# Information Support & Services I Course No. 10052 Credit: 1.0

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| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes:Information Support & Services (11.0301)

Course Description: **Technical Level:** a course designed for students who have chosen to pursue an Information Support and Services program of study to introduce the basic conceptual and practical skills necessary to identify, install, and manage relevant hardware and software in a server/client environment. **\*\*Prerequisite Information Support & Services I or demonstration of all competencies therein.**

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Working knowledge of information systems foundations.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Demonstrate knowledge of the history, use, and general characteristics of different servers including basic information systems terminology. |  |
| 1.2 | Identify the major components of an information systems infrastructure: Computer Hardware, Computer Software, Databases, Network, and Human Resources. |  |
| 1.3 | Describe data storage and management in general and within the context of different information systems, including any of, but not limited to, the following: Transaction Processing Systems, Office Automation Systems, Knowledge Management Systems, Management Information Systems, Decision Support Systems, and Executive Support Systems. |  |

## Benchmark 2: Working knowledge of the Open Systems Interconnection (OSI) Model and its basic functions.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Explain the Open Systems Interconnection (OSI) Model and the flow of data through it, define the functions, and identify the associated hardware components. |  |
| 2.2 | Identify the basic functions of a network operating system (NOS), research various types (e.g. Microsoft Windows server, Linux enterprise server, UNIX, etc.), and synthesize findings to demonstrate knowledge that includes, but is not limited to: Optimal software requirements, Client support features, Organization of network elements, Sharing applications, Managing system resources (e.g., memory, multitasking, multiprocessing), and The importance of considering future needs. |  |

## Benchmark 3: Working knowledge of building an information system

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Identify the basic steps involved in building a data warehouse, including but not limited to: Extracting the transactional data from the data sources into a staging area, Transforming the transactional data, Loading the transformed data into a dimensional database, Building pre-calculated summary values to speed up report generation, and Building a front-end reporting tool. |  |
| 3.2 | Configure and build a basic information system with a corresponding data warehouse using available materials, hardware, and software. |  |

## Benchmark 4: Troubleshooting and Life Cycle

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 4.1 | Research and describe the most common information systems security risks associated with: people; data transmission and hardware; protocols and software; and internet access. Investigate and distinguish among the following common prevention methods to secure an information system: Authentication, Access Control, Backups, Encryption, Firewalls, and Intrusion Detection Systems. Synthesize findings to identify security requirements for your information system/data warehouse while also discussing the balance of client usability. |  |
| 4.2 | Illustrate the seven phases of the systems development life cycle in general and in the context of information systems and data warehousing: Planning, Systems Analysis & Requirements, Systems Design, Development, Integration & Testing, Implementation, and Operations & Maintenance. Synthesize findings to refine, build, create, or expand existing or new information systems and data warehouses. E.g. systems/data to serve student run businesses, school events, or faculty support. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

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