

# COMPUTER INFORMATION SYSTEMS, Certificate - 1312

Engineering, Trades & Computer Technologies Department  
CIP Code: 11.1006

The Computer Information Systems certificate provides students with the essential knowledge and skills in computer software, hardware, and network communication needed for entry into the computer information technology job market. Additionally, the certificate is appropriate for individuals, who are currently in the workforce and are interested in updating their technical skills. Students are able to focus their studies by choosing one of two concentrations: **Support Specialist**, which concentrates on technical support with software, hardware, and security and the **Database Analyst**, which emphasizes database management and administration. Graduates of both options apply their cumulative knowledge and skills through a capstone experience, which results in the completion of an individual electronic portfolio. The **Support Specialist Concentration** can be completed at the Harrisburg Campus. Students may also complete this concentration at the Lancaster and York campuses by taking some courses through virtual learning. The **Database Analyst Concentration** can only be completed through virtual learning.

### Career Opportunities

Graduates may obtain entry-level positions within many different businesses, government agencies, computer consulting firms, health care, and educational institutions. Depending on the degree concentration the student has chosen, below are the specific occupations associated with each of the two concentrations:

- **Support Specialist:** *computer operator, help-desk analyst, and technical support specialist*
- **Database Analyst:** *database analyst, database administrator, and data modeler*

**(SOC Code: 15-1150 Computer User Support Specialists)**

### Competency Profile

These degree concentrations are designed to prepare students to:

#### The Support Specialist:

- Manage and troubleshoot computer software, hardware, and networks
- Operate a help-desk support system

#### The Database Analyst:

- Manage database management systems
- Develop a database system through an entire life-cycle

## PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements	Other Required Courses
	CIS 105 Introduction to Software for Business	3
	CIS 110 Introduction to Computer Information Systems	3
	CNT 120 Network Communication Technology I	<u>3</u>
		9
<b>Support Specialist Concentration</b>	<b>Database Analyst Concentration</b>	
CIS 128 Client Administration	CIS 135 Intermediate Spreadsheet Application	3
CIS 135 Intermediate Spreadsheet Applications <b>or</b>	CIS 140 Intermediate Database Management	3
CIS 140 Intermediate Database Management	CIS 224 Intro Systems Analysis and Design	4
CIS 222 Intro to Windows Servers	CIS 241 Database Administration I	3
CIS 227 Technical Support	CIS 245 Database Programming	3
CISE 200 Information Security Fundamentals	CIS 257 Data Warehouse	3
ELEC 125 Introduction to PC Technology	Database-Related Elective*	<u>3</u>
ELEC 126 Installing & Troubleshooting PCs		22
		22

\*Students are to select from the following courses: CIS 222, 239, 243, 258 263; WEB 126, 143.

Note: Grades of C, or higher, are required for all computer-related courses (CIS, CISE, CNT, CPS, ELEC, GIS, and WEB) and in all certificate concentrations for graduation.

## **RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS**

### **Support Specialist Concentration**

<b>Summer</b>		<b>Fall Semester I</b>		<b>Spring Semester I</b>	
CIS 105	3	CIS 110	3	CIS 135 or 140	3
CNT 120	3	CIS 128	3	CIS 227	3
		CIS 222	3	CISE 200	3
		ELEC 125	3	ELEC 126	4

### **Database Analyst Concentration**

<b>Summer</b>		<b>Fall Semester I</b>		<b>Spring Semester II</b>	
CIS 105	3	CIS 110	3	CIS 224	4
CNT 120	3	CIS 135	3	CIS 241	3
		CIS 140	3	CIS 245	3
		Database Elective*	3	CIS 257	3