### **Technical and Vocational Programs**

# A 25 59 0 CP Information Technology: Computer Programming – Associate in Applied Science C 25 59 0 CP Fundamentals of Computer Programming Certificate

#### **CONCENTRATION OVERVIEW**

The Information Technology: Computer Programming curriculum prepares graduates for employment as computer programmers and related positions through the study of computer concepts, logic, programming procedures, languages, operating systems, networking and data management. Students will gain the knowledge and skills to design, process, implement, and manage information systems in a variety of business and industry settings.



Upon completion of this concentration, graduates should qualify for employment in entry-level positions in businesses, educational systems, and governmental agencies as programmers, programmer trainees, programmer/analysts, computer operators, system technicians or database specialists. The program will incorporate the competencies of industry-recognized certification exams.

#### Student Learning Outcomes - Upon completion of the program, students will:

- 1. Demonstrate the ability to analyze the needs of a software-development project; and develop, code, and test an appropriate software solution to implement the project.
- 2. Communicate programming-related concepts effectively through the delivery of a major project report and final project oral presentation.
- 3. Identify methods to evaluate digital content for validity and usefulness.

Partnership: N/A

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First Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
CIS 110 Introduction to Computers CIS 111 Basic PC Literacy	Pre-Requisites for CIS 111: None Pre-Requisites for CIS 110: ENG 002 Tier 1 and MAT 003 Tier 1	1-2	2		3-4	2-3
CTI 110 Web, Pgm, & DB Foundation	Pre-Requisites: none	2	2		4	3
CIS 115 Intro to Programming and Logic	Pre-Requisites: MAT 003 Tier 1	2	3		5	3
CSC 151 JAVA Programming	Co-Requisites: CIS 110 or CIS 111 or CIS 115	2	3		5	3
TOTAL SEMESTER HOURS						11-12
Second Semester Course Number and Title	Pre-Requisites and Co-Requisites	Class Hours	Lab Hours	Clinical Hours	Total Contact Hours	Total Credit Hours
CTI 120 Network & Sec Foundation	Pre-Requisites: CIS 110 or CIS 111	2	2		4	3
CSC 251 Advanced JAVA Programming	Pre-Requisites: CSC 151	2	3		5	3
TOTAL SEMESTER HOURS						6
TOTAL SEMESTER HOURS REQUIRED FOR CERTIFICATE						17-18