

# PROGRAMMING BASICS, CAREER PATHWAY CERTIFICATE OF COMPLETION

The Career Pathway Certificate of Completion: Programming Basics offers the fundamental core courses in Computer Science. The core courses give the student a well-rounded basic understanding of computer application development. Students completing this certification will be prepared to seek entry-level employment in occupations such as network administration support, entry software developer, and software testing.

Click here (<https://www.socc.edu/pathways/roadmapsaz/312-cis-software-development-roadmap>) to learn how this Career Pathway Certificate can lead to an AAS in CIS Software Development.

## Graduation Requirements

Students must complete a minimum of 16 credit hours with a cumulative Grade Point Average (GPA) of 2.0 or better. All courses must be completed with a grade of 'C' or better. One course must be completed at Southwestern before the Career Pathway Certificate of Completion: Programming Basics is awarded.

Complete the graduation application process one term prior to the term of completion (e.g., spring term graduates must apply during winter term).

## Pre-Program Courses

Students are required to take the following courses *prior* to the program courses, depending on students' college placement information. See advisor for details:

Code	Title	Credits
CIS90	Computer Basics (or demonstrate proficiency)	2
MTH60	Algebra I (or placement in higher math course)	4
WR90R	Academic Literacy (or placement in higher writing course)	4

## Program Guide

Course	Title	Credits
<b>First Year</b>		
<b>Fall</b>		
CS160	Computer Science Orientation	4
MTH86	Computer Technology Mathematics	4
Credits		8
<b>Winter</b>		
CS161	Introduction to Computer Science I	4
Credits		4
<b>Spring</b>		
CS162	Introduction to Computer Science II	4
Credits		4
Total Credits		16

## Program Student Learning Outcomes

Upon successful completion of this program, the student will be able to:

- Plan, write and debug software applications within multiple programming environments.
- Apply project life cycle concepts to assist in finding solutions to business needs.
- Research, interpret, and communicate technical information in written, graphic, diagrammatic, electronic and oral forms.
- Demonstrate the ability to work independently or in a group environment with sensitivity to needs of customers and coworkers.