Computer Science
Associate in Arts & Sciences – Direct Transfer (DTA)

EVERETT COMMUNITY COLLEGE

GENERAL INFORMATION

Students interested in Computer Science have many different options. An informative resource for reviewing the scope of the field is the Occupational Outlook Handbook. The following descriptions are drawn from that handbook.

Computer scientists work as theorists, researchers, or inventors. Their jobs are distinguished by the higher level of theoretical expertise and innovation they apply to complex problems and the creation or application of new technology. Those employed by academic institutions work in areas ranging from complexity theory, to hardware, to programming-language design. Some work on multidisciplinary projects, such as developing and advancing uses of virtual reality, extending human-computer interaction, or designing robots. Their counterparts in private industry work in areas such as applying theory, developing specialized languages or information technologies, or designing programming tools, knowledge-based systems, or even computer games.

Systems analysts solve computer problems and apply computer technology to meet the individual needs of an organization. They help an organization to realize the maximum benefit from its investment in equipment, personnel, and business processes. Systems analysts may plan and develop new computer systems or devise ways to apply existing systems' resources to additional operations. They may design new systems, including both hardware and software, or add a new software application to harness more of the computer's power. Most systems analysts work with specific types of systems—for example, business, accounting, or financial systems, or scientific and engineering systems—that vary with the kind of organization. Some systems analysts also are known as systems developers or systems architects.

Networks come in many variations, so **network systems and data communications analysts** are needed to design, test, and evaluate systems such as local area networks (LANs), wide area networks (WANs), the Internet, intranets, and other data communications systems. Systems can range from a connection between two offices in the same building to globally distributed networks, voice mail, and e-mail systems of a multinational organization. **Network systems and data communications analysts** perform network modeling, analysis, and planning; they also may research related products and make necessary hardware and software recommendations. **Telecommunications specialists** focus on the interaction between computer and communications equipment. These workers design voice and data communication systems, supervise the installation of those systems, and provide maintenance and other services to clients after the system is installed.

The growth of the Internet and the expansion of the World Wide Web (the graphical portion of the Internet) have generated a variety of occupations related to the design, development, and maintenance of Web sites and their servers. For example, **webmasters** are responsible for all technical aspects of a Web site, including performance issues such as speed of access, and for approving the content of the site. Internet developers or **Web developers, also called Web designers**, are responsible for day-to-day site design and creation.

With the Internet and electronic business generating large volumes of data, there is a growing need to be able to store, manage, and extract data effectively. **Database administrators** work with database management systems software and determine ways to organize and store data. They identify user requirements, set up computer databases, and test and coordinate modifications to the systems. An organization's database administrator ensures the performance of the system, understands the platform on which the database runs, and adds new users to the system. Because they also may design and implement system security, database administrators often plan and coordinate security measures. With the volume of sensitive data generated every second growing rapidly, data integrity, backup systems, and database security have become increasingly important aspects of the job of database administrators.

Check out our other programs related to computer technologies:
* Associate in Technical Arts in Information Technology
* Associate in Applied Science-Transfer in Information Technology
* And Computing Technician; Systems Specialist; and Networking Specialist certificates.

PREPARATION

Typically, entry into these careers requires a bachelor's degree and usually a master's degree. Universities offer preparation for these careers in several different ways by offering a variety of majors: Computer Science, Math, Engineering, Business Information Systems, Information Management, to name a few. All of these majors share a common emphasis on a strong mathematics background.

You can start your preparation for a major in computer sciences by following EvCC's **Associate of Arts and Sciences** Direct Transfer degree program. This curriculum guide outlines the degree program for a computer science major.

EvCC offers this degree as part of a transfer agreement with a variety of universities in Washington. The degree offers qualified students priority for admission with junior status at most 4-year institutions in Washington. Students interested in colleges and universities outside of Washington may also find the requirements of this degree to be appropriate.

The **Associate of Arts and Sciences** Direct Transfer **Degree** requires that the student complete all freshman and sophomore general education coursework along with transfer electives chosen as appropriate for a Computer Science major at the intended transfer institution. Upon transfer, the student will be able to complete a Bachelor of Science degree in Computer Science with two additional years of coursework.

Please discuss your interests and course selection with an advisor.

If you are interested in Engineering you should consult the curriculum guide for Engineering. If you are interested in Information Management or Business Administration with an Information Systems or Computer Science minor, you should consult the curriculum guide for Business Administration. In any case, it is extremely important that you work closely with an EvCC advisor and with advisors at your intended university.

PROGRAM ADVISORS

For on-campus credit courses and programs, please contact:

Kevin Bolan, 425-388-9368
kbolan@everettcc.edu

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DTA checklist effective January 2017.**

Associate in Arts and Sciences – Direct Transfer

This checklist is targeted at transfer students with an interest in a **COMPUTER SCIENCE** major at a university. Students should meet with an advisor and maintain this checklist while at Everett Community College. The quarter before expected completion, this checklist should be submitted with a diploma application to the Enrollment Services Office. Note: Though courses in a foreign language are not required in the Associate of Science degree, some universities may require two or three quarters of foreign language for admission or for graduation.

Student Name: _____

☐ **COMPLETION** of College Success Course _____ _____ _____
  Where completed/Course Title Year Completed Grade

☐ **COMPLETION** of Diversity Course _____ _____ _____
  Where completed/Course Title Year Completed Grade

Course Number	Course Title	Credits	Quarter Completed	Grade

BASIC COMMUNICATION SKILLS (10 credits total, at least 5 in English Composition.)

Course Number	Course Title	Credits	Quarter Completed	Grade
ENGL& 101	English Composition I	5		

BASIC QUANTITATIVE SKILLS (5 credits from the DTA approved Quantitative Skills List.)

Course Number	Course Title	Credits	Quarter Completed	Grade
MATH& 151 (required)	Calculus I	5		

HUMANITIES (15 credits from the AAS-DTA approved Humanities List; no more than 5 credits in Humanities Performance. See Note 1.)

SOCIAL SCIENCES (15 credits from the AAS-DTA approved Social Sciences List. See Note 1.)

NATURAL SCIENCES (15 credits from the AAS-DTA approved Natural Sciences List, including one lab science class. See Notes 1 and 2.)

	Course Title	Credits	Quarter Completed	Grade
Part A (lab – 5 credit min)				
Part A or B				
Part C MATH& 152	Calculus II	5		

MAJOR PREPARATION COURSES (Minimum 30 credits. Select courses appropriate for your intended transfer destination in consultation with your faculty advisor. All classes with *** next to them are required.)

Course Number	Course Title	Credits	Quarter Completed	Grade
CS 110 or ENGR 121	Introduction to Computer Science **or** Introduction to Engineering 2: Design	5		
***CS& 131 (See Note 3)	Computer Science I	5		
***CS 132 or 143 (See Note 3)	Computer Science II (C++ **or** Java)	5		
CS 233 (See Note 4)	Advanced Data Structures	5		

ELECTIVES (Electives may be selected from the A and B lists on the DTA checklist. A maximum of 15 credits from the B list may be used.)

Course Number	Course Title	Credits	Quarter Completed	Grade

Total: Minimum 90 credits required, with a 2.0 minimum cumulative GPA.

Note 1: Courses must be from 3 different disciplines. No more than 10 credits in any one discipline may be used in Humanities, Social Science, and Natural Science altogether. No more than 5 credits may be used in any foreign language as part of the Humanities requirement.
Note 2: See back page advising guidance table for picking distribution classes applicable to specific transfer goals.
Note 3: CS 132 is recommended for students intending to transfer to WSU and UW-Bothell. CS 143 is recommended for students transferring to UW – Seattle. CS& 141 is an acceptable substitute for CS& 131 for this degree. Please consult with an advisor for specific computer language requirements at other transfer destinations.
Note 4: CS 233 is recommended for all students except those intending to transfer to UW-Seattle.

Computer Science Transfer Advising Guidance

University	Distribution Course Recommendations*	Major Preparation Courses*
University of Washington - Seattle	Natural Sciences • PHYS& 241/231, CHEM& 161 or BIOL& 221 • Second choice from above Three years of high school foreign language required, can substitute with three quarters of college foreign language.	CS 143 MATH& 163 MATH 260
University of Washington – Bothell, Central Washington University	Follow general DTA guidelines	CS 233 MATH& 146
Western Washington University, Eastern Washington University	Natural Sciences • Complete three quarter science sequence starting with PHYS& 241/231, CHEM& 161 or BIOL& 221	CS 233 MATH& 163 MATH 260 Rest of science sequence
Washington State University	Social Sciences • ECON& 201 or ECON& 202 Natural Sciences • PHYS& 241/231	CS 233 MATH& 163 MATH 260 Rest of engineering physics sequence
Seattle University	Humanities • Include a Philosophy course Natural Sciences • PHYS& 241/231	CS 233 MATH& 163 MATH 260
University of Washington - Tacoma	Natural Sciences • PHYS& 241/231	CS 143 MATH& 146

* Recommendations based on courses needed for departmental admission and/or to transfer as a junior with reasonable expectation to graduate with BS in two years. Follow general DTA guidelines for the remainder of the course selections in these distribution areas.

Computer Science Transfer Recommended Sequence of Courses

	Fall	Winter	Spring	Summer
First Year	MATH& 151 ENGL& 101 H/SS elective	MATH& 152 ENGL& 102 H/SS elective	MATH& 163 CS 110 or ENGR 121 Lab Science Elective	H/SS elective H/SS elective
Second Year	CS& 131 MATH 260 PHYS& 221/231	PHYS& 222/232 CS 132 or 143 PHYS 130 (1 cr) H/SS elective	PHYS& 223/233 CS 233 H/SS elective	

Note: Some additional prerequisites may be required depending on prior preparation in math, physics, and computer programming. This recommended sequence is designed to prepare for transfer to any computer science program in the state of Washington and exceeds the minimum requirements for several transfer options. Please consult with a faculty advisor.

GETTING STARTED AT EVCC

Our Enrollment Services Office provides information about application, orientation and registration for new and continuing students. All new students must complete entry advising through the Advising Center to select first quarter classes at EvCC. Contact:

◆ Enrollment Services, Parks Student Union, Room 201, 425-388-9219, admissions@everettcc.edu
◆ Advising Center, Rainier Hall, Room 108, 425-388-9339