

University of San Diego Shiley-Marcos School of Engineering
Industrial & Systems Engineering Degree Checklist (2018/19 catalog)

Complete	Core Curriculum	Course that Satisfies Requirement	Units
	First Year Writing (CFYW)	FYW 150	3
	Mathematical Reasoning (CMRP)	MATH 150	
	Second Language Competency		3 to 9
	Lower-Division Theological and Religious Inquiry (FTRI)		3
	Upper-Division Theological and Religious Inquiry (FTRI)		3
	Philosophical Inquiry (FPHI)		3
	Ethical Inquiry (FETI)	PHIL 342	3
	Scientific and Technological Inquiry (ESTI)	ENGR 101	
	Historical Inquiry (EHSI)		3
	Social and Behavioral Inquiry (ESBI)		3
	Literary Inquiry (ELTI)		3
	Artistic Inquiry (EARI)		3
	Diversity, Inclusion, Social Justice (FDD1)	ENGR 103	
	Diversity, Inclusion, Social Justice (FDD2 or FDG2)		
	Advanced Writing (CADW)	ISYE 391	
	Oral Communication (CORL)	ISYE 391	
	Quantitative Reasoning (CQUR)	ISYE 330	
	First Year Integration (CINL)	LLC course	
	Advanced Integration (CINT)		
Complete	Math/Science Courses	Prerequisites/(Corequisites)	
	CHEM 151/151L - General Chemistry +lab		4
	MATH 150 - Calculus I		4
	MATH 151 - Calculus II	MATH 150	4
	MATH 310 - Applied Math for Science and Engineering I	MATH 151	3
	MATH Elective (MATH 250, MATH 320 or approved)		3
	PHYS 270/270L – Mechanics +lab	MATH 150	4
	PHYS 271/271L – Electricity & Magnetism +lab	PHYS 270, MATH 151	4
Complete	Engineering Core Courses	Prerequisites/(Corequisites)	26
	ENGR 101 - Intro to Engineering	MATH 115 or (MATH 150)	3
	ENGR 102 – Engineering Design Practice	ENGR 101, ENGR 121, MATH 150	3
	ENGR 103 – User-Centered Collaborative Design	ENGR 101, MATH 150	3
	ENGR 121 or COMP 110– Engineering Programming	(MATH 150)	3
	ENGR 311 - Materials Science	MATH 151 CHEM 151/151L, PHYS 271	3
	MENG 210 - Statics	MATH 150, PHYS 270	3
	ENGR Elective (MENG 260 or ELEC 201)		3
Complete	ISyE Required Courses	Prerequisites/(Corequisites)	21
	ISyE 220 - Engineering Economics	(ISYE 330)	3
	ISyE 310 - Work Analysis w/ Lab	(ISyE 330)	4
	ISyE 320 - Intro to Systems Engineering	ISYE 330 , ISyE 391W	3
	ISyE 330 - Engineering Probability/Statistics	MATH 151 [C- or better]	3
	ISyE 335 - Statistical Process Control w/ Lab	ISYE 310, ISYE 330 [C- or better]	4
	ISyE 340 - Operations Research I	MATH 310 or 320	3
	ISyE 350 - Manufacturing Processes w/ Lab	MENG 210, ENGR 311	4
	ISyE 391W - Professional Practice	(ISyE 310)	3
	ISyE 420 - Simulation w/ Lab	ENGR 121, ISYE 440	4
	ISyE 430 - Design/Analysis of Experiments	ISYE 335	3
	ISyE 440 - Operations Research II	ISYE 340, ISYE 330 [C- or better]	3
	ISyE 460 - Operations & Supply Chain Mgmt.	ISYE 220, ISYE 440	3
	ISyE 470 - Facilities Planning	ISYE 340, ISyE 310	3
	ISyE 492 - Senior Design	ISYE 310, 320, 335, 350, 420, 470	3
Complete	ISyE Elective Courses		46
	ISYE Program Elective I		3
	ISYE Program Elective II		3
	ISYE Program Elective III		3
	ISYE Program Elective IV		3
	ISYE Program Elective V		3
	Free Elective		3
	Free Elective		3
	Free Elective		3
	Free Elective		3
	Total ISyE Degree Units		147