University of San Diego
SHILEY-MARCOS
SCHOOL OF ENGINEERING

University of San Diego Shiley-Marcos School of Engineering

B.S. Computer Science 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)		3
	Scientific and Technological Inquiry (ESTI)		
	Historical Inquiry (EHSI)		3
	Social and Behavioral Inquiry (ESBI)		3
	Literary Inquiry (ELTI)		3
	Artistic Inquiry (EARI)		3
	Diversity, Inclusion, Social Justice (FDD1)		
	Diversity, Inclusion, Social Justice (FDD2 or FDG2)		
	Advanced Writing (CADW)		
	Oral Communication (CORL)		3
	Quantitative Reasoning (CQUR)		
	First Year Integration (CINL)	LLC Course	
	Advanced Integration (CINT)	COMP 492	
Complete	**Math/Science Courses**	**Prerequisites/(Corequisites)**	
	MATH 150 - Calculus I	MATH 115 or placement exam	4
	MATH 151 - Calculus II	MATH 151	4
	MATH 222 - Discrete Math	MATH 151 or (COMP 110 & MATH 150)	3
	MATH 320 - Linear Algebra	MATH 151	3
	ISYE 330 - Engineering Probability and Statistics	MATH 151	3
	Additional Science Class		3
Complete	**Computer Science Core Courses**	**Prerequisites/(Corequisites)**	**20**
	COMP 110 - Computational Problem Solving (was COMP 150)	MATH 115	3.5
	COMP 120 - Programming Abstractions and Methodologies	COMP 110	3.5
	COMP 230 -Advanced Computational Problem Modeling	COMP 120	3.5
	COMP 280 - Introduction to Computer Systems	COMP 120	3.5
Complete	**Computer Science Required Courses**	**Prerequisites/(Corequisites)**	**14**
	COMP 305 - Object-Oriented Design and Programming	COMP 230 or COMP 285	3
	COMP 370 - Automata, Commutability and Formal Languages	(COMP 230 or 285) & MATH 222	3
	COMP 480 - Algorithms	MATH 151 & (COMP 230 or 285)	3
	COMP 491 - Senior Project I	COMP 305	3
	COMP 492 - Senior Project II	COMP 491	3
Complete	**Systems Courses (2 required)**	**Prerequisites/(Corequisites)**	**12**
	COMP 300 - Principles of Digital Hardware	COMP 280	
	COMP 310 - Operating Systems	COMP 280	
	COMP 375 - Networking	COMP 280	
Complete	**Computer Science Elective Courses choose 9 units**		**7**
	COMP 340 - Numerical Analysis	MATH 151, COMP 110	
	COMP 341 - Numerical Analysis II	MATH 250 , MATH 320,(MATH 330) COMP 340	
	COMP 345 - Database Management Systems Design	COMP 230 or COMP 285	
	COMP 350 - Computer Graphics	MATH 151 & (COMP 230 or 285)	
	COMP 360 - Principles of Programming Languages	COMP 230 or COMP 285	
	COMP 365 - Principles of Information Security	COMP 280	
	COMP 380 - Neural Networks	MATH 151 & (COMP 230 or 285)	
	COMP 382 - Introduction to Data Mining	COMP 230	
	COMP 421 - Embedded Software Development	COMP 280	
	COMP 422 - Advanced Embedded Software Development	COMP 421 or GENG 421	
	COMP 494 - Special Topics	COMP 305	
	COMP 499 - Independent Study	Permission of Instructor	
	CYBR 500 - Foundations of Cyber Security (6 units)	COMP 280	
		total degree units	**124**