



# Computer Programming

Associate in Applied Science Degree (96-103 credits)

Web Design Certificate of Proficiency (29-30 credits; 319-330 contact hours)

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**PROGRAM DESCRIPTION:** The AAS in Computer Programming is designed for persons interested in writing computer programs in various languages, such as Visual Basic, C# and Java, both stand-alone and web-based. Computer programmers design, build, and support solutions for business problems. Consideration is also given to database connectivity. Computer programmer duties include some or all of the following: analysis of business needs and problems, design of software solutions, application of industry standard tools and techniques for software development and preparation of documentation and user training materials applying sound verbal and written skills.

The Web Design Certificate is intended to: (1) provide fundamental skills so that essential tasks working with web sites can be completed; (2) create a foundation for further training if a student's interest or need warrants; (3) enable individuals to use common tools to convey and gather information through the Internet.

**CAREER OPPORTUNITIES:** Career opportunities typically begin as a computer programmer with possible future promotion to systems analyst and software engineer. Computer programming is a field with good opportunities for qualified persons in both government and private business.

Web Design Certificate opportunities can be found in professions where there is a job responsibility to maintain a website.

**PROGRAM OUTCOMES:** South Puget Sound Community College believes that all students need to develop a broad range of abilities that will not only make them more effective in their professional pursuits but will enhance their capacity to relate well to others in their daily lives. Therefore students who complete the Web Design Certificate program will be able to:

- Demonstrate the following skills standards:
  - Use standard tools for creating and maintaining web sites.
  - Possess fundamental skills in mark-up, scripting, and programming languages.
  - Design and access databases to store information used by web sites.
  - Integrate problem-solving and technical skills to create and maintain web pages that provide the essential features of business and personal web sites.
- Think logically and critically.

In addition to the outcomes above, students who complete an AAS in Computer Programming will:

- Demonstrate the following skills standards specific to Computer Programming:
  - Effectively plan, create and debug programs.
  - Apply database and programming concepts in various situations.
  - Use industry standard programming tools and techniques.
- Communicate effectively.
- Evaluate and process quantitative and symbolic data.
- Understand themselves in relation to others in a multicultural world.
- Understand ethical responsibilities and consequences.

**PROGRAM REQUIREMENTS:** Based on placement testing, basic skills and/or pre-college English, Reading, or Math may be required (ENGL 097, READ 097 & MATH 099). Deficiencies must be completed prior to graduation; however, students are strongly encouraged to enroll at the beginning of their education.

An AAS will be awarded upon successful completion of all core, elective, and general education requirements.

A certificate will be awarded upon successful completion of all certificate requirements.

**PROGRAM INFORMATION:**

**Admission:** Applications for admission and financial aid are available in Building 25, Office of Enrollment services, or call (360) 596-5241. Information is also available at the college website: [www.spscc.ctc.edu](http://www.spscc.ctc.edu). Students are accepted into the Computer Programming program every quarter.

**Length of Program:**

- Full-time students typically complete the AAS in six quarters, after basic skills are complete.
- The certificate can be completed in 3 quarters if basic skills are complete.

**Costs:** Tuition is subject to change by the State Legislature. Detailed tuition information is available in the quarterly class schedule. Tuition and fees do not include the costs of textbooks and supplies.

**Special Program Note:** Students entering the program are expected to have successfully completed the following courses or their equivalents:

CIS 101	Keyboarding 1
CIS 108	Introduction to Microsoft Office
CIS 123	Introduction to Windows
MATH 099	Intermediate Algebra

**Cooperative Work Experience/Internships:** Cooperative Work Experience is the internship program at South Puget Sound Community College and offers students an opportunity to receive college credit for paid or unpaid work experience related to their educational goals. This program gives students an opportunity to apply their skills while still in college.

For more information or for an appointment, contact the Cooperative Work Experience/Internship office at (360) 596-5359 (Bldg 25-129A) or at <http://www.spscc.ctc.edu/programs/special/coop>

**DIVERSITY REQUIREMENT:** South Puget Sound Community College requires all new students seeking an Associate Degree to complete a “diversity” course which meets the college criteria for listing as a diversity course and has been approved for such listing by the college Instructional Council prior to the student enrolling in the class.

**OFFICE OF CIVIL RIGHTS COMPLIANCE STATEMENT:** South Puget Sound Community College’s equal opportunity policy prohibits discrimination in our services and in employment against any person on the basis of race or ethnicity, creed, color, national origin, sex, marital status, sexual orientation, age, religion, Vietnam-era or disabled veteran status, or the presence of any sensory, physical or mental disability except in the case of a bona fide occupation qualification. South Puget Sound Community College is an equal opportunity/affirmative action employer and complies with the Americans with Disabilities Act (ADA).

Course	Title	Credits	THE SHADED AREAS WILL BE COMPLETED WITH YOUR ADVISOR	
<b>Core Requirements - Associate Degree and Certificate of Proficiency</b>			<b>Evaluation Notes</b>	
CIS 145	Introduction to Access	5		NAME:
CIS 160	Introduction to Programming	5		
CIS 182	Structured Query Language (SQL)	5		
CIS 184	Creating Web Pages	5		
CIS 185	Web Scripting	5		
		25		
<b>Additional Core Requirements - Certificate of Proficiency</b>				
Choose one of the following:				
CIS 235	Rich Internet Applications	4-5		SID:
CIS 237	Dreamweaver			
CIS 284	Web Application Development			
<b>Additional Core Requirements - Associate Degree</b>				
CIS 166	Programming Business Objects	5		
CIS 168	Programming Logic	5		
CIS 169	Requirements Analysis	3		
CIS 235	Rich Internet Applications	5		
CIS 266	Developing Database Applications	5		
CIS 269	Software Maintenance	5		
CIS 282	SQL Projects	5		
CIS 284	Web Application Development	5		
CNA 130	Introduction to Linux/Unix	5		
CS 142	Object-Oriented Programming I	5		
CS 143	Object-Oriented Programming II	5		
		53		
			Math	
			English	
			Reading	
			<b>Official Evaluation</b>	
<b>Electives - Associate Degree</b>				
Choose two courses from the following list:				
CIS 189	XML	7-10		Prepared By:
CIS 237	Dreamweaver			
CIS 245	Developing Applications in Access			
CIS 264	C++ Programming			
CIS 290	Cooperative Work Experience/Internship			
CIS 293	Application Development-Special Projects			
<b>General Education Requirements - Associate Degree</b>				
<b>Reading/Writing</b>			College/University	Credit
ENGL& 101	English Composition I	5		
<b>Speaking/Listening</b>	<b>Choose one of the following:</b>	5	College/University	Credit
CIS 210	Business Communications			
ENGL& 235	Technical Writing			
<b>Computation</b>			College/University	Credit
CIS 168	Programming Logic		Completed in Core	
<b>Human Relations</b>	<b>Choose one of the following:</b>	3-5		
CIS 109	Human Dimensions in the Office: Diversity			
CMST& 230	Small Group Communication			
		13-15	<b>Total Credits Transferred:</b>	