

# PROGRAMMING TECHNICIAN, CERTIFICATE OF COMPLETION

The Certificate of Completion Programming Technician is a one-year certificate that includes the first year of the Computer Science and supporting Computer Information Technologies. This certificate is intended for students focused on becoming career-ready in one year. Students completing this certification will be prepared to seek entry-level employment in occupations such as a software testing specialist, junior developer, mobile application developer, or web developer.

Click here to learn how this certificate can lead to an AAS in CIS Software Development.

## GAINFUL EMPLOYMENT DISCLOSURE

Southwestern is required by federal regulations to disclose information related to the College's educational programs that lead to gainful employment in a recognized occupation. This information is intended to provide students the opportunity to measure employment outcomes associated with certificate programs.

Gainful employment information for the Certificate of Completion Programming Technician can be found online at <https://www.socc.edu/images/ge/programming.html>.

## GRADUATION REQUIREMENTS

Students must complete a minimum of 45 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 Certificate of Completion 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).

## 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.
- Design, administer, and maintain a database.
- Plan and design integrate technology systems ranging from servers to user interfaces.
- 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.

## 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>		
CIS151	Network Essentials	4
CS160	Computer Science Orientation	4
MTH86	Computer Technology Mathematics <sup>1</sup>	4
WR115	Fundamentals of Report Writing (or higher) <sup>4</sup>	3
		Credits
		15
<b>Winter</b>		
CIS140U	Intro to Operating Systems: Unix	4
CIS145	Hardware Installation Support	4
CS161	Introduction to Computer Science I	4
CS195	Web Development I	3
		Credits
		15
<b>Spring</b>		
BA110	Group Dynamics for Teams <sup>2</sup>	3
CS133WS	Computer Language I: Web Scripting	4
CS162	Introduction to Computer Science II	4
Specific Elective <sup>3</sup>		4
		Credits
		15
		Total Credits
		45

<sup>1</sup> MTH105 or higher excluding MTH211 may be substituted for MTH86.

<sup>2</sup> BA120, BA285, PSY100, PSY201, PSY203 may be substituted for BA110.

<sup>3</sup> Specific Elective: Any AC, BA, CIS/CS, course not required for the degree; WR227, MTH65, MTH95, or higher; ART115, ART116, ART117, ART225.

<sup>4</sup> Excluding WR241, WR242, WR243, and WR250.

\* All Honors courses may substitute for their equivalent requirements.