +lab	4
ENGR 121 or COMP 110: Computational Problem Solving	3.5	MATH 151: Calculus II	4
Core Curriculum	3	CHEM 151/L: Chem +lab	4
Core Curriculum	3	Core Curriculum	3
Total Hours		Total Hours	
	16.5		18
Second Year			
Fall		Spring	
ENGR 102 or ENGR 103	3	ISYE 330: Engineering Prob./Statistics	3
PHYS 271/L: Intro to Electricity & Magnet. +lab	4	MATH Elective (MATH 250, 222 or 262)	3
MATH 310: Applied Math for Engineers	3	MENG 210: Statics	3
Core Curriculum	3	ENGR Lower Div Elect (ELEC 201 or MENG 260)	3
Core Curriculum	3	Core Curriculum	3
Total Hours		Total Hours	
	16		15
Third Year			
Fall		Spring	
ISYE 220: Engineering Economics	3	ISYE 320: Intro to Systems Engineering	3
ISYE 310: Work Analysis & Design	4	ISYE 335: 6sigma -Process Improvement Methods	4
ISYE 340: Operations Research I	3	ISYE 350/L: Manufacturing Processes w/Lab	4
ISYE 305: Professional Practice	3	ISYE 440: Operations Research II	3
MENG/ENGR 311: Materials Science	3	ISYE Program Elective I	3
Total Hours		Total Hours	
	16		17
Fourth Year			
Fall		Spring	
ISYE 420: Simulation	4	ISYE 492: Senior Design Project	3
ISYE 430: Design of Experiments	3	ISYE 460: Operations & Supply Chain Mgmt.	3
ISYE 470: Facilities Planning	3	ISYE Program Elective III	3
PHIL 332/338/342/345: Ethics (Core Curr.)	3	ISYE Program Elective IV	3
ISYE 491: ISyE Senior Design Preparation	1	Core Curriculum	3
ISYE Program Elective II	3	Total Hours	
Total Hours		Total Hours	
	17	15	
Final Semester			
Fall		Spring	
Core Curriculum	3	ISYE 380: Sustainability and Engineering	3
Core Curriculum	3	ISYE 385: Technology, Environment & Society	3
ISYE Program Elective V	3	ISYE 410: Human Factors (Spring)	3
Free Elective	3	ISYE 450: Manufacturing Systems (Fall)	3
Free Elective	3	ISYE 480: Data Science / Analytics	3
Free Elective	3	ISYE 494: ISYE Special Topics Course	3
Total Hours		Sustainability Concentration (12 units total)	
	18	ISYE 380: Sustainability and Engineering	3
Core Curriculum		ISYE 385: Technology, Environment & Society	3
Total ISyE Degree Hours		Plus 2 more sustainability-related courses	
	148	6	

34 units of Prep of Major completed before taking ISYE 305, ISYE 310 and ISYE 340 (fall third year)