



## Welcome to Computer Science & Software Development

The DSU Computer and Information Technology 4-Year Degree program offers a Computer Science degree (CS) and CIT degree with an emphasis in Software Development (SDEV). These are great for students interested in computer programming and software engineering.

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 1010 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 3100 Advanced Multimedia/Internet Integration](#)
- [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 4010 Interactive Web Development](#)
- [CS 4300 Artificial Intelligence](#)
- [CS 4550 Compilers](#)
- [CS 4600 Senior Project](#)

Many of the job requirements of computer programmers include:

- 4 year degree in CS, CIT, Math, Physics, Engineering, or related field
- experience in computer programming and software engineering — managing software and systems projects.

- Proficiency in computer programming C++ (CS1400 and CS1410), Java and object oriented programming, Windows OS, Unix — Linux (IT 1100, IT3100, IT3110), Server Maintenance (IT3110), Databases MySQL and Postgres (IT4300), and Programming fluency in OS, GUI, AI, Compilers (CS3400, CS3500, CS3600, CS4300, CS4550)
- Networking skills (IT2400, 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](#)