

B.S. Computer Science Degree Checklist (2024/25 catalog)

Complete	Core Curriculum (30-36 Units)	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 345 or PHIL 348	
	Scientific and Technological Inquiry (ESTI)	Natural Science	
	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)	COMP 305	
	Oral Communication (CORL)		3
	Quantitative Reasoning (CQUR)	ISYE 330	
	First Year Integration (CINL)	LLC Course	
	Advanced Integration (CINT)	COMP 492	
Complete	Math/Science Courses (23 Units)	Prerequisites/(Corequisites)	
	MATH 150 - Calculus I	MATH 115 or placement in MATH 130 or higher	4
	MATH 151 - Calculus II	MATH 150 (C- or better)	4
	MATH 262 - Discrete Math or MATH 260 - Found. Higher Math	MATH 150	3
	MATH 320 - Linear Algebra	MATH 262 (C- or better)	3
	ISYE 330 - Engineering Probability and Statistics	MATH 151	3
	Natural Science		6
Complete	Computer Science Core Courses (14 Units)	Prerequisites/(Corequisites)	
	COMP 110 - Computational Problem Solving	MATH 115 or placement in MATH 130 or higher	3.5
	COMP 120 - Programming Abstractions and Methodologies	COMP 110 (C- or better)	3.5
	COMP 230 - Advanced Computational Problem Modeling	COMP 120 (C- or better), MATH 260/262 (C- or better)	3.5
	COMP 280 - Introduction to Computer Systems	COMP 120 (C- or better)	3.5
Complete	Computer Science Required Courses (18.5 Units)	Prerequisites/(Corequisites)	
	PHIL 345 - Computer Ethics or PHIL 348 - Ethics of AI & Robotics		3
	COMP 305 - Object-Oriented Software Design	COMP 230 (C- or better)	3.5
	COMP 370 - Automata, Commutability and Formal Languages	COMP 230 (C- or better), MATH 260/262 (C- or better)	3
	COMP 480 - Algorithms	COMP 230 (C- or better), MATH 260/262 (C- or better)	3
	COMP 491 - Senior Project I	COMP 280 (C- or better), COMP 305 (C- or better)	3
	COMP 492 - Senior Project II	COMP 491	3
Complete	Systems Courses (2 required - 7 Units)	Prerequisites/(Corequisites)	
	COMP 300 - Principles of Digital Hardware	COMP 280 (C- or better), MATH 260/262 (C- or better)	3.5
	COMP 310 - Operating Systems	COMP 280 (C- or better)	3.5
	COMP 375 - Networking	COMP 280 (C- or better)	3.5
Complete	Computer Science Elective Courses (3 required - 9 units)	Prerequisites/(Corequisites)	
	COMP 340 - Numerical Analysis	COMP 110 (C- or better) or MATH 150 (C- or better), MATH 151 (C- or better)	3
	COMP 341 - Numerical Analysis II	MATH 250, MATH 320, COMP 340 (all C- or better), (MATH 330)	3
	COMP 345 - Database Management Systems Design	COMP 230 (C- or better)	3
	COMP 350 - Computer Graphics	MATH 320 (C- or better), COMP 230 (C- or better)	3
	COMP 360 - Principles of Programming Languages	COMP 230 (C- or better), MATH 260/262 (C- or better)	3
	COMP 365 - Principles of Information Security	COMP 280 (C- or better)	3
	COMP 380 - Neural Networks	COMP 230 (C- or better), MATH 320 (C- or better)	3
	COMP 382 - Introduction to Data Mining	COMP 230 (C- or better), ISYE 330 (C- or better)	3
	COMP 421 - Embedded Software Development	COMP 280 (C- or better)	3
	COMP 422 - Advanced Embedded Software Development	COMP 421 (C- or better) or GENG 421 (C- or better)	3
	COMP 494 - Special Topics		1 - 4
	COMP 499 - Independent Study	Permission of Instructor	1 - 3
	Approved CYBR, AAI, ADS Graduate Level Courses	Permission of Chair	3
Complete	Additional Requirements	Notes for Additional Requirements	
	Connect (Career Readiness Program)	Complete 12 points (orientation, networking, senior survey, and 9 flex points)	
	Free Electives	Complete additional units needed to meet 124 Unit requirement for degree	
	Upper-Division Courses	Complete additional upper-division units needed to meet 48 Upper-Division Unit requirement for degree	
Total COMP Degree Units			124