

Computer Science – What is it?

Computers are an integral part of modern society. People interact with computers and technology on a daily basis using hardware and operating systems, computer software and communication systems, databases, interactive games, educational software and videos. Computer Science programs require a solid foundation in math and science. B.S. degrees typically require advanced study in math, science and computer science courses. B.A. programs include basic computer knowledge and skills and often provide opportunities for multidisciplinary studies, application and specialization in areas such as architecture, engineering, music, mathematics, art, computer animation, computer graphics, science and business. Degrees with titles such as “Information Systems” and “Information Technology” usually focus on applied technical skills, such as learning to use existing products and methods for business purposes.

Areas of Study in Computer Science: Computer Programming, Computer Networking, Algorithms and Data Structures, Operating Systems, Software Development and Design, Computer Graphics, Computer Animation, Databases, Image Processing, Artificial Intelligence and Professional Ethics.

Where does my path start?

You will complete an Associate of Arts – Direct Transfer Agreement (AA-DTA) at Shoreline.

Use the AA -DTA **Degree Planning Guide** to understand the requirements for graduation.

Once you complete your Shoreline degree, you can transfer to a four-year school to earn a baccalaureate degree in Computer Science or a related field.

Where can I go for help?

Computer Science Faculty Advisors

Eric Basham	206-546-4625	ebasham@shoreline.edu	Rm 2809
Fred Kuczmariski	206-546-6993	fkuczmar@shoreline.edu	Rm 5348
Stephanie Diemel	206-546-4579	sdiemel@shoreline.edu	Rm 5356
Sasha Malinsky	206-533-6769	smalinsky@shoreline.edu	Rm 5383
Tiffany Meier	206-546-6953	tmeier@shoreline.edu	Rm 5231

General Academic Advising

FOSS (5000) Building, Rm. 5229
206-546-4559 advising@shoreline.edu
www.shoreline.edu/advising

International Advising

9000 Building, Rm. 9302
206-546-4697 leadvisors@shoreline.edu
www.shoreline.edu/international/advising/

Where can I transfer?

The AA—DTA makes it possible for students to transfer to a number of public and private colleges and universities in the U.S. with junior standing. Washington state institutions are listed below.

Public Institutions

[Eastern Washington University](#)
[The Evergreen State College](#)
University of Washington—[Seattle](#),
[Tacoma](#) and [Bothell](#)
Washington State University—
[Pullman](#), [Richland](#) and [Vancouver](#)
[Western Washington University](#)

Private Institutions

[Gonzaga University](#)
[Heritage University](#)
[Pacific Lutheran University](#)
[Saint Martin’s University](#)
[Seattle Pacific University](#)
[Seattle University](#)
[University of Puget Sound](#)
[Walla Walla University](#)
[Whitworth University](#)

Info Tech Degrees

Central Washington University—[Des Moines](#),
[Everett](#) and [Lynnwood](#)
Eastern Washington University – [Bellevue](#), [South
Seattle](#) (Applied Technology)
[City University of Seattle](#)—[Renton](#)
[North Seattle College](#)
University of Washington—[Tacoma](#) and [Bothell](#)
[Western Governors University](#) (online)

What can I do with a Bachelor’s Degree in Computer Science?

Graduates with a bachelor’s degree in Computer Science or Computing and Software Systems have far reaching opportunities in the computer career field, working as computer programmers, network specialists, systems and data communication analyst, software and hardware engineers, technical consultants and educators. Depending on the position, wages are typically strong ranging from \$40,000 to well over \$100,000 a year. Resource: Association for Computing Machinery at www.computingcareers.acm.org.

Potential employers include: Computer software and hardware companies, software publishers, businesses and consulting firms, entertainment industry, schools, health care agencies and manufacturing companies. For more, please visit <http://www.shoreline.edu/counseling-services/career-counseling.aspx>

What courses should I take?*

Below are recommendations for fulfilling the AA-DTA requirements if you are planning to pursue a four-year degree in Computer Science or related fields.

Strongly Recommended

These are commonly **required** for admission. Check with your chosen four-year program(s) to confirm.

Other Recommendations

These courses are well-matched with this major, but are not commonly required for admission.

I. GENERAL EDUCATION REQUIREMENTS

Communications	ENGL &101 and ENGL &102
Quant. and Symb. Reasoning	MATH &151
Multicultural Understanding	--

II. DISTRIBUTION REQUIREMENTS

Humanities	--	World Language if required for university admission or graduation.
Natural Sciences	PHYS &221, &222, MATH &152	
Social Sciences	--	

III. GENERAL ELECTIVES

CS &141, 143; MATH &163, PHYS &223
[CS 121 is a prerequisite for CS &141]

CHEM 171/181, 172/182, 173/183;
 MATH &146, 207, 208, 211; BIOL &213,
 PHYS &116, &223, PHIL &120

What does your chosen four-year school require?

Before choosing classes, become familiar with the four-year program where you want to apply: visit the website, email the department, and/or speak with a Shoreline advisor. Below are examples from Washington schools with different admissions and graduation requirements. Check with the school for world language requirements. (Non-native speakers of English are often exempt from this requirement.)

School	Degrees	Requirements
UW – Seattle	B.S. in Computer Science	Admission requirements: ENGL &101, MATH &151, &152, &163, CS &141, 143, and one science course in CHEM 171/181 or PHYS &221 or BIOL &211. Additional courses: MATH 208, another Science course.
University of Washington – Bothell	B.S. in Computing and Software Systems; B.A. Applied Computing	B.S. and B.A. Admissions requirements: ENGL &101, &102, CS 121, &141, 143, MATH &151, &152 (required for BS online), &146 or 211. Recommended: MATH &152, &163, 208. A minimum of 2.0 is required in each course.
University of Washington - Tacoma	B.A. and B.S. Computer Science and Systems	Admission requirements: MATH &151, &146 or 211, lab science – prefer PHYS &221, CHEM 171/181 or BIOL 211, CS &141, 143. See Assoc. in Science Track 2.
	B.S. Information Technology and Systems.	Admission requirements: MATH &141, &142, CS &141
Seattle University	B.A. and B.S. in Computer Science with specialization options in Business or Mathematics :	Course requirements for B.A. degree: CS &141, 143, MATH & 151, &152; courses required for B.S. degree: MATH &151, &152, &163, PHYS &221 and two of the following: PHYS &222, &223, BIOL &211, CHEM 171/181, CHEM 172/182. In addition MATH 208 can be taken before or after transfer. Students are required to have a 2.5 GPA for admissions.
Seattle Pacific University	B B.A. and B.S. in Computer Science, B.S. Information Systems	Course requirements for B.A.: CS &141, MATH &146 or 211 and MATH &148; courses required for B.S. degree: MATH &151, &152, &163, 207 or 208, CS &141 and three courses with two in one science sequence: PHYS &221-223 or CHEM 171/181, 172/182, 173/183 or BIOL &211-&213. B.S. Info. Systems: CS &141, MATH &146, &148.
Western Washington University	B.S. Computer Science:	Course requirements: MATH &151, &152, &163, 208, and one science sequence (CHEM 171/181, 172/182, 173/183 OR PHYS &221-&223 OR BIOL &211-&213). CS 121, &141, 143 do not meet a requirement, but programming experience is important.

**** This unofficial guide is intended to support you as you prepare for your major. Please consult with an advisor and your chosen four-year school(s), as program and admissions requirements vary and may change without notice.**