

# Computer Science (BA) 2021-22

What can you do with a Computer Science (BA) major from SPU?

The BA in Computer Science emphasizes problem-solving, organizing and synthesizing ideas, and applications of computing theory. It's a particularly good major if you wish to double-major or minor in another field. You will graduate prepared to apply your computer knowledge and skills in a variety of occupational settings.

#### Potential occupations include:

Quality Assurance Analyst

- Computer Designer
- Database Administrator
- Software Developer
- Systems Analyst
- User Interface Designer
- Internet Apps Programmer
- Software Engineer
- Web Developer

### Other majors at SPU with similar requirements in the first two years

Information Systems (BS)

#### Suggested transfer preparation at Highline College

Associate of Arts (AA-DTA), with careful selection of courses. Students who study Java rather than C++ are required to take CSC 2330 in their first quarter at SPU.

#### Courses in the major you may complete at Highline College

Highline College Course	SPU Equivalent Course
C SCI 151 Object Oriented Programming w/ C++ (5) – OR –	CSC 1230 Problem Solving & Programming (5) – OR –
C SCI 142 Obj-Oriented Prgrmng I w/ Java (5) – and – C SCI 143 (5) Object-Oriented programming II (5) – and – C SCI 242 (5) Object-Orient. Prog III w/ Java (5)	CSC 1230 Problem Solving & Programming (5), if CSC 2330 (3) is completed at SPU.
C SCI 152 Data Structures w/ C++ & .NET (5) – OR – C SCI 143 Object-Oriented Programming II (5)	CSC 2430 Data Structures I (5) – OR – CSC 2430 Data Structures I (5), if with C SCI 242 (5), and if CSC 2330 (5) is completed at SPU.
C SCI 242 Object-Orient. Prog III w/ Java (5)	CSC 2431 Data Structures II (5), if CSC 2330 (5) is completed at SPU.
MATH& 148 Business Calculus (5)	MAT 1221 Survey of Calculus (5)
MATH& 146 Introduction to Statistics (5)	MAT 2360 Stats for Sciences (5)

### Admission to the major

If you identify the Computer Science (BA) major as your first choice on your application for admission to the University, you will automatically gain entry to the major when admitted to SPU.

#### Learn more about the Computer Science (BA) major at:

http://spu.edu/computer-sci-engineering http://spu.edu/computer-science-ba-regs

**Get more information** about transfer admission to Seattle Pacific University at: <u>http://spu.edu/transfer</u>. **Questions?** Contact <u>transfer@spu.edu</u>.

## **Courses to complete at SPU**

CSC 3011 Living in a Digital World (3)			
CSC 3150 Systems Design (5)			
CSC 3220 Applications Programming (4)			
CSC 3221 Netcentric Computing (4)			
CSC 3310 Concepts in Programming Langs (4)			
CSC 3350 Operating Systems Programming (3)			
CSC 3430 Algorithm Design & Analysis (4)			
CSC 3750 Computer Architecture/Organization (5)			
CSC 4410 Database Management (5)			
CSC 4898 Senior Capstone Seminar (2)			
MAT 1720 Math for Computer Science (5)			
<ul> <li>Select one of the following technical electives:</li> <li>CSC 4210 Theory of Computation/Algorithms (3)</li> <li>CSC 4220 Cybersecurity Fundamentals (3)</li> <li>CSC 4250 Intro to Artificial Design (3)</li> <li>CSC 4310 Compiler Design (3)</li> <li>CSC 4350 Advanced Operating Systems (3)</li> <li>CSC 4430 Advanced Programming (3 – 5)</li> <li>CSC 4750 Computer Networks (5)</li> <li>CSC 4760 Advanced Computer Architecture (5)</li> <li>CSC 4800 Advanced Issues in Computer Sci (3 – 5)</li> </ul>			
<ul> <li>Project and Internship Requirements:</li> <li>CSC 3000 Principles of Professional Practice (1)</li> <li>CSC 4151 Software Engineering I (3)</li> </ul>			

CSC 4151 Software Engineering I (3)

- CSC 4152 Software Engineering II (3)
- CSC 4941 Internship Review (1)

## Other requirements for the degree

In addition to the major, the degree requires completion of any remaining general education and University requirements, and at least 180 collegelevel credits total, including 60 upperdivision (UD) credits.

All students must complete the University Foundations Requirement at SPU – even those who have completed the Direct Transfer Agreement (DTA) Associate Degree.

Students admitted with fewer than 90 credits (freshmen and sophomores) complete 15 credits: UFDN 1000 The Christian Faith (5) UFDN 2000 Christian Scriptures (5)

UFDN 3100 Christian Theology (5)

Students admitted with 90 credits or more (juniors and seniors) complete 10 credits:

UFDN 3001 Christian Scriptures (5) UFDN 3100 Christian Theology (5)

# Suggested course plan for your junior and senior years at SPU

Assumes junior standing at entrance and successful completion of C SCI 151, 152, and 242; and MATH& 146 and 148, prior to transfer.

Junior Year				
Autumn	Winter	Spring	Notes	
<ul> <li>CSC 2330 (5) if needed; consult advisor.</li> <li>CSC 3000 (1)</li> <li>CSC 3150 (5) or take this in spring.</li> <li>MAT 1720 (5) or take this in winter.</li> <li>+ credits to total 15 - 18</li> <li>Any Quarter Offered:</li> </ul>	<ul> <li>CSC 3011 (3)</li> <li>CSC 3220 (4)</li> <li>MAT 1720 (5) if not taken in autumn.</li> <li>+ credits to total 15 – 18</li> </ul>	<ul> <li>CSC 3150 (5) if not taken in autumn.</li> <li>CSC 3221 (4)</li> <li>+ credits to total 15 – 18</li> </ul>	• Students are required to complete 200+ internship hours – this can be done any time this year, but usually take place over the summer between your junior and senior years.	
Technical elective (3				
UFDN, general education, and University requirements.     Senior Year				
Autumn	Winter	Spring	Notes	
<ul> <li>CSC 3310 (4)</li> <li>CSC 4898 (2)</li> <li>+ 9 – 12 credits</li> </ul>	<ul> <li>CSC 3430 (4)</li> <li>CSC 3750 (5)</li> <li>CSC 4151 (3)</li> <li>CSC 4410 (5)</li> <li>CSC 4941 (1)</li> </ul>	<ul> <li>CSC 3350 (3)</li> <li>CSC 4152 (3)</li> <li>+ 9 – 12 credits</li> </ul>	Be sure you will     have completed 180     college-level credits     by graduation – at     least 60 of these	
Any Quarter Offered: • Any remaining election	ves, UFDN, general education,	and University requirements.	must be upper- division (numbered 3000-4999).	