

University of San Diego Shiley-Marcos School of Engineering

B.A. Computer Science Degree Checklist (2023/24 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 |
| | 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) | 33 |
| | MATH 150 - Calculus I | MATH 115 or placement exam | 4 |
| | MATH 260 - Foundations of Higher Math or MATH 262 - Discrete Math | MATH 150 | 3 |
| | ISYE 330 - Probability and Statistics or MATH 320 - Linear Algebra | | 3 |
| Complete | Computer Science Core Courses | Prerequisites/(Corequisites) | 10 |
| | COMP 110 - Computational Problem Solving (was COMP 150) | MATH 115 credit or placement in MATH 130 or higher | 3.5 |
| | COMP 120: Programming Abstractios and Methodologies | COMP 110 (C- or better) | 3.5 |
| | COMP 230: Advanced Computational Problm Solving | COMP 120 (C- or better), MATH 262 (C- or better) | 3.5 |
| | COMP 280: Intro to Computer Systems | COMP 120 (C- or better) | 3.5 |
| Complete | Computer Science Required Courses | Prerequisites/(Corequisites) | 14 |
| | COMP 305 - Object-Oriented Design and Programming | COMP 230 or COMP 285 (C- or better) | 3 |
| | COMP 480 - Algorithms | (COMP 285 or COMP 230) (C- or better), MATH 262 (C- or better) | 3 |
| | COMP 491 - Senior Project I | COMP 305 | 3 |
| | COMP 492 - Senior Project II | COMP 491 | 3 |
| Complete | Systems Courses (1 required) | Prerequisites/(Corequisites) | 12 |
| | COMP 300 - Principles of Digital Hardware | COMP 280 (C- or better) & MATH 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 choose 9 units | | 3.5 |
| | COMP 340 - Numerical Analysis | MATH 151 (C- or better), COMP 110 (C- or better) | |
| | COMP 341 - Numerical Analysis II | MATH 250, MATH 320,(MATH 330) COMP 340 (all C- or better) | |
| | COMP 345 - Database Management Systems Design | COMP 230 or COMP 285 (C- or better) | |
| | COMP 350 - Computer Graphics | MATH 320 & (COMP 230 or 285) (C- or better) | |
| | COMP 360 - Principles of Programming Languages | (COMP 230 or 285) (C- or better)& MATH 262 (C- or better) | |
| | COMP 365 - Principles of Information Security | COMP 280 (C- or better) | |
| | COMP 370 - Automata, Computability & Formal Languages | (COMP 230 or 285) (C- or better)& MATH 262 (C- or better) | |
| | COMP 380 - Neural Networks | COMP 230 (C- or better) & ISYE 330 (C- or better) | |
| | COMP 382 - Introduction to Data Mining | COMP 280 (C- or better) | |
| | COMP 421 - Embedded Software Development | COMP 421 (C- or better)or GENG 421 (C- or better) | |
| | COMP 422 - Advanced Embedded Software Development | | |
| | COMP 494 - Special Topics | Permission of Instructor | |
| | CYBR 501 - Intro to Cybersecurity Concepts and Tools | permission of chair | |
| | CYBR 502 - Cybersecurity Network Defense | CYBR 501 (C- or better) | |
| total degree units | | | 124 |