Welcome to Computer Science & Software Engineering

The DSU Computing and Design department offers a Computer Science degree (CS) and a Software Engineering degree (SE). These are ideal for students interested in careers in the software industry.

Below you will find descriptions of each of these fields as well as many of the job requirements employers are requesting. Additionally, you will find DSU course listings next to the job requirements. These course listings correspond to specific courses that teach the skills employers seek. Please take the time to browse through these careers and course offerings below. We also invite you to come in and test drive the latest in computer hardware and software and explore your technical abilities while you learn with us at Dixie State University's Computer Science program.

Software Engineering—Computer Programming

Computer Programmers and software engineers write code, generally in C, C++, Java, or a variety of other programming languages. CIT courses that teach computer programming and software engineering include:

- CS 1030 Problem Solving with Computers
- CS 1400 Fundamentals of Programming
- CS 1410 Object Oriented Programming
- CS 2420 Introduction to Algorithms and Data Structures
- CS 2450 Software Engineering
- CS 2810 Computer Organization and Architecture
- CS 3005 C++ Programming
- CS 3310 Discrete Mathematics
- CS 3400 Operating Systems
- CS 3410 Distributed Systems
- CS 3500 Application Development
- CS 3510 Advanced Algorithms/Data Structures
- CS 3520 Programming Languages
- CS 3530 Computational Theory
- CS 3600 Graphics Programming
- CS 4300 Artificial Intelligence
- CS 4307 Database Systems
- CS 4320 Machine Learning
- CS 4550 Compilers
- CS 4600 Senior Project
- CS 4920 Internship

Many of the job requirments of computer programmers include:

- 4 year degree in CS, SE, Math, Physics, Engineering, or related field
- experience in computer programming and software engineering — managing software and systems projects.
- Proficiency in computer programming Python, C, C++, Java, Swift, Go, Rust, Windows OS, Unix — Linux (IT 1100, IT3100, IT3110), Server Maintenance (IT3110), SQL Databases (CS4307), and Programming

fluency in OS, GUI, AI, Compilers (CS3400, CS3500, CS3600, CS4300, CS4550)
- Networking skills (CS3150, IT4400)
- Macintosh and PC skills

Career Information Sites:

- National Wages for Computing Careers from U.S. Department of Labor
- Utah Wages for Computing Careers from U.S. Department of Labor
- Utah Wages by Career from Utah.gov
- Utah Labor Report